Department of Defense
Fiscal Year (FY) 2013 President's Budget Submission

February 2012

Navy

Justification Book Volume 3

Research, Development, Test & Evaluation, Navy

Budget Activity 5

THIS PAGE INTENTIONALLY LEFT BLANK

Table of Volumes

THIS PAGE INTENTIONALLY LEFT BLANK

Volume 3 Table of Contents

THIS PAGE INTENTIONALLY LEFT BLANK

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Summary Recap of Budget Activities	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Basic Research	538,716	605,319		605,319
Applied Research	704,164	822,951		822,951
Advanced Technology Development	769,394	692,105		692,105
Advanced Component Development & Prototypes	3,971,685	4,430,747	1,500	4,432,247
System Development & Demonstration	6,309,828	6,263,080	11,050	6,274,130
RDT&E Management Support	1,179,998	838,757		838,757
Operational Systems Development	4,391,753	4,086,616	41,334	4,127,950
Total Research, Development, Test & Evaluation	17,865,538	17,739,575	53,884	17,793,459

Summary Recap of FYDP Programs				
Strategic Forces	118,511	151,960		151,960
General Purpose Forces	1,426,503	1,419,726	7,550	1,427,276
Intelligence and Communications	1,368,028	1,321,973		1,321,973
Research and Development	13,354,716	13,458,494	12,550	13,471,044
Central Supply and Maintenance	65,553	80,477		80,477
Training Medical and Other	4,104			
Administration and Associated Activities	377			
Classified Programs	1,527,746	1,306,945	33,784	1,340,729
Total Research, Development, Test & Evaluation	17,865,538	17,739,575	53,884	17,793,459

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Summary Recap of Budget Activities	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Basic Research	605,021		605,021
Applied Research	790,302		790,302
Advanced Technology Development	584,402		584,402
Advanced Component Development & Prototypes	4,335,297	4,600	4,339,897
System Development & Demonstration	5,747,232	2,173	5,749,405
RDT&E Management Support	845,077	5,200	850,277
Operational Systems Development	3,975,546	48,146	4,023,692
Total Research, Development, Test & Evaluation	16,882,877	60,119	16,942,996

Summary Recap of FYDP Programs			
Strategic Forces	161,263		161,263
General Purpose Forces	1,422,932	6,762	1,429,694
Intelligence and Communications	1,176,330	7,600	1,183,930
Research and Development	12,883,923	11,973	12,895,896
Central Supply and Maintenance	87,270		87,270
Training Medical and Other Administration and Associated Activities			
Classified Programs	1,151,159	33,784	1,184,943
Total Research, Development, Test & Evaluation	16,882,877	60,119	16,942,996

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
1	0601103N	University Research Initiatives	01	104,088	133,157		133,157	U
2	0601152N	In-House Laboratory Independent Research	01	18,011	18,092		18,092	U
3	0601153N	Defense Research Sciences	01	416,617	454,070		454,070	U
		Basic Research		538,716	605,319		605,319	
4	0602114N	Power Projection Applied Research	02	100,159	104,796		104,796	U
5	0602123N	Force Protection Applied Research	02	143,063	196,734		196,734	U
6	0602131M	Marine Corps Landing Force Technology	02	42,131	44,745		44,745	U
7	0602235N	Common Picture Applied Research	02	68,155	65,184		65,184	U
8	0602236N	Warfighter Sustainment Applied Research	02	109,716	101,072		101,072	U
9	0602271N	Electromagnetic Systems Applied Research	02	86,966	108,185		108,185	U
10	0602435N	Ocean Warfighting Environment Applied Research	02	47,231	50,076		50,076	U
11	0602651M	Joint Non-Lethal Weapons Applied Research	02	5,762	5,937		5,937	U
12	0602747N	Undersea Warfare Applied Research	02	66,056	108,639		108,639	U
13	0602750N	Future Naval Capabilities Applied Research	02					U
14	0602782N	Mine and Expeditionary Warfare Applied Research	02	34,925	37,583		37,583	U
		Applied Research		704,164	822,951		822,951	
15	0603114N	Power Projection Advanced Technology	03	125,673	114,270		114,270	U
16	0603123N	Force Protection Advanced Technology	03	63,732	45,020		45,020	U
17	0603235N	Common Picture Advanced Technology	03	91,526	48,985		48,985	U
18	0603236N	Warfighter Sustainment Advanced Technology	03	95,045	71,149		71,149	U
19	0603271N	Electromagnetic Systems Advanced Technology	03	94,558	122,458		122,458	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
1	0601103N	University Research Initiatives	01	113,690		113,690	U
2	0601152N	In-House Laboratory Independent Research	01	18,261		18,261	U
3	0601153N	Defense Research Sciences	01	473,070		473,070	U
		Basic Research		605,021		605,021	
4	0602114N	Power Projection Applied Research	02	89,189		89,189	U
5	0602123N	Force Protection Applied Research	02	143,301		143,301	U
6	0602131M	Marine Corps Landing Force Technology	02	46,528		46,528	U
7	0602235N	Common Picture Applied Research	02	41,696		41,696	U
8	0602236N	Warfighter Sustainment Applied Research	02	44,127		44,127	U
9	0602271N	Electromagnetic Systems Applied Research	02	78,228		78,228	U
10	0602435N	Ocean Warfighting Environment Applied Research	02	49,635		49,635	U
11	0602651M	Joint Non-Lethal Weapons Applied Research	02	5,973		5,973	U
12	0602747N	Undersea Warfare Applied Research	02	96,814		96,814	U
13	0602750N	Future Naval Capabilities Applied Research	02	162,417		162,417	U
14	0602782N	Mine and Expeditionary Warfare Applied Research	02	32,394		32,394	U
		Applied Research		790,302		790,302	
15	0603114N	Power Projection Advanced Technology	03	56,543		56,543	U
16	0603123N	Force Protection Advanced Technology	03	18,616		18,616	U
17	0603235N	Common Picture Advanced Technology	03				U
18	0603236N	Warfighter Sustainment Advanced Technology	03				U
19	0603271N	Electromagnetic Systems Advanced Technology	03	54,858		54,858	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
20	0603640M	USMC Advanced Technology Demonstration (ATD)	03	110,068	124,115		124,115	U
21	0603651M	Joint Non-Lethal Weapons Technology Development	03	10,832	11,286		11,286	U
22	0603673N	Future Naval Capabilities Advanced Technology Development	03					U
23	0603729N	Warfighter Protection Advanced Technology	03	54,356	56,819		56,819	U
24	0603747N	Undersea Warfare Advanced Technology	03	51,283	41,959		41,959	U
25	0603758N	Navy Warfighting Experiments and Demonstrations	03	51,115	49,996		49,996	U
26	0603782N	Mine and Expeditionary Warfare Advanced Technology	03	21,206	6,048		6,048	U
		Advanced Technology Development		769,394	692,105		692,105	
27	0603128N	Unmanned Aerial System	04	36,000				U
28	0603207N	Air/Ocean Tactical Applications	04	115,072	84,962		84,962	U
29	0603216N	Aviation Survivability	04	9,151	10,893		10,893	U
30	0603237N	Deployable Joint Command and Control	04	3,997	3,702		3,702	U
31	0603251N	Aircraft Systems	04		10,497		10,497	U
32	0603254N	ASW Systems Development	04	7,969	7,896		7,896	U
33	0603261N	Tactical Airborne Reconnaissance	04	6,755	5,944		5,944	U
34	0603382N	Advanced Combat Systems Technology	04	1,613	1,418		1,418	U
35	0603502N	Surface and Shallow Water Mine Countermeasures	04	94,539	127,757		127,757	U
36	0603506N	Surface Ship Torpedo Defense	04	49,625	118,764		118,764	U
37	0603512N	Carrier Systems Development	04	99,704	54,072		54,072	U
38	0603513N	Shipboard System Component Development	04	51				U
39	0603525N	PILOT FISH	04	79,699	95,605		95,605	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
20	0603640M	USMC Advanced Technology Demonstration (ATD)	03	130,598		130,598	U
21	0603651M	Joint Non-Lethal Weapons Technology Development	03	11,706		11,706	U
22	0603673N	Future Naval Capabilities Advanced Technology Development	03	256,382		256,382	U
23	0603729N	Warfighter Protection Advanced Technology	03	3,880		3,880	U
24	0603747N	Undersea Warfare Advanced Technology	03				U
25	0603758N	Navy Warfighting Experiments and Demonstrations	03	51,819		51,819	U
26	0603782N	Mine and Expeditionary Warfare Advanced Technology	03				U
		Advanced Technology Development		584,402		584,402	
27	0603128N	Unmanned Aerial System	04				U
28	0603207N	Air/Ocean Tactical Applications	04	34,085		34,085	U
29	0603216N	Aviation Survivability	04	8,783		8,783	U
30	0603237N	Deployable Joint Command and Control	04	3,773		3,773	U
31	0603251N	Aircraft Systems	04	24,512		24,512	U
32	0603254N	ASW Systems Development	04	8,090		8,090	U
33	0603261N	Tactical Airborne Reconnaissance	04	5,301		5,301	U
34	0603382N	Advanced Combat Systems Technology	04	1,506		1,506	U
35	0603502N	Surface and Shallow Water Mine Countermeasures	04	190,622		190,622	U
36	0603506N	Surface Ship Torpedo Defense	04	93,346		93,346	U
37	0603512N	Carrier Systems Development	04	108,871		108,871	U
38	0603513N	Shipboard System Component Development	04				U
39	0603525N	PILOT FISH	04	101,169		101,169	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
40	0603527N	RETRACT LARCH	04	159,117	73,421		73,421	U
41	0603536N	RETRACT JUNIPER	04	127,544	130,153		130,153	U
42	0603542N	Radiological Control	04	1,292	1,338		1,338	U
43	0603553N	Surface ASW	04	44,172	29,787		29,787	U
44	0603561N	Advanced Submarine System Development	04	549,702	861,366		861,366	U
45	0603562N	Submarine Tactical Warfare Systems	04	5,520	9,233		9,233	U
46	0603563N	Ship Concept Advanced Design	04	17,835	14,308		14,308	U
47	0603564N	Ship Preliminary Design & Feasibility Studies	04	10,087	22,210		22,210	U
48	0603570N	Advanced Nuclear Power Systems	04	364,644	463,683		463,683	U
49	0603573N	Advanced Surface Machinery Systems	04	5,295	18,239		18,239	U
50	0603576N	CHALK EAGLE	04	447,620	582,025		582,025	U
51	0603581N	Littoral Combat Ship (LCS)	04	191,613	292,665		292,665	U
52	0603582N	Combat System Integration	04	33,323	34,123		34,123	U
53	0603609N	Conventional Munitions	04	5,333	4,753		4,753	U
54	0603611M	Marine Corps Assault Vehicles	04	214,597	37,000		37,000	U
55	0603635M	Marine Corps Ground Combat/Support System	04	26,899	54,877		54,877	U
56	0603654N	Joint Service Explosive Ordnance Development	04	31,354	33,654	1,500	35,154	U
57	0603658N	Cooperative Engagement	04	57,198	54,783		54,783	U
58	0603713N	Ocean Engineering Technology Development	04	12,715	9,996		9,996	U
59	0603721N	Environmental Protection	04	19,473	21,714		21,714	U
60	0603724N	Navy Energy Program	04	33,124	70,538		70,538	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
40	0603527N	RETRACT LARCH	04	74,312		74,312	U
41	0603536N	RETRACT JUNIPER	04	90,730		90,730	U
42	0603542N	Radiological Control	04	777		777	U
43	0603553N	Surface ASW	04	6,704		6,704	U
44	0603561N	Advanced Submarine System Development	04	555,123		555,123	U
45	0603562N	Submarine Tactical Warfare Systems	04	9,368		9,368	U
46	0603563N	Ship Concept Advanced Design	04	24,609		24,609	U
47	0603564N	Ship Preliminary Design & Feasibility Studies	04	13,710		13,710	U
48	0603570N	Advanced Nuclear Power Systems	04	249,748		249,748	U
49	0603573N	Advanced Surface Machinery Systems	04	29,897		29,897	U
50	0603576N	CHALK EAGLE	04	509,988		509,988	U
51	0603581N	Littoral Combat Ship (LCS)	04	429,420		429,420	U
52	0603582N	Combat System Integration	04	56,551		56,551	U
53	0603609N	Conventional Munitions	04	7,342		7,342	U
54	0603611M	Marine Corps Assault Vehicles	04	95,182		95,182	U
55	0603635M	Marine Corps Ground Combat/Support System	04	10,496		10,496	U
56	0603654N	Joint Service Explosive Ordnance Development	04	52,331	4,600	56,931	U
57	0603658N	Cooperative Engagement	04	56,512		56,512	U
58	0603713N	Ocean Engineering Technology Development	04	7,029		7,029	U
59	0603721N	Environmental Protection	04	21,080		21,080	U
60	0603724N	Navy Energy Program	04	55,324		55,324	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
61	0603725N	Facilities Improvement	04	3,727	3,754		3,754	U
62	0603734N	CHALK CORAL	04	70,284	79,415		79,415	U
63	0603739N	Navy Logistic Productivity	04	4,009	4,137		4,137	U
64	0603746N	RETRACT MAPLE	04	221,725	276,171		276,171	U
65	0603748N	LINK PLUMERIA	04	59,443	52,588		52,588	U
66	0603751N	RETRACT ELM	04	163,393	150,584		150,584	U
67	0603755N	Ship Self Defense - Dem/Val	04	3,422				U
68	0603764N	LINK EVERGREEN	04	48,618	144,985		144,985	U
69	0603787N	Special Processes	04	35,802	43,365		43,365	U
70	0603790N	NATO Research and Development	04	8,888	9,140		9,140	U
71	0603795N	Land Attack Technology	04	899	421		421	U
72	0603851M	Joint Non-Lethal Weapons Testing	04	42,464	40,992		40,992	U
73	0603860N	Joint Precision Approach and Landing Systems - Dem/Val	04	155,538	118,255		118,255	U
74	0603889N	Counterdrug RDT&E Projects	04	8,700				U
75	0603925N	Directed Energy and Electric Weapon Systems	04	7,959				U
76	0604272N	Tactical Air Directional Infrared Countermeasures (TADIRCM)	04	50,166	64,097		64,097	U
77	0604279N	ASE Self-Protection Optimization	04	7,000	697		697	U
78	0604653N	Joint Counter Radio Controlled IED Electronic Warfare (JCREW)	04	68,421	62,044		62,044	U
79	0604659N	Precision Strike Weapons Development Program	04	5,322	3,450		3,450	U
80	0604707N	Space and Electronic Warfare (SEW) Architecture/Engineering Support	04	31,785	33,573		33,573	U
81	0604775N	Defense Rapid Innovation Program	04	104,466				U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
61	0603725N	Facilities Improvement	04	3,401		3,401	U
62	0603734N	CHALK CORAL	04	45,966		45,966	U
63	0603739N	Navy Logistic Productivity	04	3,811		3,811	U
64	0603746N	RETRACT MAPLE	04	341,305		341,305	U
65	0603748N	LINK PLUMERIA	04	181,220		181,220	U
66	0603751N	RETRACT ELM	04	174,014		174,014	U
67	0603755N	Ship Self Defense - Dem/Val	04				U
68	0603764N	LINK EVERGREEN	04	68,654		68,654	U
69	0603787N	Special Processes	04	44,487		44,487	U
70	0603790N	NATO Research and Development	04	9,389		9,389	U
71	0603795N	Land Attack Technology	04	16,132		16,132	U
72	0603851M	Joint Non-Lethal Weapons Testing	04	44,994		44,994	U
73	0603860N	Joint Precision Approach and Landing Systems - Dem/Val	04	137,369		137,369	U
74	0603889N	Counterdrug RDT&E Projects	04				U
75	0603925N	Directed Energy and Electric Weapon Systems	04				U
76	0604272N	Tactical Air Directional Infrared Countermeasures (TADIRCM)	04	73,934		73,934	U
77	0604279N	ASE Self-Protection Optimization	04	711		711	U
78	0604653N	Joint Counter Radio Controlled IED Electronic Warfare (JCREW)	04	71,300		71,300	U
79	0604659N	Precision Strike Weapons Development Program	04	5,654		5,654	U
80	0604707N	Space and Electronic Warfare (SEW) Architecture/Engineering Support	04	31,549		31,549	U
81	0604775N	Defense Rapid Innovation Program	04				U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
82	0604786N	Offensive Anti-Surface Warfare Weapon Development	04					U
83	0605812M	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	04					U
84	0303354N	ASW Systems Development - MIP	04	2,150	1,078		1,078	U
85	0303562N	Submarine Tactical Warfare Systems - MIP	04	4,231				U
86	0304270N	Electronic Warfare Development - MIP	04	641	625		625	U
		Advanced Component Development & Prototypes		3,971,685	4,430,747	1,500	4,432,247	
87	0604212N	Other Helo Development	05	51,825	42,651		42,651	U
88	0604214N	AV-8B Aircraft - Eng Dev	05	22,063	30,676		30,676	U
89	0604215N	Standards Development	05	41,991	49,439		49,439	U
90	0604216N	Multi-Mission Helicopter Upgrade Development	05	54,404	17,654		17,654	U
91	0604218N	Air/Ocean Equipment Engineering	05	5,496	5,922		5,922	U
92	0604221N	P-3 Modernization Program	05	3,517	3,417		3,417	U
93	0604230N	Warfare Support System	05	3,685	9,944		9,944	U
94	0604231N	Tactical Command System	05	87,273	77,245		77,245	U
95	0604234N	Advanced Hawkeye	05	168,157	130,994		130,994	U
96	0604245N	H-1 Upgrades	05	58,638	67,569		67,569	U
97	0604261N	Acoustic Search Sensors	05	63,041	48,838		48,838	U
98	0604262N	V-22A	05	42,686	84,477		84,477	U
99	0604264N	Air Crew Systems Development	05	5,914	3,249		3,249	U
100	0604269N	EA-18	05	20,246	17,100		17,100	U
101	0604270N	Electronic Warfare Development	05	78,147	89,418	5,600	95,018	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
82	0604786N	Offensive Anti-Surface Warfare Weapon Development	04	86,801		86,801	U
83	0605812M	Joint Light Tactical Vehicle (JLTV) Engineering and Manufacturing Development Ph	04	44,500		44,500	U
84	0303354N	ASW Systems Development - MIP	04	13,172		13,172	U
85	0303562N	Submarine Tactical Warfare Systems - MIP	04				U
86	0304270N	Electronic Warfare Development - MIP	04	643		643	U
		Advanced Component Development & Prototypes		4,335,297	4,600	4,339,897	
87	0604212N	Other Helo Development	05	33,978		33,978	U
88	0604214N	AV-8B Aircraft - Eng Dev	05	32,789		32,789	U
89	0604215N	Standards Development	05	84,988		84,988	U
90	0604216N	Multi-Mission Helicopter Upgrade Development	05	6,866		6,866	U
91	0604218N	Air/Ocean Equipment Engineering	05	4,060		4,060	U
92	0604221N	P-3 Modernization Program	05	3,451		3,451	U
93	0604230N	Warfare Support System	05	13,071		13,071	U
94	0604231N	Tactical Command System	05	71,645		71,645	U
95	0604234N	Advanced Hawkeye	05	119,065		119,065	U
96	0604245N	H-1 Upgrades	05	31,105		31,105	U
97	0604261N	Acoustic Search Sensors	05	34,299		34,299	U
98	0604262N	V-22A	05	54,412		54,412	U
99	0604264N	Air Crew Systems Development	05	2,717		2,717	U
100	0604269N	EA-18	05	13,009		13,009	U
101	0604270N	Electronic Warfare Development	05	51,304		51,304	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
102	0604273N	VH-71A Executive Helo Development	05	147,268	60,751		60,751	U
103	0604274N	Next Generation Jammer (NGJ)	05	83,948	170,910		170,910	U
104	0604280N	Joint Tactical Radio System - Navy (JTRS-Navy)	05	609,159	675,521		675,521	U
105	0604307N	Surface Combatant Combat System Engineering	05	195,569	223,217		223,217	U
106	0604311N	LPD-17 Class Systems Integration	05	1,636	884		884	U
107	0604329N	Small Diameter Bomb (SDB)	05	15,732	29,635		29,635	U
108	0604366N	Standard Missile Improvements	05	93,410	46,705		46,705	U
109	0604373N	Airborne MCM	05	42,519	41,142		41,142	U
110	0604376M	Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) for Aviation	05					U
111	0604378N	Naval Integrated Fire Control - Counter Air Systems Engineering	05	29,569	24,898		24,898	U
112	0604404N	Unmanned Carrier Launched Airborne Surveillance and Strike (UCLASS) System	05		75,700		75,700	U
113	0604501N	Advanced Above Water Sensors	05	254,778	247,071		247,071	U
114	0604503N	SSN-688 and Trident Modernization	05	100,717	90,180		90,180	U
115	0604504N	Air Control	05	5,511	5,521		5,521	U
116	0604512N	Shipboard Aviation Systems	05	68,438	45,445		45,445	U
117	0604518N	Combat Information Center Conversion	05	4,915	3,400		3,400	U
118	0604558N	New Design SSN	05	166,888	112,158		112,158	U
119	0604562N	Submarine Tactical Warfare System	05	48,269	48,466		48,466	U
120	0604567N	Ship Contract Design/ Live Fire T&E	05	157,828	121,089		121,089	U
121	0604574N	Navy Tactical Computer Resources	05	4,420	3,848		3,848	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
102	0604273N	VH-71A Executive Helo Development	05	61,163		61,163	U
103	0604274N	Next Generation Jammer (NGJ)	05	187,024		187,024	U
104	0604280N	Joint Tactical Radio System - Navy (JTRS-Navy)	05	337,480		337,480	U
105	0604307N	Surface Combatant Combat System Engineering	05	260,616		260,616	U
106	0604311N	LPD-17 Class Systems Integration	05	824		824	U
107	0604329N	Small Diameter Bomb (SDB)	05	31,064		31,064	U
108	0604366N	Standard Missile Improvements	05	63,891		63,891	U
109	0604373N	Airborne MCM	05	73,246		73,246	U
110	0604376M	Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) for Aviation	05	10,568		10,568	U
111	0604378N	Naval Integrated Fire Control - Counter Air Systems Engineering	05	39,974		39,974	U
112	0604404N	Unmanned Carrier Launched Airborne Surveillance and Strike (UCLASS) System	05	122,481		122,481	U
113	0604501N	Advanced Above Water Sensors	05	255,516		255,516	U
114	0604503N	SSN-688 and Trident Modernization	05	82,620		82,620	U
115	0604504N	Air Control	05	5,633		5,633	U
116	0604512N	Shipboard Aviation Systems	05	55,826		55,826	U
117	0604518N	Combat Information Center Conversion	05	918		918	U
118	0604558N	New Design SSN	05	165,230		165,230	U
119	0604562N	Submarine Tactical Warfare System	05	49,141		49,141	U
120	0604567N	Ship Contract Design/ Live Fire T&E	05	196,737		196,737	U
121	0604574N	Navy Tactical Computer Resources	05	3,889		3,889	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
122	0604601N	Mine Development	05	4,399	3,933		3,933	U
123	0604610N	Lightweight Torpedo Development	05	25,852	32,592		32,592	U
124	0604654N	Joint Service Explosive Ordnance Development	05	10,418	9,960	3,500	13,460	U
125	0604703N	Personnel, Training, Simulation, and Human Factors	05	10,098	12,992		12,992	U
126	0604727N	Joint Standoff Weapon Systems	05	12,503	7,506		7,506	U
127	0604755N	Ship Self Defense (Detect & Control)	05	48,526	71,222		71,222	U
128	0604756N	Ship Self Defense (Engage: Hard Kill)	05	35,284	6,631		6,631	U
129	0604757N	Ship Self Defense (Engage: Soft Kill/EW)	05	90,484	184,087		184,087	U
130	0604761N	Intelligence Engineering	05	15,831	2,196		2,196	U
131	0604771N	Medical Development	05	28,407	31,084	1,950	33,034	U
132	0604777N	Navigation/ID System	05	58,727	39,331		39,331	U
133	0604800M	Joint Strike Fighter (JSF) - EMD	05	602,142	651,786		651,786	U
134	0604800N	Joint Strike Fighter (JSF) - EMD	05	654,198	658,549		658,549	U
135	0605013M	Information Technology Development	05	22,048	19,461		19,461	U
136	0605013N	Information Technology Development	05	27,976	29,760		29,760	U
137	0605018N	Navy Integrated Military Human Resources System (N-IMHRS)	05	14,965	55,017		55,017	U
138	0605212N	CH-53K RDTE	05	558,152	624,461		624,461	U
139	0605450N	Joint Air-to-Ground Missile (JAGM)	05	80,911	108,395		108,395	U
140	0605500N	Multi-Mission Maritime Aircraft (MMA)	05	907,465	618,684		618,684	U
141	0204202N	DDG-1000	05	348,763	257,580		257,580	U
142	0304231N	Tactical Command System - MIP	05	1,311	979		979	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
122	0604601N	Mine Development	05	8,335		8,335	U
123	0604610N	Lightweight Torpedo Development	05	49,818		49,818	U
124	0604654N	Joint Service Explosive Ordnance Development	05	10,099		10,099	U
125	0604703N	Personnel, Training, Simulation, and Human Factors	05	7,348		7,348	U
126	0604727N	Joint Standoff Weapon Systems	05	5,518		5,518	U
127	0604755N	Ship Self Defense (Detect & Control)	05	87,662		87,662	U
128	0604756N	Ship Self Defense (Engage: Hard Kill)	05	64,079		64,079	U
129	0604757N	Ship Self Defense (Engage: Soft Kill/EW)	05	151,489		151,489	U
130	0604761N	Intelligence Engineering	05				U
131	0604771N	Medical Development	05	12,707	2,173	14,880	U
132	0604777N	Navigation/ID System	05	47,764		47,764	U
133	0604800M	Joint Strike Fighter (JSF) - EMD	05	737,149		737,149	U
134	0604800N	Joint Strike Fighter (JSF) - EMD	05	743,926		743,926	U
135	0605013M	Information Technology Development	05	12,143		12,143	U
136	0605013N	Information Technology Development	05	72,209		72,209	U
137	0605018N	Navy Integrated Military Human Resources System (N-IMHRS)	05				U
138	0605212N	CH-53K RDTE	05	606,204		606,204	U
139	0605450N	Joint Air-to-Ground Missile (JAGM)	05				U
140	0605500N	Multi-Mission Maritime Aircraft (MMA)	05	421,102		421,102	U
141	0204202N	DDG-1000	05	124,655		124,655	U
142	0304231N	Tactical Command System - MIP	05	1,170		1,170	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
143	0304503N	SSN-688 and Trident Modernization - MIP	05	1,408				U
144	0304785N	Tactical Cryptologic Systems	05	12,303	31,740		31,740	U
145	0305124N	Special Applications Program	05		100,000		100,000	U
		System Development & Demonstration		6,309,828	6,263,080	11,050	6,274,130	
146	0604256N	Threat Simulator Development	06	18,353	28,318		28,318	U
147	0604258N	Target Systems Development	06	68,293	44,700		44,700	U
148	0604759N	Major T&E Investment	06	37,331	37,957		37,957	U
149	0605126N	Joint Theater Air and Missile Defense Organization	06		2,970		2,970	U
150	0605152N	Studies and Analysis Support - Navy	06	9,451	17,435		17,435	U
151	0605154N	Center for Naval Analyses	06	45,582	42,751		42,751	U
152	0605502N	Small Business Innovative Research	06	320,547	10		10	U
153	0605804N	Technical Information Services	06	1,147	571		571	U
154	0605853N	Management, Technical & International Support	06	58,588	58,162		58,162	U
155	0605856N	Strategic Technical Support	06	3,335	3,277		3,277	U
156	0605861N	RDT&E Science and Technology Management	06	72,161	73,917		73,917	U
157	0605863N	RDT&E Ship and Aircraft Support	06	100,759	136,531		136,531	U
158	0605864N	Test and Evaluation Support	06	376,563	335,357		335,357	U
159	0605865N	Operational Test and Evaluation Capability	06	15,592	16,634		16,634	U
160	0605866N	Navy Space and Electronic Warfare (SEW) Support	06	9,140	4,223		4,223	U
161	0605867N	SEW Surveillance/Reconnaissance Support	06	19,600	7,642		7,642	U
162	0605873M	Marine Corps Program Wide Support	06	17,225	25,538		25,538	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
143	0304503N	SSN-688 and Trident Modernization - MIP	05				U
144	0304785N	Tactical Cryptologic Systems	05	23,255		23,255	U
145	0305124N	Special Applications Program	05				U
		System Development & Demonstration		5,747,232	2,173	5,749,405	
146	0604256N	Threat Simulator Development	06	30,790		30,790	U
147	0604258N	Target Systems Development	06	59,221		59,221	U
148	0604759N	Major T&E Investment	06	35,894		35,894	U
149	0605126N	Joint Theater Air and Missile Defense Organization	06	7,573		7,573	U
150	0605152N	Studies and Analysis Support - Navy	06	20,963		20,963	U
151	0605154N	Center for Naval Analyses	06	46,856		46,856	U
152	0605502N	Small Business Innovative Research	06				U
153	0605804N	Technical Information Services	06	796		796	U
154	0605853N	Management, Technical & International Support	06	32,782		32,782	U
155	0605856N	Strategic Technical Support	06	3,306		3,306	U
156	0605861N	RDT&E Science and Technology Management	06	70,302		70,302	U
157	0605863N	RDT&E Ship and Aircraft Support	06	144,033		144,033	U
158	0605864N	Test and Evaluation Support	06	342,298		342,298	U
159	0605865N	Operational Test and Evaluation Capability	06	16,399		16,399	U
160	0605866N	Navy Space and Electronic Warfare (SEW) Support	06	4,579	5,200	9,779	U
161	0605867N	SEW Surveillance/Reconnaissance Support	06	8,000		8,000	U
162	0605873M	Marine Corps Program Wide Support	06	18,490		18,490	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
163	0305885N	Tactical Cryptologic Activities	06	1,850	2,764		2,764	U
164	0804758N	Service Support to JFCOM, JNTC	06	4,104				U
165	0909999N	Financing for Cancelled Account Adjustments	06	377				U
	RDT&E	Management Support		1,179,998	838,757		838,757	
167	0604402N	Unmanned Combat Air Vehicle (UCAV) Advanced Component and Prototype Development	07	258,069	198,251		198,251	U
168	0604717M	Marine Corps Combat Services Support	07		400		400	U
169	0604766M	Marine Corps Data Systems	07		1,650		1,650	U
170	0101221N	Strategic Sub & Weapons System Support	07	68,575	88,873		88,873	U
171	0101224N	SSBN Security Technology Program	07	33,824	33,519		33,519	U
172	0101226N	Submarine Acoustic Warfare Development	07	6,620	6,360		6,360	U
173	0101402N	Navy Strategic Communications	07	9,492	23,208		23,208	U
174	0203761N	Rapid Technology Transition (RTT)	07	33,948	30,005		30,005	U
175	0204136N	F/A-18 Squadrons	07	143,560	145,091	2,000	147,091	U
176	0204152N	E-2 Squadrons	07	20,774	6,687		6,687	U
177	0204163N	Fleet Telecommunications (Tactical)	07	27,321	1,739		1,739	U
178	0204228N	Surface Support	07		3,377		3,377	U
179	0204229N	Tomahawk and Tomahawk Mission Planning Center (TMPC)	07	10,352	8,819		8,819	U
180	0204311N	Integrated Surveillance System	07	28,161	21,259		21,259	U
181	0204413N	Amphibious Tactical Support Units (Displacement Craft)	07	4,315	5,214		5,214	U
182	0204460M	Ground/Air Task Oriented Radar (G/ATOR)	07					U
183	0204571N	Consolidated Training Systems Development	07	39,792	42,244		42,244	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
163	0305885N	Tactical Cryptologic Activities	06	2,795		2,795	U
164	0804758N	Service Support to JFCOM, JNTC	06				U
165	0909999N	Financing for Cancelled Account Adjustments	06				U
	RDT&E	Management Support		845,077	5,200	850,277	
167	0604402N	Unmanned Combat Air Vehicle (UCAV) Advanced Component and Prototype Development	07	142,282		142,282	U
168	0604717M	Marine Corps Combat Services Support	07				U
169	0604766M	Marine Corps Data Systems	07				U
170	0101221N	Strategic Sub & Weapons System Support	07	105,892		105,892	U
171	0101224N	SSBN Security Technology Program	07	34,729		34,729	U
172	0101226N	Submarine Acoustic Warfare Development	07	1,434		1,434	U
173	0101402N	Navy Strategic Communications	07	19,208		19,208	U
174	0203761N	Rapid Technology Transition (RTT)	07	25,566		25,566	U
175	0204136N	F/A-18 Squadrons	07	188,299		188,299	U
176	0204152N	E-2 Squadrons	07	8,610		8,610	U
177	0204163N	Fleet Telecommunications (Tactical)	07	15,695		15,695	U
178	0204228N	Surface Support	07	4,171		4,171	U
179	0204229N	Tomahawk and Tomahawk Mission Planning Center (TMPC)	07	11,265		11,265	U
180	0204311N	Integrated Surveillance System	07	45,922		45,922	U
181	0204413N	Amphibious Tactical Support Units (Displacement Craft)	07	8,435		8,435	U
182	0204460M	Ground/Air Task Oriented Radar (G/ATOR)	07	75,088		75,088	U
183	0204571N	Consolidated Training Systems Development	07	20,229		20,229	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
184	0204574N	Cryptologic Direct Support	07	1,511	1,447		1,447	U
185	0204575N	Electronic Warfare (EW) Readiness Support	07	47,973	18,142		18,142	U
186	0205601N	HARM Improvement	07	73,189	11,147		11,147	U
187	0205604N	Tactical Data Links	07	28,241	69,189		69,189	U
188	0205620N	Surface ASW Combat System Integration	07	29,983	29,472		29,472	U
189	0205632N	MK-48 ADCAP	07	33,912	46,759		46,759	U
190	0205633N	Aviation Improvements	07	90,987	100,415		100,415	U
191	0205658N	Navy Science Assistance Program	07	3,503	1,957		1,957	U
192	0205675N	Operational Nuclear Power Systems	07	73,851	82,705		82,705	U
193	0206313M	Marine Corps Communications Systems	07	227,604	320,123	1,500	321,623	U
194	0206623M	Marine Corps Ground Combat/Supporting Arms Systems	07	77,623	159,396		159,396	U
195	0206624M	Marine Corps Combat Services Support	07	52,480	27,072		27,072	U
196	0206625M	USMC Intelligence/Electronic Warfare Systems (MIP)	07	21,658	14,101	4,050	18,151	U
197	0207161N	Tactical AIM Missiles	07	906	8,765		8,765	U
198	0207163N	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	2,588	2,913		2,913	U
199	0208058N	Joint High Speed Vessel (JHSV)	07	3,508	4,108		4,108	U
204	0303109N	Satellite Communications (SPACE)	07	410,015	263,439		263,439	U
205	0303138N	Consolidated Afloat Network Enterprise Services (CANES)	07	42,417	24,855		24,855	U
206	0303140N	Information Systems Security Program	07	24,988	37,196		37,196	U
207	0303150M	WWMCCS/Global Command and Control System	07		1,250		1,250	U
208	0303238N	Consolidated Afloat Network Enterprise Services (CANES) - MIP	07	9,334	6,602		6,602	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
184	0204574N	Cryptologic Direct Support	07	1,756		1,756	U
185	0204575N	Electronic Warfare (EW) Readiness Support	07	19,843		19,843	U
186	0205601N	HARM Improvement	07	11,477		11,477	U
187	0205604N	Tactical Data Links	07	118,818		118,818	U
188	0205620N	Surface ASW Combat System Integration	07	27,342		27,342	U
189	0205632N	MK-48 ADCAP	07	28,717		28,717	U
190	0205633N	Aviation Improvements	07	89,157		89,157	U
191	0205658N	Navy Science Assistance Program	07	3,450		3,450	U
192	0205675N	Operational Nuclear Power Systems	07	86,435		86,435	U
193	0206313M	Marine Corps Communications Systems	07	219,054		219,054	U
194	0206623M	Marine Corps Ground Combat/Supporting Arms Systems	07	181,693		181,693	U
195	0206624M	Marine Corps Combat Services Support	07	58,393	6,762	65,155	U
196	0206625M	USMC Intelligence/Electronic Warfare Systems (MIP)	07	22,966		22,966	U
197	0207161N	Tactical AIM Missiles	07	21,107		21,107	U
198	0207163N	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	2,857		2,857	U
199	0208058N	Joint High Speed Vessel (JHSV)	07	1,932		1,932	U
204	0303109N	Satellite Communications (SPACE)	07	188,482		188,482	U
205	0303138N	Consolidated Afloat Network Enterprise Services (CANES)	07	16,749		16,749	U
206	0303140N	Information Systems Security Program	07	26,307		26,307	U
207	0303150M	WWMCCS/Global Command and Control System	07	500		500	U
208	0303238N	Consolidated Afloat Network Enterprise Services (CANES) - MIP	07				U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
210	0305149N	COBRA JUDY	07	36,278	40,605		40,605	U
211	0305160N	Navy Meteorological and Ocean Sensors-Space (METOC)	07	38,795	904		904	U
212	0305192N	Military Intelligence Program (MIP) Activities	07	4,412	4,099		4,099	U
213	0305204N	Tactical Unmanned Aerial Vehicles	07	20,480	9,353		9,353	U
214	0305206N	Airborne Reconnaissance Systems	07	49,945	20,000		20,000	U
215	0305207N	Manned Reconnaissance Systems	07	17,565				U
216	0305208M	Distributed Common Ground/Surface Systems	07	8,334	23,785		23,785	U
217	0305208N	Distributed Common Ground/Surface Systems	07	16,549	25,453		25,453	U
218	0305220N	RQ-4 UAV	07	525,552	548,267		548,267	U
219	0305231N	MQ-8 UAV	07	67,048	108,248		108,248	U
220	0305232M	RQ-11 UAV	07	509	979		979	U
221	0305233N	RQ-7 UAV	07	25,229	872		872	U
222	0305234M	Small (Level 0) Tactical UAS (STUASL0)	07	26,076				U
223	0305234N	Small (Level 0) Tactical UAS (STUASL0)	07	12,645	21,387		21,387	U
224	0305237N	Medium Range Maritime UAS	07		15,000		15,000	U
225	0305239M	RQ-21A	07		24,201		24,201	U
226	0308601N	Modeling and Simulation Support	07	7,963	8,292		8,292	U
227	0702207N	Depot Maintenance (Non-IF)	07	17,750	21,446		21,446	U
228	0702239N	Avionics Component Improvement Program	07	3,177				U
229	0708011N	Industrial Preparedness	07	44,626	54,031		54,031	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
210	0305149N	COBRA JUDY	07	17,091		17,091	U
211	0305160N	Navy Meteorological and Ocean Sensors-Space (METOC)	07	810		810	U
212	0305192N	Military Intelligence Program (MIP) Activities	07	8,617		8,617	U
213	0305204N	Tactical Unmanned Aerial Vehicles	07	9,066		9,066	U
214	0305206N	Airborne Reconnaissance Systems	07				U
215	0305207N	Manned Reconnaissance Systems	07	30,654		30,654	U
216	0305208M	Distributed Common Ground/Surface Systems	07	25,917		25,917	U
217	0305208N	Distributed Common Ground/Surface Systems	07	14,676		14,676	U
218	0305220N	RQ-4 UAV	07	657,483		657,483	U
219	0305231N	MQ-8 UAV	07	99,600		99,600	U
220	0305232M	RQ-11 UAV	07	495		495	U
221	0305233N	RQ-7 UAV	07	863	7,600	8,463	U
222	0305234M	Small (Level 0) Tactical UAS (STUASL0)	07				U
223	0305234N	Small (Level 0) Tactical UAS (STUASL0)	07	9,734		9,734	U
224	0305237N	Medium Range Maritime UAS	07				U
225	0305239M	RQ-21A	07	22,343		22,343	U
226	0308601N	Modeling and Simulation Support	07	5,908		5,908	U
227	0702207N	Depot Maintenance (Non-IF)	07	27,391		27,391	U
228	0702239N	Avionics Component Improvement Program	07				U
229	0708011N	Industrial Preparedness	07	54,879		54,879	U

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2011 Actuals	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Sec
230	0708730N	Maritime Technology (MARITECH)	07		5,000		5,000	U
9999	9999999999	Classified Programs		1,527,746	1,306,945	33,784	1,340,729	U
		Operational Systems Development		4,391,753	4,086,616	41,334	4,127,950	
Total Research, Development, Test & Eval, Navy				17,865,538	17,739,575	53,884	17,793,459	

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Department of the Navy
FY 2013 President's Budget
Exhibit R-1 FY 2013 President's Budget
Total Obligational Authority
(Dollars in Thousands)

18 Jan 2012

Appropriation: 1319N Research, Development, Test & Eval, Navy

Line No	Program Element Number	Item	Act	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Sec
230	0708730N	Maritime Technology (MARITECH)	07	5,000		5,000	U
9999	9999999999	Classified Programs		1,151,159	33,784	1,184,943	U
		Operational Systems Development		3,975,546	48,146	4,023,692	
Total Research, Development, Test & Eval, Navy				16,882,877	60,119	16,942,996	

R-1C: FY 2013 President's Budget (Published Version), as of January 18, 2012 at 11:19:58

Program Element Table of Contents (by Budget Activity then Line Item Number)

Budget Activity 05: Development & Demonstration (SDD)
Appropriation 1319: Research, Development, Test & Evaluation, Navy

Budget Activity 05: Development & Demonstration (SDD)
Appropriation 1319: Research, Development, Test & Evaluation, Navy

Budget Activity 05: Development & Demonstration (SDD)
Appropriation 1319: Research, Development, Test & Evaluation, Navy

Budget Activity 05: Development & Demonstration (SDD)
Appropriation 1319: Research, Development, Test & Evaluation, Navy

Program Element Table of Contents (Alphabetically by Program Element Title)

Research, Development, Test and Evaluation, Navy

For expenses necessary for basic and applied scientific research, development, test and evaluation, including maintenance, rehabilitation, lease, and operation of facilities and equipment, $16,882,877,000, to remain available for obligation until September 30, 2014.

For an additional amount for Research, Development, Test and Evaluation, Navy, $60,119,000, to remain available until September 30, 2014: Provided, That such amounts in this paragraph are designated by the Congress for Overseas Contingency Operations pursuant to section 251(b)(2)(A) of the Balanced Budget and Emergency Deficit Control Act of 1985, as amended.

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	51.826	42.651	33.978	-	33.978	26.381	17.836	14.043	9.246	Continuing	Continuing
1109: *CH/MH-53*	3.478	3.271	2.455	-	2.455	2.674	2.685	2.719	2.764	Continuing	Continuing
2415: *H-60 Development*	39.379	30.606	29.743	-	29.743	21.953	13.422	9.576	4.714	Continuing	Continuing
2460: *VH-3/VH-60*	8.969	1.774	1.780	-	1.780	1.754	1.729	1.748	1.768	Continuing	Continuing
9999: *Congressional Adds*	-	7.000	-	-	-	-	-	-	-	0.000	7.000

A. Mission Description and Budget Item Justification

This Program Element includes funding for the development support for improvements to current systems for CH/MH-53, MH-60 development, and VH-3/VH-60. The H-53 is the premier heavy lift helicopter for the Marine Corps and only operational airborne mine sweeping platform for the Navy. H-53 RDT&E efforts focus on trade studies and risk reduction measures to identify candidate survivability, safety, avionics, cargo handling, cockpit and other airframe specific improvements to extend the service life. The MH-60S Helicopter has three primary mission areas; Combat Support, Organic Airborne Mine Countermeasures and Armed Helo. The VH-3/VH-60 is required to provide safe and timely transportation for the President and Vice President of the United States, heads of state and others as directed by the White House Military Office.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	44.329	35.651	24.401	-	24.401
Current President's Budget	51.826	42.651	33.978	-	33.978
Total Adjustments	7.497	7.000	9.577	-	9.577
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	7.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	8.638	-			
• SBIR/STTR Transfer	-0.915	-			
• Program Adjustments	-	-	9.583	-	9.583
• Rate/Misc Adjustments	-	-	-0.006	-	-0.006
• Congressional General Reductions Adjustments	-0.226	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604212N: *Other Helicopter Development*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Congressional Add: *VH-3/VH-60 (Cong)*	-	7.000
Congressional Add Subtotals for Project: 9999	-	7.000
Congressional Add Totals for all Projects	-	7.000

Change Summary Explanation

Technical: Not applicable.

Schedule:

1109 CH/MH-53: Not Applicable

2415 Airborne Mine Countermeasures: Not Applicable.

2415 Forward Firing Weapon - Not Applicable.

2460 VH-3D/VH-60N: Not Applicable

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1109: *CH/MH-53*	3.478	3.271	2.455	-	2.455	2.674	2.685	2.719	2.764	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The H-53 helicopter is the premier heavy lift helicopter for the Marine Corps and the only operational airborne mine sweeping platform for the Navy. Through FY2016, H-53 efforts will continue to develop and qualify components, prior to production and approval decisions, in order to replace obsolete system components. Emphasis will be placed on supportability improvement modifications that will sustain the H-53 aircraft until the transition of the H-53K is complete. These efforts combined, will significantly improve the readiness of the H-53 fleet while reducing long term operational and supportability costs. Modeling and simulation will be used to the maximum practical extent throughout this effort. Man Flight Simulator will be utilized to develop, install and test interim modifications to existing H-53 legacy avionics, while maintaining the original basic system footprint and functionality. As a part of this effort, a complete Electro Magnetic Vulnerability assessment will be required for the affected and/or modified systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: H-53 Avionics	0.544	0.544	0.544	-	0.544
Articles:	0	0	0		0
FY 2011 Accomplishments: Integrated software applique for cockpit and avionics improvements, to include the development of new sensors. Developed flight control computer and test set design modifications to address anticipated obsolesence issues. Conducted Business Case Analyses to determine impact of high Operation and Support cost drivers and address alternatives to mitigate identified issues.					
FY 2012 Plans: Integrate software applique for cockpit and avionics improvements, to include the development of new sensors. Develop flight control computer and test set design modifications to address anticipated obsolesence issues. Conduct Business Case Analyses to determine impact of high Operation and Support cost drivers and address alternatives to mitigate identified issues.					
FY 2013 Base Plans: Integrate software applique for cockpit and avionics improvements, to include the development of new sensors. Develop flight control computer and test set design modifications to address anticipated obsolescence issues.					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Conduct Business Case Analyses to determine impact of high Operation and Support cost drivers and address alternatives to mitigate identified issues.					
Title: H-53 Survivability	0.406	0.406	0.405	-	0.405
Articles:	0	0	0		0
FY 2011 Accomplishments: Performed trade studies, risk reduction, design, development, model, integration and test activities for H-53 survivability systems to include effectiveness of the ballistic vulnerability (armor) package.					
FY 2012 Plans: Perform trade studies, risk reduction, design, development, model, integration and test activities for H-53 survivability systems to include effectiveness of the ballistic vulnerability (armor) package.					
FY 2013 Base Plans: Perform trade studies, risk reduction, design, development, model, integration and test activities for H-53 survivability systems to include effectiveness of the ballistic vulnerability (armor) package.					
Title: H-53 Propulsion	1.490	1.265	0.451	-	0.451
Articles:	0	0	0		0
FY 2011 Accomplishments: Performed trade studies, risk reduction, design, development, integration and test activities for H-53 T64 engine and related systems.					
FY 2012 Plans: Perform trade studies, risk reduction, design, development, integration and test activities for H-53 T64 engine and related systems.					
FY 2013 Base Plans: Provide in-house, field activity, and contractor support of IPTs to allow for studies and analyses, preparation of acquisition documentation and examination of equipment and avionics for the H-53. Efforts include, but are not limited to, government development support, engineering support, product management support, system engineering and logistics support, and travel for the H-53 program.					
Title: Project Management Support	0.714	0.732	0.731	-	0.731
Articles:	0	0	0		0
FY 2011 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Provided in-house, field activity, and contractor support of IPTs to allow for studies and analyses, preparation of acquisition documentation and examination of equipment and avionics for the H-53. Efforts included, but were not limited to, government development support, engineering support, product management support, system engineering and logistics support, and travel for the H-53 program. ***FY 2012 Plans:*** Provide in-house, field activity, and contractor support of IPTs to allow for studies and analyses, preparation of acquisition documentation and examination of equipment and avionics for the H-53. Efforts include, but are not limited to, government development support, engineering support, product management support, system engineering and logistics support, and travel for the H-53 program. ***FY 2013 Base Plans:*** Provide in-house, field activity, and contractor support of IPTs to allow for studies and analyses, preparation of acquisition documentation and examination of equipment and avionics for the H-53. Efforts include, but are not limited to, government development support, engineering support, product management support, system engineering and logistics support, and travel for the H-53 program.					
Title: H-53 Airframe	0.324	0.324	0.324	-	0.324
Articles:	0	0	0		0
FY 2011 Accomplishments: Performed trade studies, risk reduction, design, development, integration and test activities for the H-53 airframe to include, but not limited to, main rotorhead, cowlings, aircraft structure, drive train, and various dynamic components. ***FY 2012 Plans:*** Perform trade studies, risk reduction, design, development, integration and test activities for the H-53 airframe to include, but not limited to, main rotorhead, cowlings, aircraft structure, drive train, and various dynamic components. ***FY 2013 Base Plans:*** Perform trade studies, risk reduction, design, development, integration and test activities for the H-53 airframe to include, but not limited to, main rotor head, cowlings, aircraft structure, drive train, and various dynamic components.					
Accomplishments/Planned Programs Subtotals	3.478	3.271	2.455	-	2.455

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0528: *H-53 Series*	59.945	124.067	45.567	15.870	61.437	52.278	40.599	30.054	30.616	406.953	2,004.267

D. Acquisition Strategy

This is a non-ACAT program. H-53 RDT&E efforts will focus on trade studies and risk reduction measures to identify candidate survivability, safety, avionics, cargo handling, cockpit and other airframe specific improvements to extend the service life.

E. Performance Metrics

Successfully perform studies, analysis and develop software to address emergent H-53 issues. Successfully support developmental and operation test activities to qualify aircraft modifications/upgrades.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Various:Various	2.493	0.420	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Ancillary Hardware Development	Various	Various:Various	1.794	0.224	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWC AD:Patuxent River, MD	2.384	0.524	Nov 2011	0.544	Nov 2012	-		0.544	Continuing	Continuing	Continuing
Prior Year Prod Dev	Various	Various:Various	14.503	-		-		-		-	0.000	14.503	
		Subtotal	21.174	1.168		0.544		-		0.544			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	Various	Various:Various	2.071	0.326	Mar 2012	0.325	Mar 2013	-		0.325	Continuing	Continuing	Continuing
GFE	Various	NAWC AD:Patuxent River, MD	1.741	0.421	Nov 2011	0.421	Nov 2012	-		0.421	Continuing	Continuing	Continuing
		Subtotal	3.812	0.747		0.746		-		0.746			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various:Various	5.167	0.870	Mar 2012	0.700	Mar 2013	-		0.700	Continuing	Continuing	Continuing
		Subtotal	5.167	0.870		0.700		-		0.700			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*

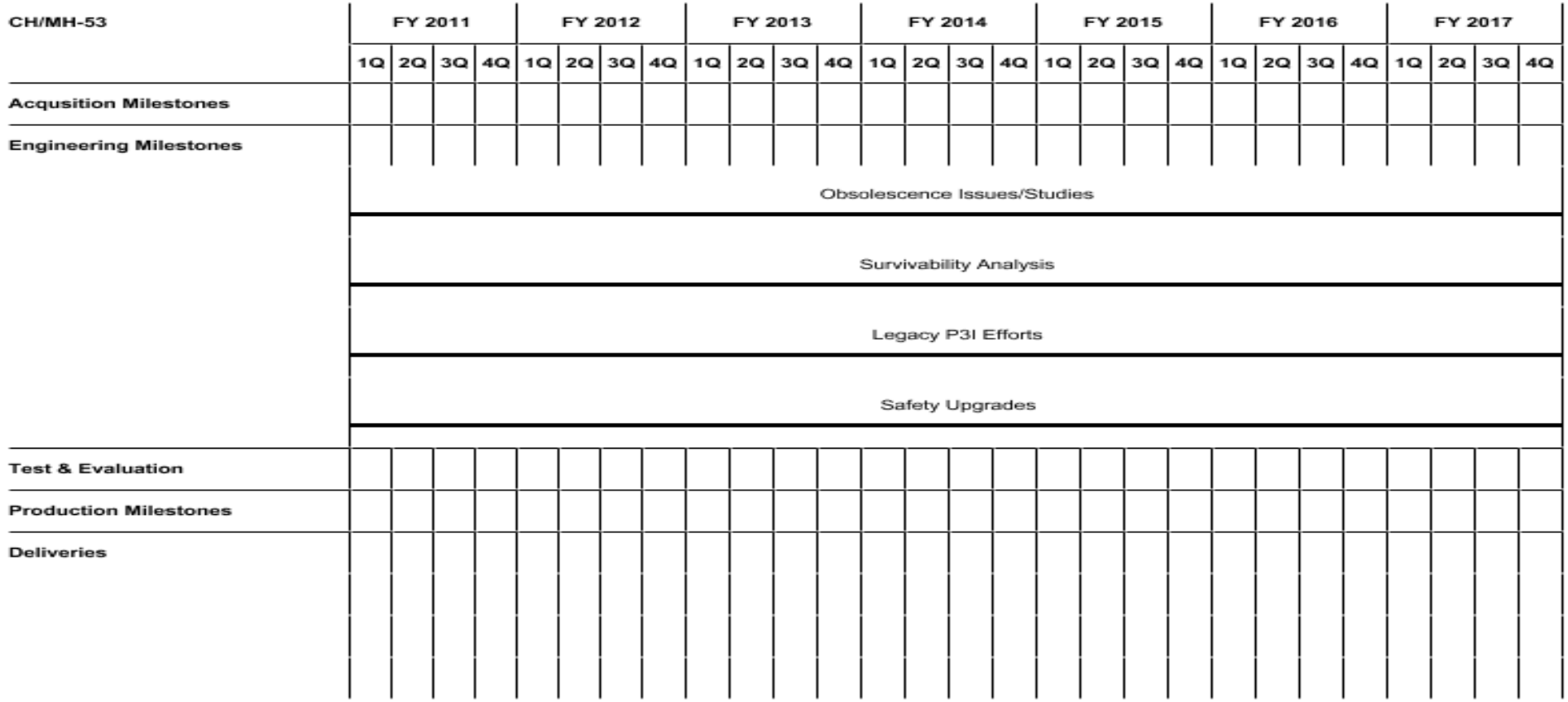
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWC AD:Patuxent River, MD	5.077	0.307	Nov 2011	0.286	Nov 2012	-		0.286	Continuing	Continuing	Continuing
Travel	Various	Various:Various	1.597	0.179	Oct 2011	0.179	Oct 2012	-		0.179	Continuing	Continuing	Continuing
Prior Year Mgmt	Various	Various:Various	4.674	-		-		-		-	0.000	4.674	
		Subtotal	11.348	0.486		0.465		-		0.465			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	41.501	3.271		2.455		-		2.455			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*



2013OSD - 0604212N - 1109

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 1109: *CH/MH-53*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
CH/MH-53				
Engineering Milestones: - Obsolescence Issues/Studies	1	2011	4	2017
Engineering Milestones: - Survivability Analysis	1	2011	4	2017
Engineering Milestones: - Legacy P3I Efforts	1	2011	4	2017
Engineering Milestones: - Safety Upgrades	1	2011	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2415: *H-60 Development*	39.379	30.606	29.743	-	29.743	21.953	13.422	9.576	4.714	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Helicopter Combat Support mission is to maintain forward deployed fleet sustainability through rapid airborne delivery of materials and personnel and to support amphibious operations through search and rescue coverage. The primary roles of the aircraft are to conduct vertical replenishment, day/night ship-to-ship, ship-to-shore, and shore-to-ship external transfer of cargo; internal transport of passengers, mail and cargo, vertical on board delivery; airhead operations, and day/night search and rescue, Airborne Mine Countermeasures (AMCM) and Armed Helo. The MH-60S Operational Requirements Document was modified in May 2000 to add AMCM as a primary mission for the MH-60S. ORD Change II was validated and approved by the Joint Requirements Oversight Council on 15 February 2008 updating key performance parameters. The AMCM mission will provide Carrier Strike Groups and Expeditionary Strike Groups with an AMCM capability. The Armed Helo will provide Combat Search and Rescue, Surface Warfare and Maritime Interdiction Operations to include Link 16 and Forward Firing Weapons (FFW), which includes Rockets and Anti-swarm weapons to address the Fast Attack Craft/Fast Inshore Attack Craft Threat. The aircraft secondary roles include torpedo and drone recovery, noncombatant evacuation operations, and SEAL team and Explosive Ordnance Disposal support.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: MH-60S Airframe Development and Integration	9.805	7.400	10.463	-	10.463
Articles:	0	0	0		0
Description: The effort includes design, development, integration, and support of the AMCM unique items into the MH-60S airframe. T&E on AMCM Mission Kits as each sensor/weapon system is introduced to the MH-60S. AMCM training development to include situational analysis and Instructional System Development documentation. Conduct trade studies and analysis, develop and qualify components in order to replace obsolete system components on the MH-60S. Analyze, design, integrate, test, and support FFW.					
FY 2011 Accomplishments: Continued AMCM sensor/weapon system integration and testing. Continued FFW integration/testing efforts.					
FY 2012 Plans: Continue AMCM sensor/weapon system integration and testing. Initiate AMCM Spiral Upgrade efforts. Complete FFW 20mm Gun System testing and reporting.					
FY 2013 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Complete Airborne Mine Countermeasures (AMCM) sensor/weapon system testing. Continue AMCM Spiral Upgrade efforts. Analyze, design, integrate, and support follow-on Forward Firing Weapons (FFW) capability of Rockets to include training development of complete FFW capability.					
Title: MH-60S Avionics Development and Integration ***Articles:*** ***Description:*** Developmental efforts on the avionics architecture and systems of the MH-60S helicopter. Development of the operator consoles, as well as software modifications/improvements, to support AMCM systems. AMCM training development to include situational analysis, and Instructional System Development documentation for various sensors. Link 16 software development/upgrades and test for AMCM messages. ***FY 2011 Accomplishments:*** Continued AMCM Blk 2B sensor/weapon system testing and FFW integration efforts. ***FY 2012 Plans:*** Continue AMCM Blk 2B sensor/weapon system testing. Support AMCM Spiral Upgrade efforts. ***FY 2013 Base Plans:*** Continue AMCM test efforts/AMCM Spiral Upgrades; Support Rockets integration.	12.595 0	10.276 0	2.500 0	-	2.500 0
Title: MH-60S Test, Engineering, Logistics, Mgt Support ***Articles:*** ***Description:*** Navy field activity systems engineering, logistics support, management and travel for the AMCM MH-60S Weapons System Integration Team for airframe and avionics, and FFW integration. Support/conduct MH-60S aircraft integration testing for AMCM sensor/weapon systems and FFW. ***FY 2011 Accomplishments:*** Supported, planned and conducted AMCM 2A/2B sensor/weapon system and FFW testing and evaluation. ***FY 2012 Plans:*** Continue support of test and integration of AMCM 2B sensor/weapon system and complete FFW integration. ***FY 2013 Base Plans:***	16.979 0	12.930 0	16.780 0	-	16.780 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Complete Airborne Mine Countermeasures (AMCM) test and integration of AMCM 2B sensor/weapon system, support AMCM Spiral Upgrades, follow-on Forward Firing Weapons (FFW) Guns 20mm reporting and Rockets Integration/testing.					
Accomplishments/Planned Programs Subtotals	39.379	30.606	29.743	-	29.743

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN1/017900: *MH-60S*	531.763	474.661	454.069	0.000	454.069	464.954	280.648	29.009	0.000	0.000	7,010.955
• APN6/060510: *MH-60S SPARES*	0.360	0.887	2.824	0.000	2.824	2.188	0.393	0.000	0.000	0.000	170.214
• APN5/053000: *H-60 MODS*	26.716	26.203	18.945	0.000	18.945	22.359	32.501	45.204	45.906	86.819	402.162

D. Acquisition Strategy

AMCM and Armed Helo are elements of the existing MH-60S ACAT IC Program. MH-60S will employ an evolutionary acquisition approach via the MH-60S Block Upgrades. This allows for future modification for systems still in early development. The block upgrades will maximize commonality across all MH-60S missions and all AMCM/Armed Helo weapon systems, including logistics, training and maintenance. The MH-60S block upgrades are as follows.
-Block 1 - Combat Support Helicopter
-Block 2 - Organic Airborne Mine Countermeasures
-Block 3 - Armed Helo

E. Performance Metrics

Successfully achieve Initial Operational Capability for AMCM. Successfully conduct Interim Program Review IV for AMCM to achieve kit full rate production decision. Successfully complete Developmental Test/Operational Test for Block IIA AMCM sensor integration. Successfully complete FFW Rockets Developmental/Operational Testing.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Dev - Airframe*	SS/CPIF	Sikorsky:Stratford, CT	167.240	4.850	Jan 2012	3.000	Mar 2013	-		3.000	3.500	178.590	178.590
Primary Hdw Dev - Airframe FFW	SS/CPFF	Sikorsky:Stratford, CT	9.637	-		4.213	Mar 2013	-		4.213	5.745	19.595	19.595
Primary Hdw Dev - Avionics*	SS/CPIF	Lockheed Martin:Owego, NY	208.940	10.276	Oct 2011	2.500	Dec 2012	-		2.500	4.133	225.849	225.849
Primary Hdw Dev - CSTRS	WR	NSWC:Panama City, FL	20.630	1.500	Feb 2012	1.500	Dec 2012	-		1.500	1.500	25.130	
Primary Hdw Dev - CSTRS	MIPR	CECOM:APG, MD	11.979	1.050	Dec 2011	1.000	Dec 2012	-		1.000	1.300	15.329	
Primary Hdw Dev - FFW	C/FFP	TBD:TBD	-	-		0.250	Dec 2012	-		0.250	0.250	0.500	0.500
Primary Hdw Dev - Training	TBD	TBD:TBD	-	-		0.500	Jan 2013	-		0.500	1.350	1.850	
All Product Dev Cost from FY97-FY11	Various	Various:Various	51.554	-		-		-		-	0.000	51.554	
		Subtotal	469.980	17.676		12.963		-		12.963	17.778	518.397	

Remarks

Remarks: * PY SS/CPAF - 2%
FY05-FY12 SS/CPIF

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS - MSS (Non FFRDC)	Various	Various:Various	2.669	0.350	Dec 2011	0.410	Dec 2012	-		0.410	1.589	5.018	
Integrated Logistics Support	WR	Various:Various	5.560	0.470	Nov 2011	1.000	Nov 2012	-		1.000	7.000	14.030	
All Support cost from FY98-FY11	Various	Various:Various	8.589	-		-		-		-	0.000	8.589	
		Subtotal	16.818	0.820		1.410		-		1.410	8.589	27.637	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Evaluation	WR	NAWCAD:Patuxent River, MD	40.322	4.300	Nov 2011	3.000	Nov 2012	-		3.000	4.700	52.322	
Dev Test & Evaluation	WR	Various:Various	20.228	0.650	Nov 2011	0.913	Nov 2012	-		0.913	0.000	21.791	
Operational Test & Evaluation	WR	OPTEVFOR:Norfolk, VA	4.535	2.275	Feb 2012	2.100	Nov 2012	-		2.100	2.500	11.410	
All Test & Eval Costs from FY97-FY11	Various	Various:Various	6.159	-		-		-		-	0.000	6.159	
		Subtotal	71.244	7.225		6.013		-		6.013	7.200	91.682	

Management Services ($ in Millions)

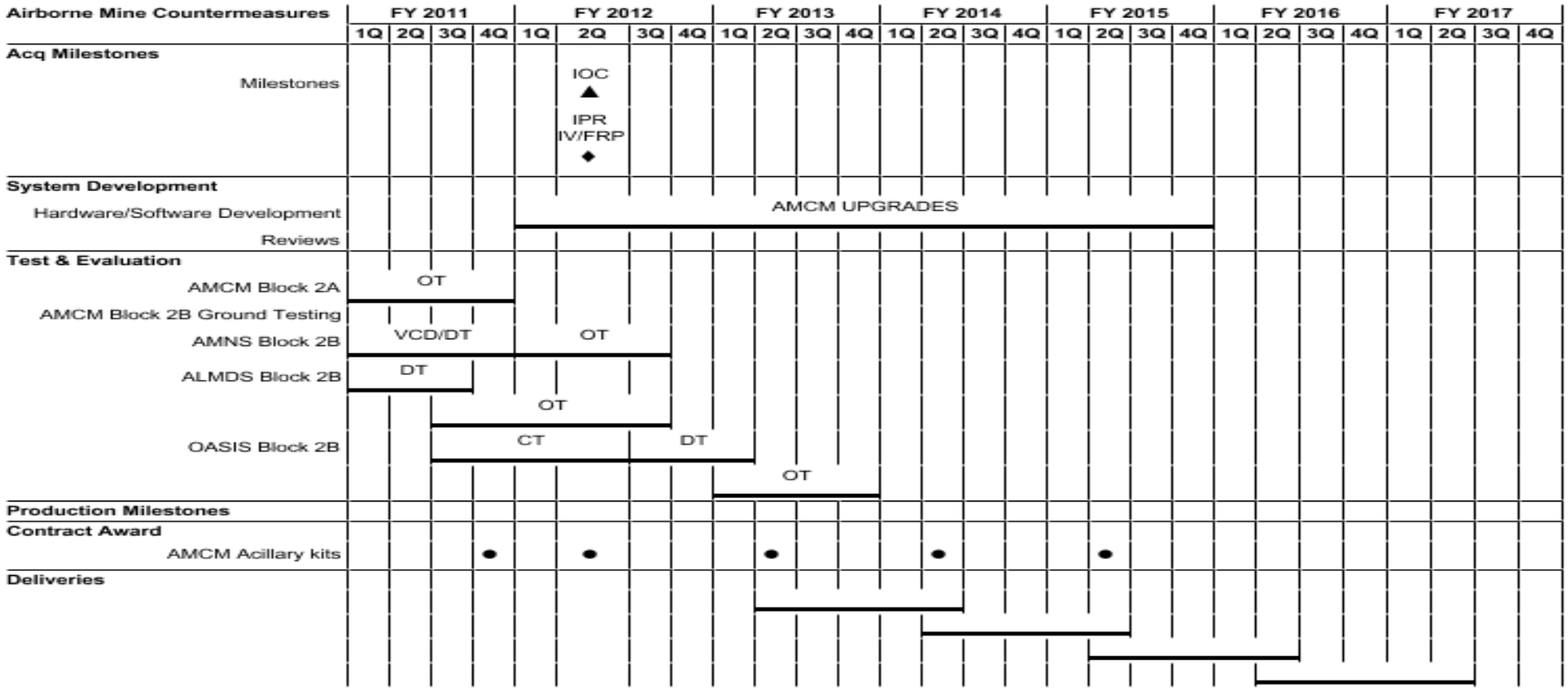
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng & Tech Srvc (Non FFRDC)	Various	Various:Various	16.465	0.845	Jan 2012	2.735	Jan 2013	-		2.735	4.080	24.125	
Government Engineering Support	WR	NAWCAD:Patuxent River, MD	12.020	1.883	Nov 2011	3.494	Nov 2012	-		3.494	4.883	22.280	
Government Engineering Support	WR	NSWC:Panama City, FL	30.346	0.800	Nov 2011	1.589	Nov 2012	-		1.589	2.644	35.379	
Government Engineering Support	WR	Various:Various	25.123	0.205	Dec 2011	0.550	Dec 2012	-		0.550	1.875	27.753	
Program Mgmt Support CSS	WR	Various:Various	5.380	0.242	Jan 2012	0.172	Jan 2013	-		0.172	0.688	6.482	
Program Mgmt Support	WR	Various:Various	13.681	0.710	Nov 2011	0.642	Nov 2012	-		0.642	1.284	16.317	
Travel	WR	Various:Various	2.926	0.200	Nov 2011	0.175	Nov 2012	-		0.175	0.706	4.007	
All Mgmt Costs from FY97-FY11	Various	Various:Various	0.984	-		-		-		-	0.000	0.984	
		Subtotal	106.925	4.885		9.357		-		9.357	16.160	137.327	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	664.967	30.606		29.743		-		29.743	49.727	775.043	

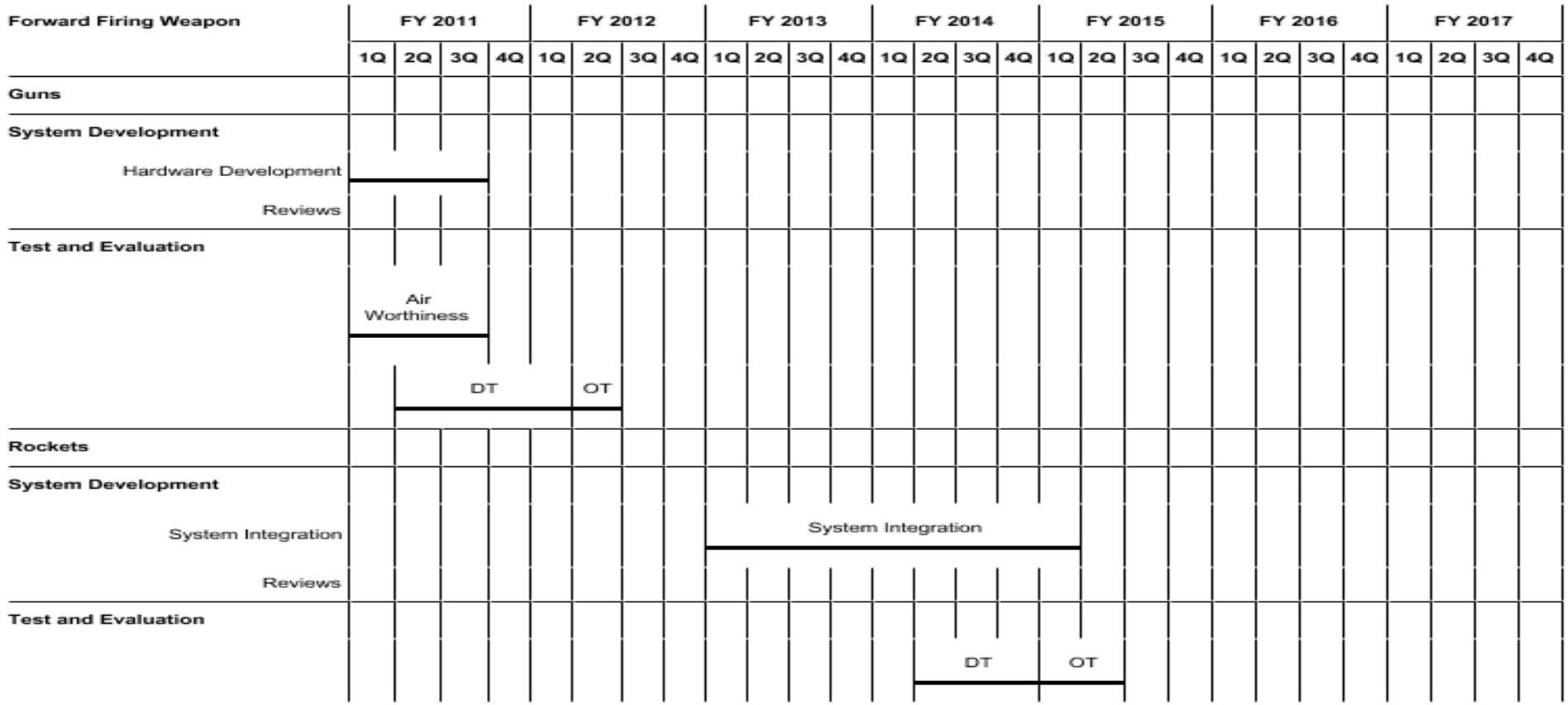
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*



2013PB - 0604212N - 2415

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*



2013PB - 0604212N - 2415

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Airborne Mine Countermeasures				
Acq Milestones: Milestones: - Initial Operational Capability-AMCM	2	2012	2	2012
Acq Milestones: Milestones: - IPR IV/FRP AMCM	2	2012	2	2012
System Development: Hardware/Software Development: - AMCM Spiral Upgrades	1	2012	4	2015
Test & Evaluation: AMCM Block 2A: - Operational Testing (OT) Block 2A	1	2011	4	2011
Test & Evaluation: AMNS Block 2B: - Verification of Correction of Deficiencies (VCD) / Developmental Testing (DT) (AMNS)	1	2011	4	2011
Test & Evaluation: AMNS Block 2B: - Operational Testing (OT) (AMNS)	1	2012	3	2012
Test & Evaluation: ALMDS Block 2B: - Developmental Testing (DT) (ALMDS)	1	2011	3	2011
Test & Evaluation: ALMDS Block 2B: - Operational Testing (OT) (ALMDS)	3	2011	3	2012
Test & Evaluation: OASIS Block 2B: - Contractor Test (OASIS)	3	2011	2	2012
Test & Evaluation: OASIS Block 2B: - Development Testing (DT) (OASIS)	3	2012	1	2013
Test & Evaluation: OASIS Block 2B: - Operation Testing (OT) (OASIS)	1	2013	4	2013
Contract Award: AMCM Acillary kits: - Contract Award - LRIP (AMCM Ancillary Kits-FY11)	4	2011	4	2011
Contract Award: AMCM Acillary kits: - Contract Award - Production (AMCM Ancillary Kits-FY12)	2	2012	2	2012
Contract Award: AMCM Acillary kits: - Contract Award - Production (AMCM Ancillary Kits-FY13)	2	2013	2	2013
Contract Award: AMCM Acillary kits: - Contract Award - Produciton (AMCM Ancillary Kits-FY14)	2	2014	2	2014
Contract Award: AMCM Acillary kits: - Contract Award - Produciton (AMCM Ancillary Kits-FY15)	2	2015	2	2015
Deliveries: - LRIP Delivery (AMCM Ancillary Kits-FY11)	2	2013	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2415: *H-60 Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: - Production Delivery (AMCM Ancillary Kits-FY12)	2	2014	2	2015
Deliveries: - Production Delivery (AMCM Ancillary Kits-FY13)	2	2015	2	2016
Deliveries: - Production Delivery (AMCM Ancillary Kits-FY14)	2	2016	2	2017
Forward Firing Weapon				
System Development: Hardware Development: - System Design, Build and Integration (FFW)	1	2011	3	2011
Test and Evaluation: - Air Worthiness Certification (FFW)	1	2011	3	2011
Test and Evaluation: - Developmental Testing (DT) (FFW)	2	2011	1	2012
Test and Evaluation: - Operational Testing (OT) (FFW)	2	2012	2	2012
System Development: System Integration: System Integration	1	2013	1	2015
Test and Evaluation: Developmental Testing (DT) (FFW)	2	2014	4	2014
Test and Evaluation: Operational Testing (OT) (FFW)	1	2015	2	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2460: *VH-3/VH-60*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2460: *VH-3/VH-60*	8.969	1.774	1.780	-	1.780	1.754	1.729	1.748	1.768	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Marine Helicopter Squadron One (HMX-1) is required to provide safe and timely transportation for the President and Vice President of the United States, heads of state and others as directed by the White House Military Office. Currently two Type, Model, Series aircraft are used by HMX-1 for the Presidential support mission - the VH-3D and the VH-60N. This project provides a Service Life Assessment Program and Aircraft Life Management Plan for the VH Executive Helicopters.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: VH-3D and VH-60N Service Life Assessment Program	0.339	-	-	-	-
Articles:	0				
Description: VH-3D and VH-60N Service Life Assessment Program: This project funds a Service Life Assessment Program for both the VH-3D and VH-60N.					
FY 2011 Accomplishments: FY 2011 Plans: Included government support for efforts related to the successful completion of a Service Life Assessment Program on each VH aircraft.					
Title: VH Executive Helicopter Aircraft Life Management Plan	8.630	1.774	1.780	-	1.780
Articles:	0	0	0		0
Description: VH Executive Helicopter Aircraft Life Management Program: Provides for management and improvement of all Executive Helicopter systems readiness including safety, operational weight, mission availability, structural integrity, component reliability, maintainability, software, and obsolescence issues as they arise.					
FY 2011 Accomplishments: Provided government support and contract award for efforts associated with the Aircraft Life Management Program for the VH-3D and VH-60N.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2460: *VH-3/VH-60*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Provides government support and contract award for efforts associated with the Aircraft Life Management Program for the VH-3D and VH-60N. ***FY 2013 Base Plans:*** Provides government support and contract award for efforts associated with the Aircraft Life Management Program for the VH Executive Helicopters.					
Accomplishments/Planned Programs Subtotals	8.969	1.774	1.780	-	1.780

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/056600: *Executive Helicopters Series*	43.195	77.511	58.163	0.000	58.163	85.810	107.898	84.740	66.349	49.552	975.469

D. Acquisition Strategy

VH Executive Helicopter Aircraft Life Management Plan will include trade studies necessary to address safety, operational weight, mission availability, structural integrity, component reliability, maintainability, software, and obsolescence issues as they arise. Results of these trade studies will lead to modifications to be addressed through the program's Obsolescence Management Program Operational Safety and Improvement Program.

E. Performance Metrics

Completion of VH-3D and VH-60N Service Life Assessment Program efforts. Completion of VH Executive Helicopter Aircraft Life Management Program efforts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 2460: *VH-3/VH-60*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/CPFF	Sikorsky:Stratford, CT	15.150	1.388	Feb 2012	-		-		-	7.206	23.744	23.744
Prior Year Prod Dev	Various	Various:Various	2.743	-		-		-		-	0.000	2.743	2.743
		Subtotal	17.893	1.388		-		-		-	7.206	26.487	26.487

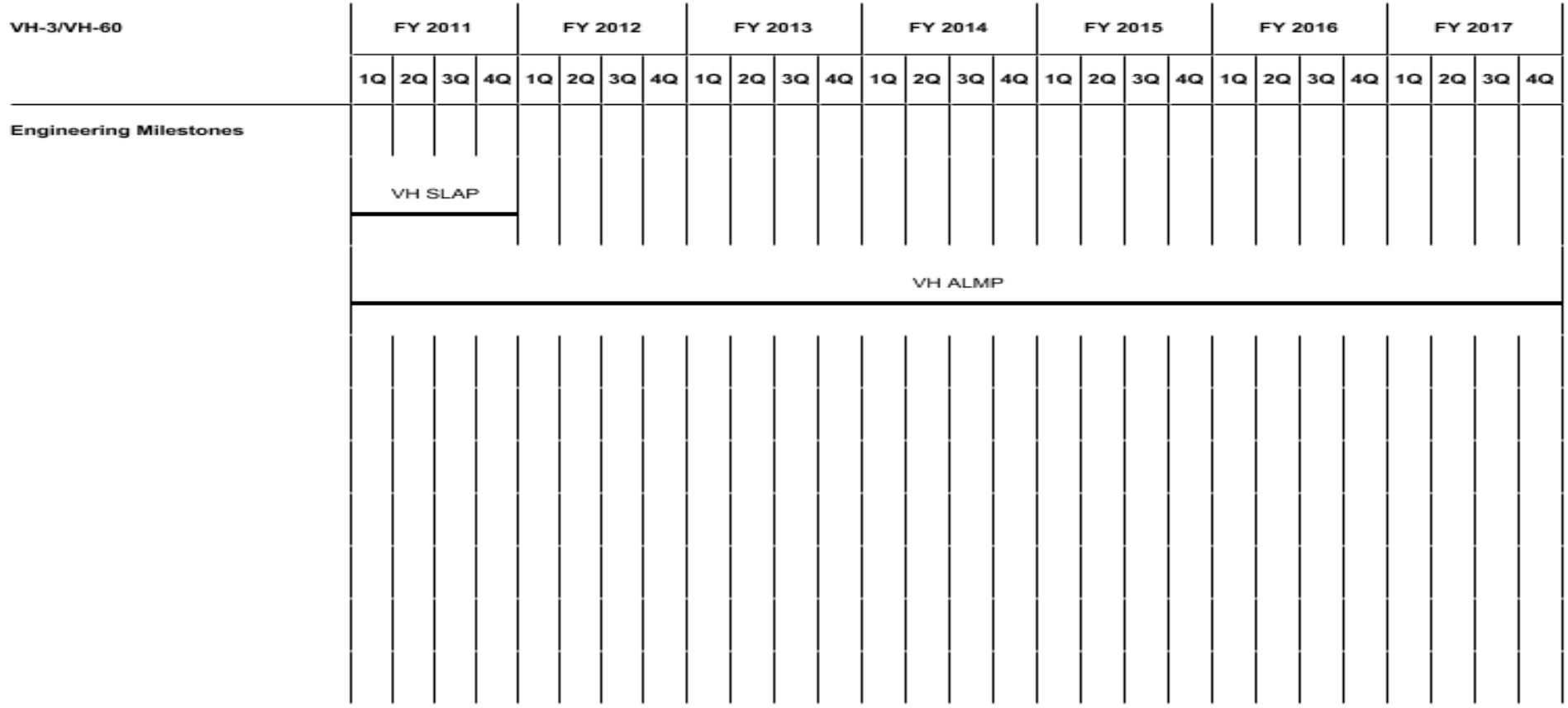
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD:Patuxent River, MD	4.085	0.286	Nov 2011	1.341	Nov 2012	-		1.341	Continuing	Continuing	Continuing
Program Management Support	WR	NAWCAD:Patuxent River, MD	0.338	0.050	Nov 2011	0.399	Nov 2012	-		0.399	Continuing	Continuing	Continuing
Travel	Various	Various:Various	0.150	0.050	Oct 2011	0.040	Oct 2012	-		0.040	Continuing	Continuing	Continuing
		Subtotal	4.573	0.386		1.780		-		1.780			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	22.466	1.774		1.780		-		1.780			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604212N: *Other Helicopter Development*	**PROJECT** 2460: *VH-3/VH-60*



*2013PB - 0604212N - 2460 ***Fuel System Upgrade Program completed 4Q FY10*

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604212N: *Other Helicopter Development*	**PROJECT** 2460: *VH-3/VH-60*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
VH-3/VH-60				
Engineering Milestones: VH SLAP	1	2011	4	2011
Engineering Milestones: VH-3D / VH-60N ALMP	1	2011	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604212N: *Other Helicopter Development*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	7.000	-	-	-	-	-	-	-	0.000	7.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: VH-3/VH-60 (Cong)	-	7.000
FY 2012 Plans: N/A		
Congressional Adds Subtotals	-	7.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/056600: *Executive Helicopters Series*	43.195	77.511	58.163	0.000	58.163	85.810	107.898	84.740	66.349	49.552	975.469

D. Acquisition Strategy

Not required for Congressional Adds.

E. Performance Metrics

Not required for Congressional Adds.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	22.063	30.676	32.789	-	32.789	35.932	15.057	18.772	19.277	Continuing	Continuing
0652: *AV-8B*	22.063	30.676	32.789	-	32.789	35.932	15.057	18.772	19.277	Continuing	Continuing

A. Mission Description and Budget Item Justification

The program provides for AV-8B Design, Development, Integration and Test of various platform improvements such as: Engine Life Management Program (ELMP), Escape Systems, Joint Mission Planning System (JMPS), and Block upgrades to various mission systems, communications systems, navigation equipment, weapons carriage and countermeasures, and the Aircraft Handling/Readiness Management Plan (RMP). The JMPS is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. A/C handling and performance represents all engineering activities for development and design to support aircraft safety flight clearance and concept exploration to support POM objectives. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activities under the consolidated effort of Block Developments: H6.0, H6.1 and follow-on block upgrades. H6.0 block upgrade provides weapons carriage expansion through the Digital Improved Triple Ejector Rack program and will also deliver critical improvements to aircraft survivability equipment. The H6.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades, mission planning updates, and Litening Operational Flight Program. A H6.2 update, accomplished by the Common Avionics Program, provides AV-8B a self-contained GPS navigation capability that is required to access preferred airspaces. AV-8B funding supports peculiar flight test requirements. The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and accessories. PMA-257 will accomplish this mission by conducting Engineering Project Description investigations and performing a series of planned Endurance Tests to derive engineering improvements to the engine. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The RMP is required to ensure the AV-8B air vehicle's sustained mission availability, and safe and reliable operational readiness until end of service. Air vehicle sustainment requires component and system analyses, technical planning, identification and diagnosis of problems and the development, testing and flight clearance of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, systems reliability and maintainability, inventory preservation, alternative mission development, or other emergent material or equipment conditions affecting AV-8B systems readiness. Activities include research/analysis for system safety deficiency corrections, fuel system safety improvements, structural analyses, monitoring and integrity analysis, component obsolescence analyses including development of display computer and air data computer replacement, alternatives explorations for aging equipment, reliability improvement analyses and design developments. FY13 continues Flight Control Computer development efforts and associated obsolescence and readiness requirements for ELMP, RMP and Operational Flight Program updates.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	22.867	30.676	23.763	-	23.763
Current President's Budget	22.063	30.676	32.789	-	32.789
Total Adjustments	-0.804	-	9.026	-	9.026
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.300	-			
• SBIR/STTR Transfer	-0.388	-			
• Program Adjustments	-	-	8.982	-	8.982
• Rate/Misc Adjustments	-	-	0.044	-	0.044
• Congressional General Reductions Adjustments	-0.116	-	-	-	-

Change Summary Explanation

Technical: H6.2 update is accomplished by the Common Avionics Program.

Schedule:
Acquisition Milestones for H6.0 DT/IT changed due to delay in H6.0 CDR.
Acquisition Milestones for H6.1 CDR, H6.1 DT/IT, H6.1 software delivery, and H6.1 IOC changed due to delay in requirements development.
Airborne Variable Message Format Terminal development was accelerated due to system development successes.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0652: *AV-8B*	22.063	30.676	32.789	-	32.789	35.932	15.057	18.772	19.277	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for AV-8B Design, Development, Integration and Test of the following improvements: The Engine Life Management Program (ELMP), Escape System and Aircraft Handling/Readiness Management Plan (RMP). The ELMP is a comprehensive plan to increase safety of flight and operational readiness of the AV-8B F402-RR-408 Engine and Gas Turbine Starter (GTS), as well as other critical engine components. The Program Office will accomplish this mission through the Component Improvement Program (CIP), which entails Engineering Project Description investigations and a series of planned Endurance Tests to derive safety and reliability improvements to the engine and engine components. The Escape System qualifies an improved ejection seat to reduce the risk of injury to aircrew. The Joint Mission Planning System (JMPS) is required as part of the DON directed migration to a common Navy and Marine Corps mission planning system. H6.0 includes weapons carriage expansion efforts, H6.1 provides enhancements and software corrections, and H6.2 (Common Avionics Program) provides GPS navigation capabilities. Other specific efforts include Airborne Variable Message Format Terminal (AVT), Flight Control Computer (FCC) and Radar Display Computer (RDC). The program is working closely with the Common Avionics program and the Allies (Spain and Italy) on all efforts. A/C handling and performance represents all engineering activities for development and design to support aircraft safety flight clearance and concept exploration for resolution of emergent service life and readiness issues.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Development of RMP Engineering Change Proposals	7.582	14.291	22.779	-	22.779
Articles:	0	0	0		0
Description: Improve structural integrity of the AV-8B aircraft as well as development of an improved RDC and FCC.					
FY 2011 Accomplishments: Conducted systems engineering analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Conducted studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue for Frame 43, Frame 41 and Bullet Fairing. Conducted component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include FCC, aircrew					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
systems, and other safety deficiency corrections. Continued development and testing of RDC, with first Flight Readiness Review and Test Readiness Review. ***FY 2012 Plans:*** Funds provided will allow for the continuation of system analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Additionally, the program will conduct studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue as well as conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include aircrew and environmental systems, flight controls and other safety deficiency corrections. Other efforts include the continuation of development and testing of Radar Display Computer (RDC) and the initiation of studies for the obsolescence replacement for the Flight Control Computer (FCC). ***FY 2013 Base Plans:*** Development efforts begin for the obsolescence replacement for the FCC. Efforts are initiated for the Rate Gyro replacement and Fatigue Trackers Users Program. Funds support emergent and ongoing efforts for system analyses, identification, and diagnosis of problems and the development and testing of engineering solutions in the areas of flight and crew safety, structural integrity, obsolescence, and systems reliability, and other material and equipment conditions affecting AV-8B systems readiness. Additionally, the program will conduct studies concerning improvements and correction of deficiencies and issues including obsolescence and structural fatigue as well as conducting component obsolescence analyses including alternatives explorations and development for obsolete aging equipment, to include aircrew and environmental systems, flight controls and other safety deficiency corrections. Other efforts include the continuation of development and testing of RDC.					
Title: F402-RR-408 Engine Safety and Reliability Enhancements	6.610	7.470	7.320	-	7.320
Articles:	0	0	0		0
Description: Improve Safety and Reliability of the F402-RR-408 Engine for the AV-8B Harrier. ***FY 2011 Accomplishments:*** Conducted research, analysis, and development of design changes and improvements to the engine and engine accessories. Continued the Component Improvement Program to ensure capabilities and performance of the F402-RR-408 and related components. Conducted multiple ECPs for the Gas Turbine Starter and continued					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
research into improvements for the Enhanced Variable Inlet Guide Vane Control System and Fuel Metering Unit. Conducted reviews of all engine Test Cells and Support Equipment (SE) that optimized facilities and addressed SE obsolescence. ***FY 2012 Plans:*** Funds provided will allow for the continuation of the Component Improvement Program, further ensuring the capabilities and performance of the F402-RR-408, engine accessories and related components. The prototype Enhanced Variable Inlet Control Systems Interrogator will undergo test and evaluation and improvements to the Gas Turbine Starter will continue. Continue Enhanced Variable Inlet Control Systems (EVICS) design. Mitigate Test Cell facilities and Support Equipment obsolescence through Redesign and procurements. ***FY 2013 Base Plans:*** Funds provided will allow for the continuation of the F402-RR-408 engine and engine accessories Component Improvement Program. These programs will be utilized to provide engineering solutions to safety, reliability and maintainability deficiencies of the engine and engine accessories that may become future ECPs. Complete EVICS design and start kit procurement. We will continue obsolescence mitigation for Test Cell facilities and Support Equipment through redesign and procurements.					
Title: Operational Flight Program (OFP) and Avionics Weapons Systems Development and Integration	7.871	8.915	2.690	-	2.690
Articles:	0	0	0		0
Description: Develop Airborne Variable Message Format Terminal (AVT), formerly Strikelink/A, Aircraft OFP updates, mission planning updates, Litening Pod software updates, and support aircraft avionics development efforts. ***FY 2011 Accomplishments:*** AVT development and testing continued, achieved Critical Design Review. Future capability expansion studies and analyses were conducted, and aircraft OFP/Litening Pod software updates began as part of the H6.1 block upgrade. ***FY 2012 Plans:*** Funds will provide for completion of AVT development and testing, future capability expansion studies and analyses, and aircraft OFP/Litening Pod software updates and developmental test as part of the H6.1 block upgrade. ***FY 2013 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Funds will provide for future capability expansion studies and analyses, peculiar flight test requirements, and aircraft OFP/Litening Pod software updates and developmental test as part of the H6.1 block upgrade.					
Accomplishments/Planned Programs Subtotals	22.063	30.676	32.789	-	32.789

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0514: *AV-8B Series Modification*	84.505	82.647	38.703	42.238	80.941	35.563	43.544	20.081	20.476	318.108	1,549.670

D. Acquisition Strategy

All efforts under Aircraft Handling/Readiness Management Program (RMP)provide investigations and analysis of testing and flight clearance authorization necessary to assess overall system capability and integration of projects. Funding for the Engine Life Management Program (ELMP) will be placed on a cost-type contract to Rolls Royce to address safety of flight issues, top readiness degraders, engine removal and mission failure drivers in order to improve Fleet readiness and reduce cost of ownership. It is also developed to assess life management program issues and design fixes for any service revealed deficiencies. The program's Evolutionary Acquisition Strategy includes Design, Development, Integration and Test activity under the consolidated effort of Block Developments: H2.0, H4.0, H5.0, H6.0, H6.1, H6.2 (Common Avionics) and following systems. The development and integration of Joint Mission Planning System occurred concurrently with H2.0. H4.0 Block improvements included the Tactical Aircraft Moving Map Capability. H5.0 Block Upgrade provided Dual Mode Laser Guided Bomb, Litening Centerline/Station 4 (improvement of current weapons carriage capability). The program is working closely with the Allies (Spain and Italy) and the Common Avionics program on these efforts for H6.0 and H6.1. H6.0 provides weapons carriage expansion. The H6.1 update will provide enhancements and software corrections that improve the AV-8B platform combat effectiveness, survivability, and relevance through avionics processor upgrades and Litening Common Operational Flight Program. The H6.2 update is being accomplished by the Common Avionics Program and provides a GPS Navigation capability for AV-8B.

E. Performance Metrics

Achieve ELMP contract award in 1Q FY2013, complete RMP Display Computer System Development in 4Q FY2012, and initiate Flight Control Computer System Development in 2Q FY2012. Continue systems development for the AVT, developmental test for the RMP Display Computer and support studies to incorporate Tactical Data Link capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	Mgmt Sciences:Albuquerque, NM	0.464	-		-		-		-	0.000	0.464	0.464
Primary Hardware Development	C/CPFF	Rolls-Royce PLC:Bristol, GB	22.918	2.235	Dec 2011	1.907	Dec 2012	-		1.907	11.108	38.168	38.168
Primary Hardware Development	C/CPFF	McDonnell Douglas:St. Louis, MO	1.465	-		-		-		-	0.000	1.465	1.465
Primary Hardware Development	C/FFP	Goodrich PS:Pitstone, GB	4.450	0.951	Feb 2012	0.999	Feb 2013	-		0.999	0.000	6.400	6.400
Primary Hardware Development	WR	NAWCWD:China Lake, CA	45.035	3.279	Dec 2011	0.615	Dec 2012	-		0.615	Continuing	Continuing	Continuing
Primary Hardware Development	Various	Various:Various	10.067	-		-		-		-	0.000	10.067	10.067
Primary Hardware Development	C/CPFF	GE Aviation DS:Grand Rapids, MI	16.839	0.300	Feb 2012	-		-		-	3.371	20.510	20.510
Primary Hardware Development	C/CPFF	Stauder:St. Peters, MO	11.099	3.351	Jan 2012	-		-		-	7.580	22.030	22.030
Primary Hardware Development	WR	NAWCAD:Patuxent River, MD	-	0.300	Nov 2011	-		-		-	0.000	0.300	
Primary Hardware Development	C/CPFF	TBD (FCC):TBD	-	7.754	Jan 2012	15.254	Jan 2013	-		15.254	0.000	23.008	23.008
Systems Engineering	Various	McDonnell Douglas:St. Louis, MO	8.400	1.016	Dec 2011	1.057	Dec 2012	-		1.057	0.177	10.650	10.650
Systems Engineering	Various	Various:Various	0.520	-		-		-		-	0.000	0.520	0.520
Systems Engineering	WR	NAWCWD:China Lake, CA	1.073	2.705	Dec 2011	3.978	Dec 2012	-		3.978	Continuing	Continuing	Continuing
Systems Engineering	MIPR	Wright Patterson AFB:Dayton, OH	0.278	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	122.608	21.891		23.810		-		23.810			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	Various	Various:Various	0.397	-		-		-		-	0.000	0.397	0.397
Engineering Technical Services (CSS)	C/CPFF	EDO Professional Services, Inc.:Arlington, VA	1.737	-		-		-		-	0.000	1.737	1.737
Integrated Logistics Support	WR	NAWCAD:Patuxent River, MD	1.436	-		-		-		-	0.000	1.436	
Software Development	Various	DCMA Boeing:St. Louis, MO	1.148	-		-		-		-	0.000	1.148	1.148
Software Development	WR	NAWCWD:China Lake, CA	10.889	-		-		-		-	Continuing	Continuing	Continuing
Software Development	Various	Various:Various	18.875	-		-		-		-	0.000	18.875	18.875
Software Development	C/CPFF	Northrup Grumman:Rolling Meadows, IL	2.000	-		-		-		-	0.000	2.000	2.000
Studies and Analysis	Various	Various:Various	2.542	0.137	Jun 2012	0.146	Jun 2013	-		0.146	3.900	6.725	6.709
Support	Various	DCMA Boeing:St. Louis, MO	5.490	-		-		-		-	0.000	5.490	5.490
Technical Data	C/CPFF	Various:Various	2.331	0.245	Nov 2011	0.255	Nov 2012	-		0.255	0.320	3.151	3.151
		Subtotal	46.845	0.382		0.401		-		0.401			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/CPFF	McDonnell Douglas:St. Louis, MO	-	-		-		-		-	5.689	5.689	5.689
Developmental Test & Evaluation	WR	NAWCWD:China Lake, CA	41.130	1.700	Jan 2012	1.740	Jan 2013	-		1.740	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	22.923	0.050	Oct 2011	-		-		-	0.000	22.973	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	NAWCWD:China Lake, CA	2.824	-		-		-		-	Continuing	Continuing	Continuing
Test Assets	C/CPFF	GE Aviation DS:Grand Rapids, MI	0.972	-		-		-		-	0.000	0.972	0.972
		Subtotal	67.849	1.750		1.740		-		1.740			

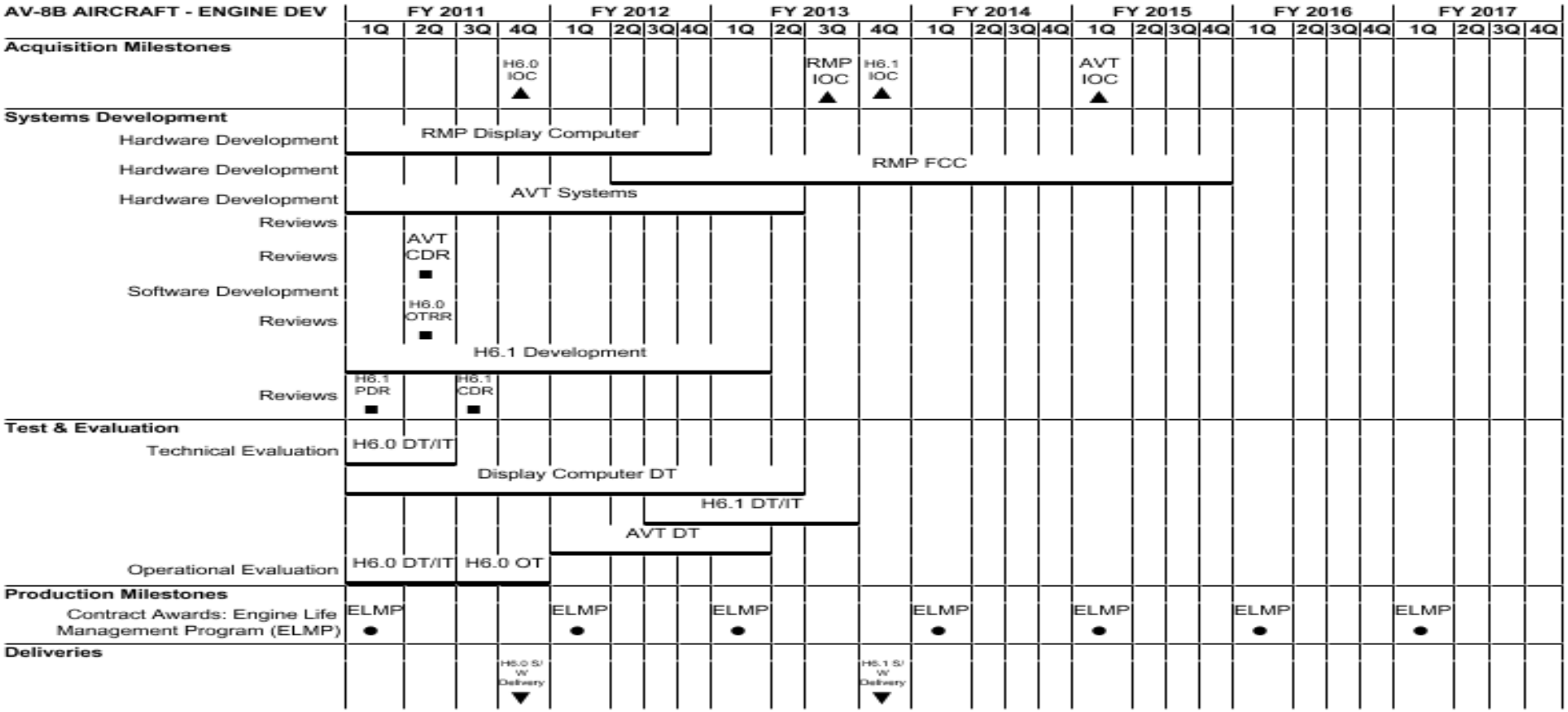
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering & Tec SRVC (Non-FFRDC)	C/CPFF	Various:Various	2.924	0.743	Jan 2012	0.664	Jan 2013	-		0.664	7.432	11.763	11.763
Government Engineering Support	WR	Various:Various	8.886	2.071	Nov 2011	2.353	Nov 2012	-		2.353	Continuing	Continuing	Continuing
MGT & PROF SUPPT SRVC (NON-FFRDC)	C/CPFF	Various:Various	6.756	1.256	Nov 2011	1.164	Nov 2012	-		1.164	12.542	21.718	21.718
Program Management Support	WR	Various:Various	8.884	2.426	Nov 2011	2.523	Nov 2012	-		2.523	Continuing	Continuing	Continuing
Travel	WR	Various:Various	0.947	0.157	Oct 2011	0.134	Oct 2012	-		0.134	Continuing	Continuing	Continuing
		Subtotal	28.397	6.653		6.838		-		6.838			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	265.699	30.676		32.789		-		32.789			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*



2013DON - 0604214N - 0652

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604214N: *AV-8B Aircraft - Engine Dev*	**PROJECT** 0652: *AV-8B*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AV-8B AIRCRAFT - ENGINE DEV				
Acquisition Milestones: H6.0 IOC	4	2011	4	2011
Acquisition Milestones: Readiness Management Program (RMP) Display Computer Initial Operational Capability (IOC)	3	2013	3	2013
Acquisition Milestones: H6.1 IOC	4	2013	4	2013
Acquisition Milestones: Airborne Variable Message Format Terminal (AVT) Initial Operational Capability (IOC)	1	2015	1	2015
Systems Development: Hardware Development: RMP Display Computer System Development (program started in 2010)	1	2011	4	2012
Systems Development: Hardware Development: RMP Flight Control Computer System (FCC) Development	2	2012	4	2015
Systems Development: Hardware Development: AVT Systems Development	1	2011	2	2013
Systems Development: Reviews: AVT CDR	2	2011	2	2011
Systems Development: Reviews: H6.0 Operational Test Readiness Review (OTRR)	2	2011	2	2011
Systems Development: Reviews: H6.1 Development (program started in 2010)	2	2011	1	2013
Systems Development: Reviews: H6.1 CDR	3	2011	3	2011
Systems Development: Reviews: H6.1 Preliminary Design Review (PDR)	1	2011	1	2011
Test & Evaluation: Technical Evaluation: H6.0 Development Test/ Integrated Test (DT/IT) (program started in 2010)	1	2011	2	2011
Test & Evaluation: Technical Evaluation: RMP Display Computer DT (program started in 2010)	4	2011	2	2013
Test & Evaluation: Technical Evaluation: H6.1 DT/IT	3	2012	3	2013
Test & Evaluation: Technical Evaluation: AVT DT	1	2012	1	2013
Test & Evaluation: Operational Evaluation: H6.0 DT/IT	1	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604214N: *AV-8B Aircraft - Engine Dev*	PROJECT 0652: *AV-8B*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: Operational Evaluation: H6.0 Operational Test (OT)	3	2011	4	2011
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY11	1	2011	1	2011
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY12	1	2012	1	2012
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY13	1	2013	1	2013
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY14	1	2014	1	2014
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY15	1	2015	1	2015
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY16	1	2016	1	2016
Production Milestones: Contract Awards: Engine Life Management Program (ELMP): ELMP Contract Award FY17	1	2017	1	2017
Deliveries: H6.0 Software (S/W) Delivery	4	2011	4	2011
Deliveries: H6.1 S/W Delivery	4	2013	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	41.991	49.439	84.988	-	84.988	91.136	66.714	57.382	56.588	Continuing	Continuing
0572: *JT Service/NV Std Avionics CP/SB*	26.978	35.110	69.745	-	69.745	76.283	51.629	42.137	40.971	Continuing	Continuing
1857: *Calibration Standards*	1.394	1.365	1.856	-	1.856	1.871	1.901	1.937	1.975	Continuing	Continuing
2311: *Stores Planning and Weaponeering Module*	12.725	12.075	12.508	-	12.508	12.417	12.624	12.726	12.971	Continuing	Continuing
2312: *Common Helicopters*	0.894	0.889	0.879	-	0.879	0.565	0.560	0.582	0.671	Continuing	Continuing

Note

FY12-FY16 Avionics Component Improvement Program (AvCIP) - Funding has been moved from PE 0702239N, Project Unit 3170.
FY13-FY17 Avionics Component Improvement Program (AvCIP) cancelled by Issue# 50388 POM 13 ENDGAME OFFSET.

A. Mission Description and Budget Item Justification

This project provides for the identification, study, design, development, demonstration, test, evaluation, and qualification of standard avionics capabilities for Navy use, and wherever practicable, use across all Services and Foreign Military Sales. Such air combat electronics developments include communications and airborne networking, navigation and sensors, flight avionics, safety systems, and flight mission information systems for both forward fit and retrofit aircraft. These efforts continue to maintain federated systems while encouraging transition of procurements to support a modular system for enhanced performance and affordability. Consideration is given up front to reduce acquisition costs through larger procurement quantities that satisfy multi-aircraft customer requirements and that reduce life cycle costs in the areas of reliability, maintainability, and training. This project also provides a Navy-wide program to develop required calibration standards (hardware) in all major measurement technology areas in support of Navy Hull, Mechanical and Electrical (HM&E) systems as well as Navy Weapons systems, ground and air, throughout the Fleet. It funds Navy lead-service responsibilities in the DOD and Joint Services Metrology Research and Development program. This project supports the military requirement to verify the performance of all test systems used to validate the operation of HM&E as well as Navy Weapon Systems with calibration standards traceable to the National Institute of Standards and Technology.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	45.667	51.191	67.496	-	67.496
Current President's Budget	41.991	49.439	84.988	-	84.988
Total Adjustments	-3.676	-1.752	17.492	-	17.492
• Congressional General Reductions	-	-0.052			
• Congressional Directed Reductions	-	-1.700			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-2.400	-			
• SBIR/STTR Transfer	-0.963	-			
• Program Adjustments	-	-	17.447	-	17.447
• Rate/Misc Adjustments	-	-	0.045	-	0.045
• Congressional General Reductions Adjustments	-0.313	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule:

0572:
Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) - P-8 Integration extended into 1Q FY12 due to increased platform requirements of 8.33 kHz and Mode S functionalities. The start of MH-53 ADS-B DT/OT moved from 1Q FY12 to 1Q FY13 due to engineering analysis delays.
Ground Proximity Warning System/Terrain Awareness Warning System (GPWS/TAWS) - H-1 GPWS IOC moved from 3Q FY11 to 2Q FY13, H-60 TAWS IOC removed, H-1 DT moved from 1Q FY11 to 4Q FY12, and H-1 OT moved from 2Q FY11 to 1Q FY13 due to platform SCS schedule slip and non-availability of aircraft to support test. Added H-60 Obstacles MSB, MSC, and moved H-60 SW development from 1Q FY12 to 3Q FY12 due to re-designation of H-60 Obstacles from ECP to ACAT IV T Program. Changed H-60 TAWS Obstacles DT to H-60 TAWS Obstacles IT&E and moved start date to 4Q FY15 and deleted H-60 TAWS Obstacles OT due to platform test approach.
Military Flight Operational Quality Assurance (MFOQA) - Schedule changes due to the inclusion of additional requirements. MSC is now 3Q FY12 vice 1Q FY12.
Collaborative Warfare (CW) - NEXT CBA efforts extended from 1Q FY11 to 4Q FY11 due to execution and review of NEXT CBA products.
Collision Avoidance Safety Program (CASP) - Removed NSA IA efforts from CASP schedule and realigned in ADDS schedule for development contract award.
Advanced Digital Data Set (ADDS) - Schedule updated to align with lead platform schedule. MSB is now 3Q FY12 vice 1Q FY12.
Avionics Component Improvement Program (AvCIP) cancelled by Issue #50388 POM 13 ENDGAME OFSET.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*

1857: Not Applicable.

2311: Acquisition Milestone Changes:

Due to funding constraints, Weaponeering and Stores Planning (WASP) V3.2 development was delayed resulting in a push of V3.3 and V3.4. WASP V3.2, V3.3 and V3.4 were adjusted accordingly:
V3.2 Software Requirements Review (SRR) from 3QFY13 to 3QFY14, V3.2 Preliminary Design Review (PDR) from 4QFY13 to 3QFY14, V3.2 Technical Information Review Board (TIRB) moved from 4QFY14 to 4QFY15, V3.2 Functional Qualification Test (FQT) moved from 4QFY14 to 4QFY15. WASP V3.2 Inital Operational Capability (IOC) moved from 2QFY15 to 2QFY16.

V3.3 Software Requirements Review (SRR) from 3QFY14 to 1QFY16, V3.3 Preliminary Design Review (PDR) from 4QFY14 to 1QFY16, V3.3 Critical Design Review (CDR) from 1QFY15 to 2QFY16, V3.3 Test Readiness Review (TRR) from 3QFY15 to 4QFY16, V3.3 Technical Information Review Board (TIRB) moved from 4QFY15 to 2QFY17, V3.3 Functional Qualification Test (FQT) moved from 4QFY15 to 2QFY17, WASP V3.3 Test and Evaluation moved from 3QFY15-4QFY15 to 4QFY16-2QFY17. WASP V3.3 Inital Operational Capability (IOC) moved from 3QFY16 to 3QFY17.

V3.4 Software Requirements Review (SRR) moved from 3QFY15 to 3QFY17, V3.4 Preliminary Design Review (PDR) moved from 4QFY15 to 4QFY17, V3.4 Critical Design Review (CDR) moved from 1QFY16 to 4QFY17, V3.4 Technical Information Review Board (TIRB) and V3.3 Functional Qualification Test (FQT) moved outside the FYDP.

2312: Not Applicable.

9999: Not Applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0572: *JT Service/NV Std Avionics CP/SB*	26.978	35.110	69.745	-	69.745	76.283	51.629	42.137	40.971	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The Collision Avoidance Safety Program (CASP) Program, which began in FY11 and the follow-on Advanced Digital Data Set (ADDS) program in FY12 was simply a name change and re-distribution of requirements.
FY12-FY16 Avionics Component Improvement Program (AvCIP) funding has been moved from PE 0702239N, PU 3170.
FY12 Military Flight Operational Quality Assurance (MFOQA) RDT&E Article (1) for F/A-18 Squadron.
FY14 Military Flight Operational Quality Assurance (MFOQA) RDT&E Articles (2) for MH-60R/S (1) and CH-53E (1).
FY14 Advanced Digital Data Set RDT&E Articles (20) for CH-53K and MH-60R/S.
FY15 Advanced Digital Data Set RDT&E Articles (20) for CH-53K and MH-60R/S.

A. Mission Description and Budget Item Justification

Joint Services/Navy Standard Avionics Components and Subsystems: This project provides for the identification, study, design, development, demonstration, test, evaluation, and qualification of standard avionics capabilities for Navy use, and wherever practicable, use across all Services and Foreign Military Sales. Standard avionics capabilities under development include the Communication Navigation Surveillance Air Traffic Management (CNS/ATM), Advanced Mission Computers and Displays (AMCD), Tactical Communications (TACCOM), Ground Proximity Warning System/Terrain Awareness Warning System (GPWS/TAWS), Military Flight Operational Quality Assurance (MFOQA), Collaborative Warfare (CW), Avionics Component Improvement Program (AvCIP), Collision Avoidance Safety Program (CASP), Advanced Digital Data Set (ADDS) and Mid Air Collision Avoidance Capability (MCAC) formerly named Airborne Collision Avoidance System (ACAS). Participation in Human Factors Quality Management Board (HFQMB) ensures Navy safety upgrades and mandatory safety improvements for naval aircraft.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Mission Computer/Mission Systems Upgrade (AMCD)	0.477	-	-	-	-
Articles:	0				
Description: This program will conduct research, studies, development, integration, demonstration, test and evaluation efforts to ensure viable aircraft computers, processors, and displays are developed and available to support naval aviation requirements. Perform platform integration studies and activities to expand the user base of common hardware and core system software capabilities.					
FY 2011 Accomplishments:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Completed Trade Study activities for Type-4 Advanced Mission Computer upgrade to support the F/A-18E/F/G Super Hornet Flight Plan with Increment III and Increment IV capabilities.					
Title: Integration/Certification of Developmental Aircraft (CNS/ATM) ***Articles:*** ***Description:*** This program will conduct and support CNS/ATM research, studies, development, integration, demonstration, test and evaluation efforts for Naval Aviation platforms in development. Platform integration of Mode S, 8.33kHz, Reduced Vertical Separation Minimums (RVSM), Required Navigation Performance (RNP RNAV), and Automatic Dependent Surveillance-Broadcast (ADS-B) functional integration and certification efforts into naval aircraft. Perform platform functional integration for F/A-18E/F, MH-60S, MH-60R, AH-1Z, UH-1Y and other developmental platforms in the areas of communication, navigation, surveillance, processing and displays. Assist with insertion of communication, navigation, surveillance, and supporting technologies and conduct capability certification on developmental platforms such as E-2D, P-8A, Joint Strike Fighter (JSF), CH-53K, and Unmanned Air Systems. Capabilities include Mode S, 8.33kHz, RVSM, RNP/RNAV, ADS-B, and other civil and military capabilities. ***FY 2011 Accomplishments:*** Complete P-8A Certification of 8.33 kHz, Mode S, RVSM and RNP RNAV capabilities. Initiate MH-53E integration of ADS-B capability concurrent with Cockpit Upgrade. Assist with insertion of CNS/ATM technologies on and certification of developmental platforms. ***FY 2012 Plans:*** Integrate ADS-B into MH-53E concurrent with Cockpit Upgrade. Assist with insertion of CNS/ATM technologies on and certification of developmental platforms. ***FY 2013 Base Plans:*** Complete integration/certification of ADS-B into MH-53E concurrent with Cockpit Upgrade. Assist with insertion of CNS/ATM technologies on and certification of developmental platforms.	0.140 0	1.595 0	0.600 0	-	0.600 0
Title: Joint Service Review Committee for Avionics Standardization (JSRC-AS) ***Articles:*** ***Description:*** The JSRC-AS program supports Congressional and ASN (RDA) direction to control the growing proliferation of avionics and improve coordination among the services through the identification, development, and promotion of investigative and development efforts across the services and U.S. Coast Guard. The JRSC-	0.728 0	1.585 0	1.000 0	-	1.000 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
AS supports generation and review of new avionics requirements with potential for joint service application. The JSRC-AS consists of one O-6/0-5 Level member from each service and Coast Guard to chair the committee as well as the appropriate staff to support joint service working group efforts. The JSRC-AS reports up to the O-7 level tri-service Aviation Common Systems Board (ACSB) who reports up to the O-9 level Joint Aeronautical Commanders Group. ***FY 2011 Accomplishments:*** Provided leadership in support of the Navy's interest to the JSRC tri-service committee promoting commonality and joint programs with focus on interoperability, communications, CNS/ATM, Joint Services avionics obsolescence management and the update of the CAMP. Supported and participated in NARG panels, OAG, and HFQMB. ***FY 2012 Plans:*** Provide leadership in support of the Navy's interest to the JSRC tri-service committee promoting commonality and joint programs with focus on interoperability, communications, CNS/ATM, Joint Services avionics obsolescence management and the update of the CAMP. Support and participate in NARG panels, OAG, and HFQMB. ***FY 2013 Base Plans:*** Provide leadership and strategic vision as naval aviation's representatives to the JSRC-AS. Participate in joint working groups and promote efforts that makes good technical and economic sense to more than one service.					
Title: Develop Evolutionary Communication Systems (TACCOM)	5.055	3.549	2.809	-	2.809
Articles:	0	0	0		0
Description: This program will conduct research, studies, development, integration, demonstration, test and evaluation efforts to ensure tactical communication systems and capabilites are developed and available to support naval aviation requirements. Perform tactical communication platform integration studies and activities to determine technical and cost effective solutions across Naval Aviation. Develop tactical communications (voice/data) requirements, concepts and systems which have application across Naval Aviation. Support all necessary tasks to ensure evolution of legacy communications systems incorporating programmable Communication Security/Information Assurance, Variable Message Format, Beyond Line-of-Sight, Satellite Communication, High Frequency, civil interoperability, and Joint Precision Approach Landing System (JPALS) data link into the ARC-210 system. Support for networking requirements development and prototyping, Integrated Waveform, Intelligence Broadcast System, Joint Tactical Radio System, Tactical Networks, Datalinks					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
and Link 16. Awarded integration study contracts for Tactical Communication systems within E-2 AHE (Advanced Hawkeye), H-1, H-53, V22, and AV-8B and other aircraft along with Link-16 and MUOS. ***FY 2011 Accomplishments:*** Received Joint Interoperability Testing Center (JITC) certification of the RT-1939(C) and received approval for Gen5 Full Rate Production. Continued development of the Tactical Secure Voice (TSV) and JPALS for inclusion in a Gen5 Receiver Transmitter. Assisted platforms with Gen5 SIL and aircraft regression testing. Compiled test results into source data document for future Gen5 testing. ***FY 2012 Plans:*** Continue development of the TSV. Perform test and evaluation of Version 003/004 software for inclusion into Gen5. ***FY 2013 Base Plans:*** Continue development of Integrated Waveform (IW) and Variable Message Format (VMF).					
Title: Develop Ground Terrain Warning Capability (GPWS/TAWS) ***Articles:*** ***Description:*** This program will conduct research, studies, development, integration, demonstration, test and evaluation efforts to meet Naval Aviation GPWS/TAWS requirements. Perform GPWS/TAWS platform integration studies and activities to determine technical and cost effective solutions across Naval Aviation. Develop GPWS/TAWS Collision Avoidance System (CAS) algorithm tailored to platform performance and missions. Develop simulation models for use at manned flight simulator (MFS) as required for platform tailoring, including procurement of test article hardware for MFS. Evaluate aircraft simulation models for suitability in GPWS/TAWS CAS development effort. Develop GPWS/TAWS CAS algorithms utilizing MFS as real-time hardware and pilot in the loop tool. Develop and evaluate algorithm interfaces necessary for integration of the algorithm within platform host computer. ***FY 2011 Accomplishments:*** Delivered GPWS software load to the fleet for the H-60 platform. ***FY 2012 Plans:*** Support DT of GPWS in H-1 Software Configuration Set 6.0. Initiate TAWS with obstacles acquisition documentation and complete Milestone B for H-60. ***FY 2013 Base Plans:***	3.707 0	1.735 0	7.949 0	-	7.949 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Support OT and fielding of H-1 GPWS in platform Software Configuration Set 6.0. Initiate TAWS with obstacles requirements definition and software development for H-60.					
Title: Develop MFOQA Capability	12.603	14.789	13.649	-	13.649
Articles:	0	1	0		0
Description: This program will develop a Military Flight Operations Quality Assurance (MFOQA) baseline software integration framework using Government procured software modules to perform functions such as flight data analysis, post mission aircrew debrief, aircraft maintenance and system troubleshooting, and mishap investigation to meet Naval Aviation requirements. Additional efforts will include software development and integration for fleet wide shore based and shipboard MFOQA implementation. Develop and evaluate aircraft recorder systems and requirements to meet current and future MFOQA requirements. Prepare and conduct MFOQA acquisition events such as Systems Readiness Review (SRR), Preliminary Design Review (PDR), Critical Design Review, Developmental Testing (DT), Milestone C (MS C) and follow-on Decision Reviews in support of initial Fixed Wing (Phase 1) and Rotary Wing (Phase 2) platforms. ***FY 2011 Accomplishments:*** Phase 1 completed Delta Critical Design Review, completed Contractor Risk Reduction Testing, and began DT-B2 System test. ***FY 2012 Plans:*** Complete Phase I DT-B2 and DT-B3 testing, Achieve MS C and initiate fielding to F/A-18C/D/E/F and EA-18G. Phase 2 conduct Requirements Development and begin Systems Integration for MH-60R/S and CH-53E. RDT&E Article (1) for F/A-18 Squadron. ***FY 2013 Base Plans:*** Complete Phase 2 Systems Integration for MH-60R/S and CH-53E.					
Title: Collaborative Warfare (CW)	0.798	0.478	0.540	-	0.540
Articles:	0	0	0		0
Description: The CW component is a Research & Development effort to identify targeting gaps and determine the warfighting benefit of integrating networked capabilities into naval aircraft to fill those gaps. The following efforts are included: 1) A concept refinement Joint Capability Integration Development System activity, specifically, the Naval Effects Cross Domain Targeting (NEXT) Capabilities Based Assessment (CBA). 2) A					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
netted sensors proof of concept prototype demonstration in Trident Warrior exercises. 3) An integration of Netted Sensors/Sensor Fusion into the airborne tactical edge technical study. 4) A Modeling Simulation and Analysis (MS&A) Study to quantify benefits of collaborative warfare capabilities, assess feasibility, and derive initial decomposition to system requirements for use by various platform's Program Objective Memorandum issue sheets. ***FY 2011 Accomplishments:*** Completed NEXT CBA. Participated with FLTCYBERCOM/10F and Fleet Forces Command in the Trident Warrior 2011 netted sensors experiment. Completed Netted-Sensor/Fusion Engine Distribution technical study. Developed Integrated Targeting and Fire Control (ITFC) Roadmap to incorporate technical study results and netted sensors architectures into a Concept of Operations (CONOPS). ***FY 2012 Plans:*** Develop requirements, standards, and architectures in support of new and updated netted-sensors' CONOPS and capabilities. ***FY 2013 Base Plans:*** Develop requirements, standards, and architectures in support of new and updated netted-sensors' CONOPS and capabilities.					
Title: Collision Avoidance Safety Program (CASP) ***Articles:*** ***Description:*** This is a defense directed safety program to develop integrated common avionics enabling hardware and software necessary for predictive collision awareness and avoidance warning for man-made and natural obstacles in the air and on the ground. This program will conduct research, studies, development, integration, test and evaluation, and demonstration efforts to meet collision avoidance requirements. The program includes development of crash survival recording capability for post collision analysis. ***FY 2011 Accomplishments:*** Complete initial research and acquisition documentation for capability enabling hardware and software components.	3.470 0	-	-	-	-
Title: Avionics Component Improvement Program (AvCIP) ***Articles:***	-	2.000 0	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Description: Investigate High Value Return on Investment Candidates, addressing avionics critical readiness and reliability deficiencies, obsolescence, loss of sustainability and top repair cost drivers. Prioritize critical avionics performance, capability and obsolescence problems that require immediate attention. Pursue solutions to these problems based upon urgency, warfighting contribution and return on investment. Develop and test system solutions based on priority. Resources will cover program management, engineering, contracting and logistics efforts; design and development, logistics elements such as technical data, support equipment, provisioning, and training; prototypes; platform integration; and developmental/operational testing. NOTE: FY12-FY16 AvCIP funding has been moved from PE 0702239N, Project Unit 3170. ***FY 2012 Plans:*** Address current fleet problem avionics systems (top readiness degraders, cost drivers, obsolescence-driven sustainability, capability loss, fleet head-hurters). They will be chosen following a comprehensive review of most important and executable project submissions. In order to address those issues with more imminent and direct Fleet operational impacts, this review is completed following a formal solicitation and review that is completed mid-year in the year prior to execution. Candidate prioritization and selection are followed by project endorsement which leads to contract award in year of execution.					
Title: Advanced Digital Data Set (ADDS) ***Articles:*** ***Description:*** The Collision Avoidance Safety Program (CASP) Program, which began in FY11 and the follow-on Advanced Digital Data Set (ADDS) program in FY12 was simply a name change and re-distribution of requirements. ADDS consists of enabling hardware and software solutions for an advanced digital data military operating environment including removable memory, secure data management and storage, high speed data transfer, recording (including mission, sensor, audio, and video), crash survivability, maintenance diagnostics as well as mission and safety application processing and protection. It is a system of systems approach that includes the design, development, test, integration and production of test hardware and software to provide advanced digital data management, storage and processing capability. ADDS will increase mission effectiveness and survivability by providing improved situation awareness, reduced crew workload, and enhanced capability for navigation, targeting, collison avoidance, and mission planning. ***FY 2012 Plans:***	- 	9.379 0	43.198 0	- 	43.198 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Enter DoD Acquisition Lifecycle Management Framework at Milestone B and establish a System Design Specification (SDS) via the SRR process. The SDS will be used for a competitively awarded Engineering Management and Development (EMD) Contract for the design and development of ADDS. FY12 EMD will include all activities required to complete an Integrated Baseline Review, System Functional Review and PDR. ***FY 2013 Base Plans:*** Under EMD development, conduct Preliminary Design Review (PDR) and Critical Design Review (CDR) to ensure we are meeting platforms requirements by staying within cost and meeting schedule requirements.					
Accomplishments/Planned Programs Subtotals	26.978	35.110	69.745	-	69.745

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/05770: *Common Avionics*	93.464	147.760	77.333	19.420	96.753	123.637	140.887	166.716	161.919	885.726	3,801.284

D. Acquisition Strategy

CNS/ATM program is a system of systems. The program will encompass the integration of various systems that are currently post-MS III. Systems will be procured utilizing existing contracts for integration on forward-fit and retrofit platforms to provide CNS/ATM functionality. TACCOM is utilizing a firm fixed price contract to Rockwell Collins for research and development of the ARC-210 Gen 5 and other Navy contract vehicles for integration studies. The Navy will integrate systems and components to satisfy platform requirements to achieve tactical communication capability as determined by analyses. GPWS/TAWS Software Modules will be developed by a Government Software Product Team in conjunction with Industry via cost plus fixed fee contracts. MFOQA Government activities include integrating a combination of existing aircraft hardware, ground support equipment, commercial off the shelf (COTS), government off the shelf hardware and software products. MFOQA program interfaces will be created to share data captured by the automated maintenance systems (e.g., AME, HUMS) and existing databases. The Navy conducted a full and open competition for both the MFOQA software development, integration and support contract as well as the COTS software data analysis product. A follow-on Sole Source Product Contract will be awarded to complete MFOQA development, as required. The CASP is a system of systems and will design, develop and test hardware and software that provides awareness and avoidance warning for man-made and natural obstacles in the air and on the ground. The Navy will award a contract(s) to develop and integrate hardware and software needed to support these capabilities in a military operating environment. AvCIP will annually compete candidate solutions according to criticality of operational contributions, technical risk, return on investment, and breadth of application. OPNAV N88 and N43, NAVAIR, NAVICP and the Fleet will participate in project selection for execution year allocation. The AvCIP Integrated Program Team will monitor project execution and track return on investment using Fleet supply and component performance tracking systems. Modification solutions include modular hardware, software and material upgrades. Resources will cover program management, engineering, contracting and logisitics efforts; design and development, logistics elements such as technical data, support equipment, provisioning, and training; prototypes; platform integration; and DT/operational testing (OT). ADDS will conduct a full and open competition to develop and procure enabling hardware and software. Mid Air Collision Avoidance Capability (MCAC) is the capability umbrella which encompasses

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

all systems designed and developed to aid in air to air collison avoidance. Systems include but are not limited to Traffic Collision Avoidance Systems (TCAS), Mid-Air Collision Avoidance Systems (MCAS). MCAC will include a mix of sole source contracts and full and open competitive contracts to provide tailored software algorithms, hardware modifications, and new hardware, as required.

E. Performance Metrics

JSRC - Provide leadership in support of the Navy's interest to the JSRC tri-service committee promoting commonality and joint programs with focus on interoperability, communications, CNS/ATM, Joint Services avionics obsolescence management and the update of the CAMP. Support and participate in NARG panels, OAG, and HFQMB.
CNS/ATM - Successfully complete platform integration, test, and certifications.
TACCOM - Achieve NSA certification Ver 003 TSV Crypto Equip Aloor (CEA).
GPWS/TAWS - Develop software to meet platform specific requirements, successfully complete flight test, and deliver product on schedule.
MFOQA - Successfully complete MS C and IOC on schedule; successfully complete Phase 2 development and fleet introduction.
CW - Identify collaborative warfighting capability gaps and ensure the development of the most intelligent, cost effective, and timely solutions to fill those gaps.
CASP - Initiate requirements development, design, integration, and test.
AvCIP - Successful selection establishment, and execution of AVCIP projects, with benefits tracking.
ADDS - Achieve program acquisition milestones on cost and schedule meeting platform requirements.
MCAC - Achieve program acquisition milestones on cost and schedule meeting platform requirements.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Dev MFOQA	SS/CPIF	Mantech:Fairfax, VA	27.485	5.161	Dec 2011	5.242	Dec 2012	-		5.242	0.000	37.888	37.888
Primary Hardware Dev MFOQA	SS/CPFF	BGI:Dallas, TX	3.981	1.056	May 2012	1.686	Dec 2012	-		1.686	12.414	19.137	19.137
Primary Hardware Dev GPWS	TBD	TBD:TBD	7.449	0.303	Nov 2011	4.650	Nov 2012	-		4.650	0.000	12.402	12.402
Primary Hardware Dev ADDS	TBD	TBD:TBD	-	5.954	Jun 2012	34.781	Dec 2012	-		34.781	Continuing	Continuing	Continuing
Primary Hardware Dev	Various	Various:Various	55.510	1.823	Mar 2012	0.673	Mar 2013	-		0.673	Continuing	Continuing	Continuing
Aircraft Integration TACCOM	SS/FFP	Rockwell Collins:Cedar Rapids, IA	57.049	0.613	Mar 2012	0.427	Mar 2013	-		0.427	0.000	58.089	58.089
Aircraft Integration	WR	NAWCWD:China Lake, CA	7.423	-		-		-		-	0.000	7.423	
Aircraft Integration	Various	Various:Various	41.036	0.445	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:Patuxent River, MD	22.668	2.008	Nov 2011	1.937	Dec 2012	-		1.937	Continuing	Continuing	Continuing
Systems Engineering	Various	Various:Various	33.321	1.055	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Training Development	Various	Various:Various	-	0.062	Mar 2012	-		-		-	0.000	0.062	
Prior year costs no longer funded in FYDP	Various	Various:Various	287.758	-		-		-		-	0.000	287.758	
		Subtotal	543.680	18.480		49.396		-		49.396			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Various:Various	2.261	0.253	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Software Development	Various	Various:Various	1.975	0.171	Apr 2012	-		-		-	0.000	2.146	
Integrated Logistics Support	Various	Vartious:Various	13.558	2.811	Mar 2012	2.404	Mar 2013	-		2.404	Continuing	Continuing	Continuing
Studies and Analysis	Various	Various:Various	17.172	-		-		-		-	0.000	17.172	
Prior year costs no longer funded in FYDP	Various	Various:Various	25.371	-		-		-		-	0.000	25.371	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	60.337	3.235		2.404		-		2.404			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test and Evaluation	WR	NAWCAD:Patuxent River, MD	7.821	0.777	Jan 2012	0.119	Jan 2013	-		0.119	Continuing	Continuing	Continuing
Prior year costs no longer funded in FYDP	Various	Various:Various	39.111	-		-		-		-	0.000	39.111	
		Subtotal	46.932	0.777		0.119		-		0.119			

Management Services ($ in Millions)

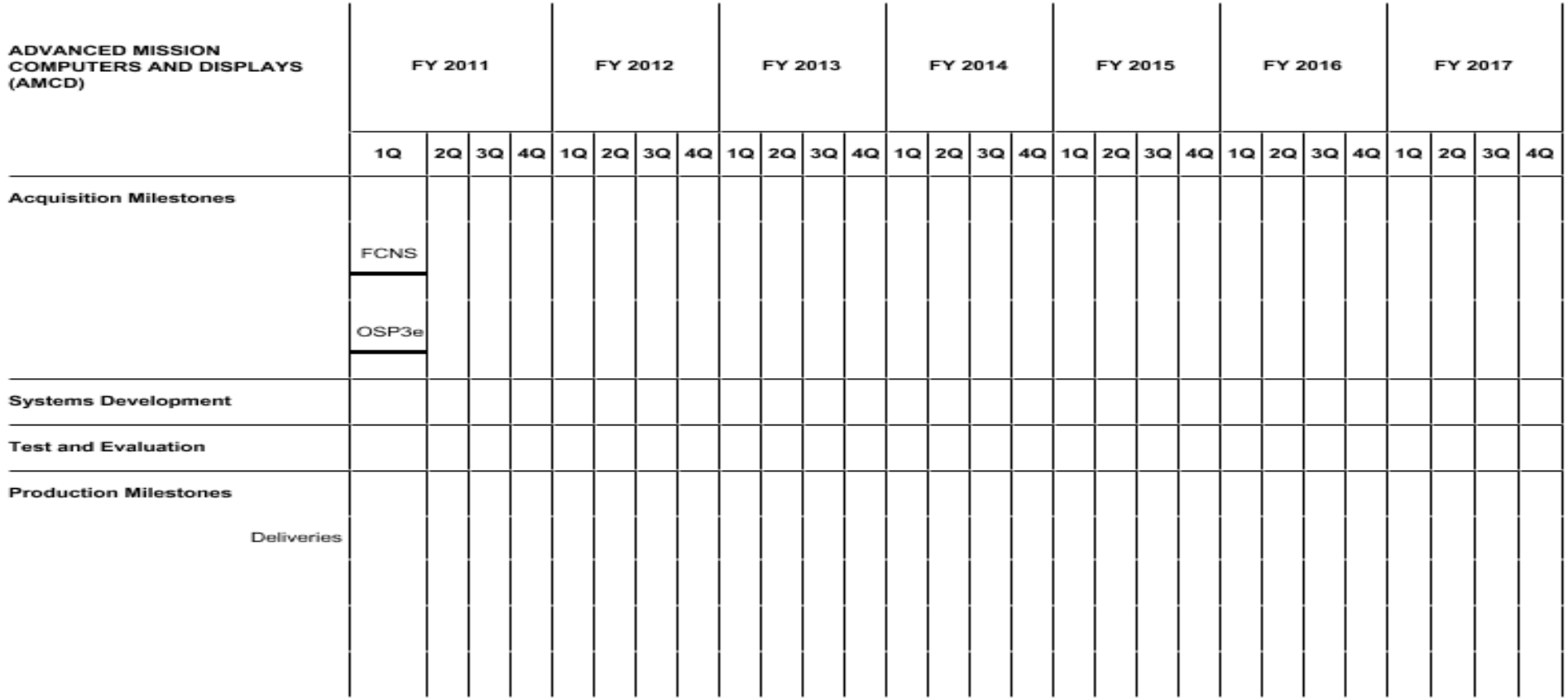
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	51.825	5.294	Feb 2012	7.130	Feb 2013	-		7.130	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWCAD:Patuxent River, MD	15.613	3.398	Mar 2012	3.832	Mar 2013	-		3.832	Continuing	Continuing	Continuing
Program Management Support	Various	Various:Various	8.928	-		-		-		-	0.000	8.928	
Program Management Support	WR	NAWCAD:Patuxent River, MD	14.489	3.754	Mar 2012	6.694	Mar 2013	-		6.694	Continuing	Continuing	Continuing
Travel	WR	NAVAIR:Patuxent River, MD	1.111	0.172	Oct 2011	0.170	Oct 2012	-		0.170	Continuing	Continuing	Continuing
Prior year costs no longer funded in FYDP	Various	Various:Various	12.608	-		-		-		-	0.000	12.608	
		Subtotal	104.574	12.618		17.826		-		17.826			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	755.523	35.110		69.745		-		69.745			

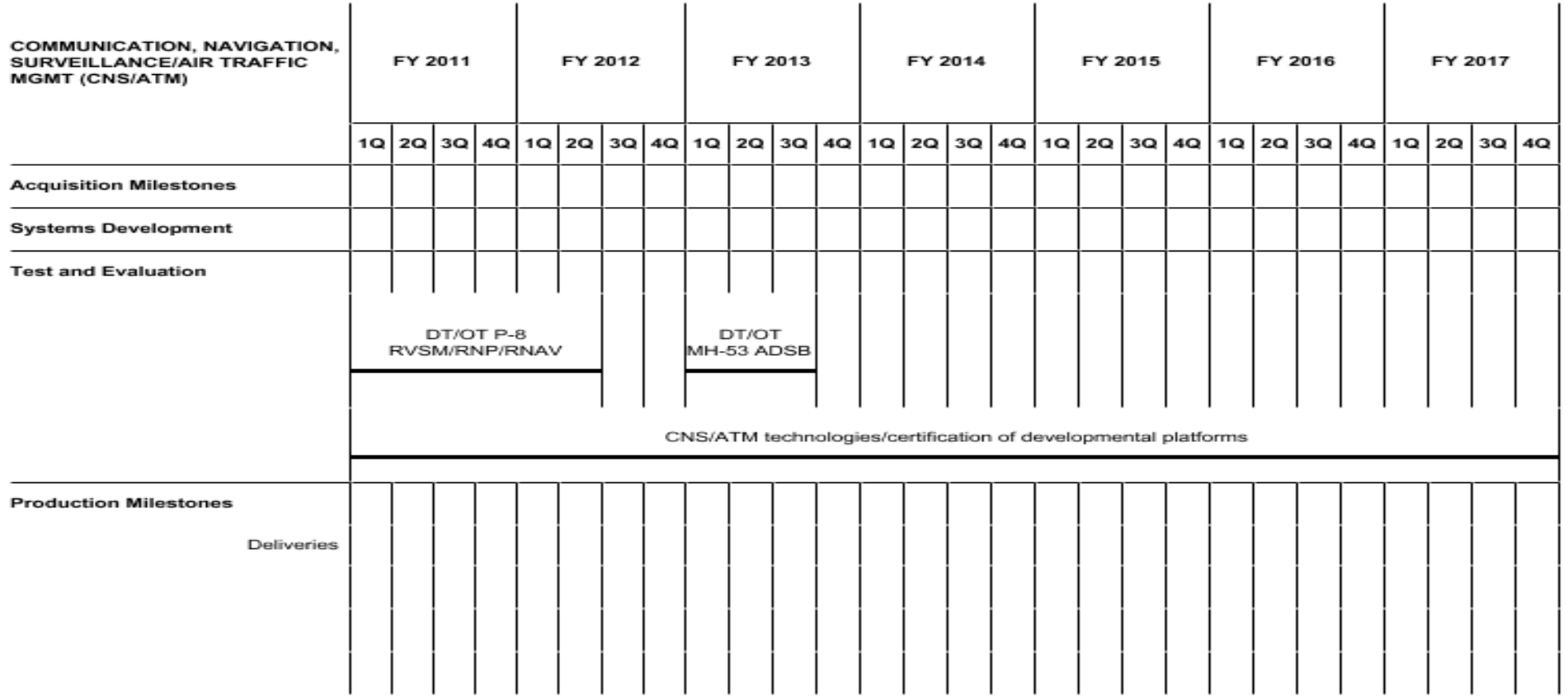
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



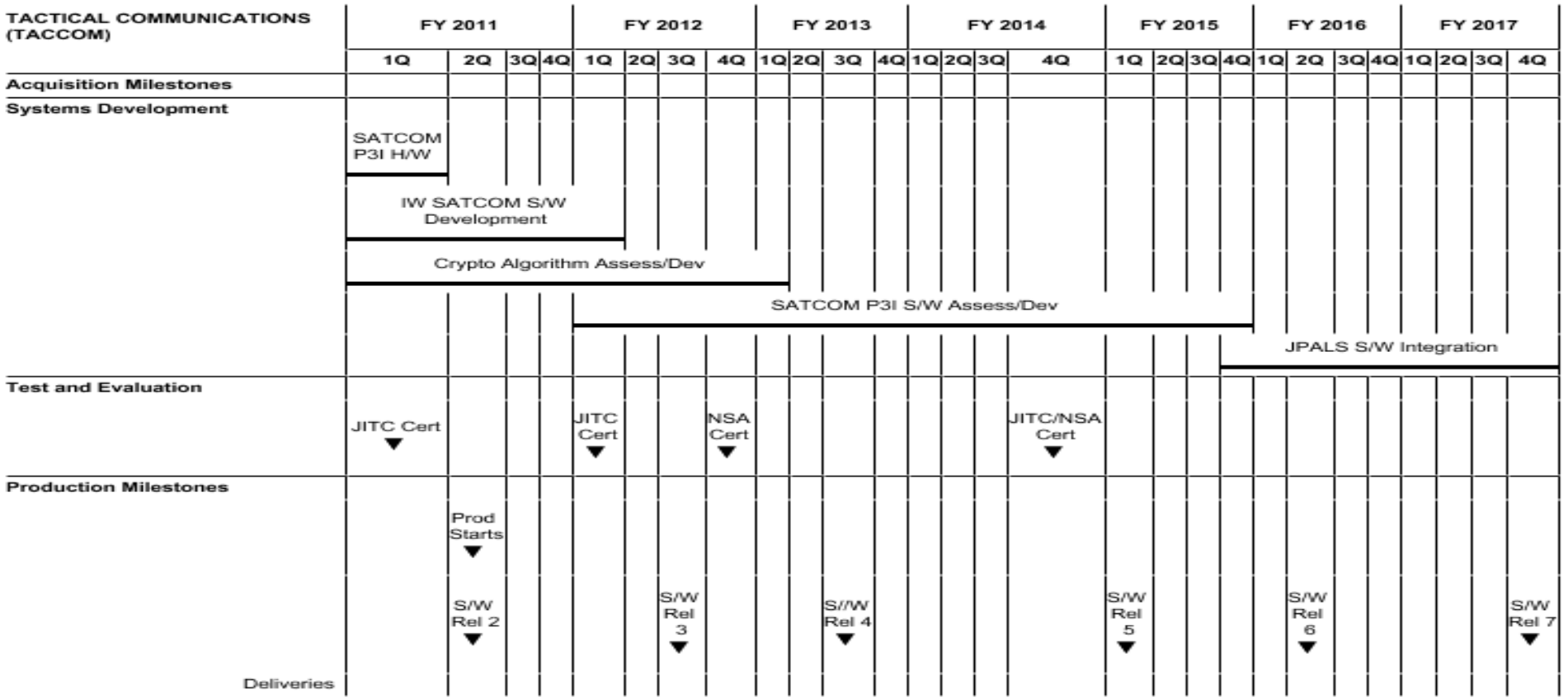
2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



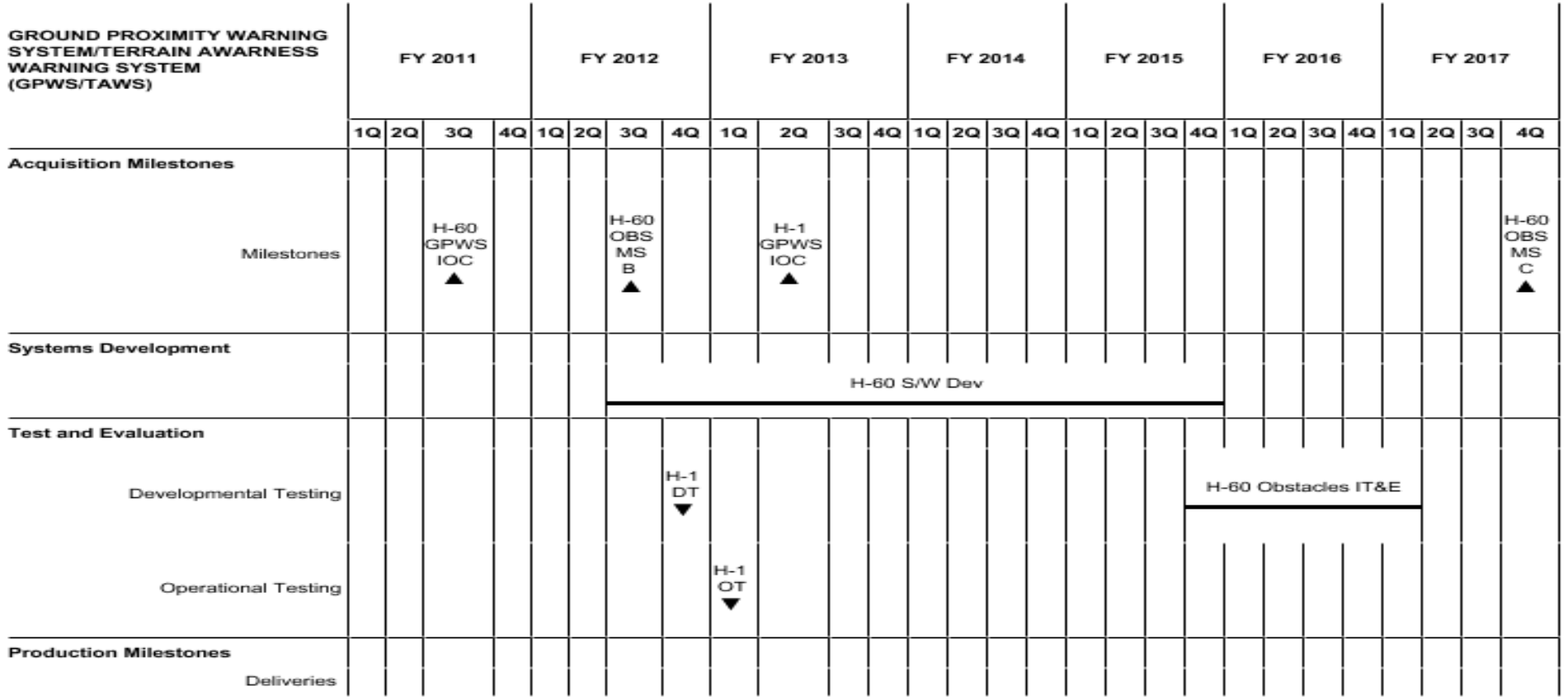
2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604215N: *Standards Development*	**PROJECT** 0572: *JT Service/NV Std Avionics CP/SB*

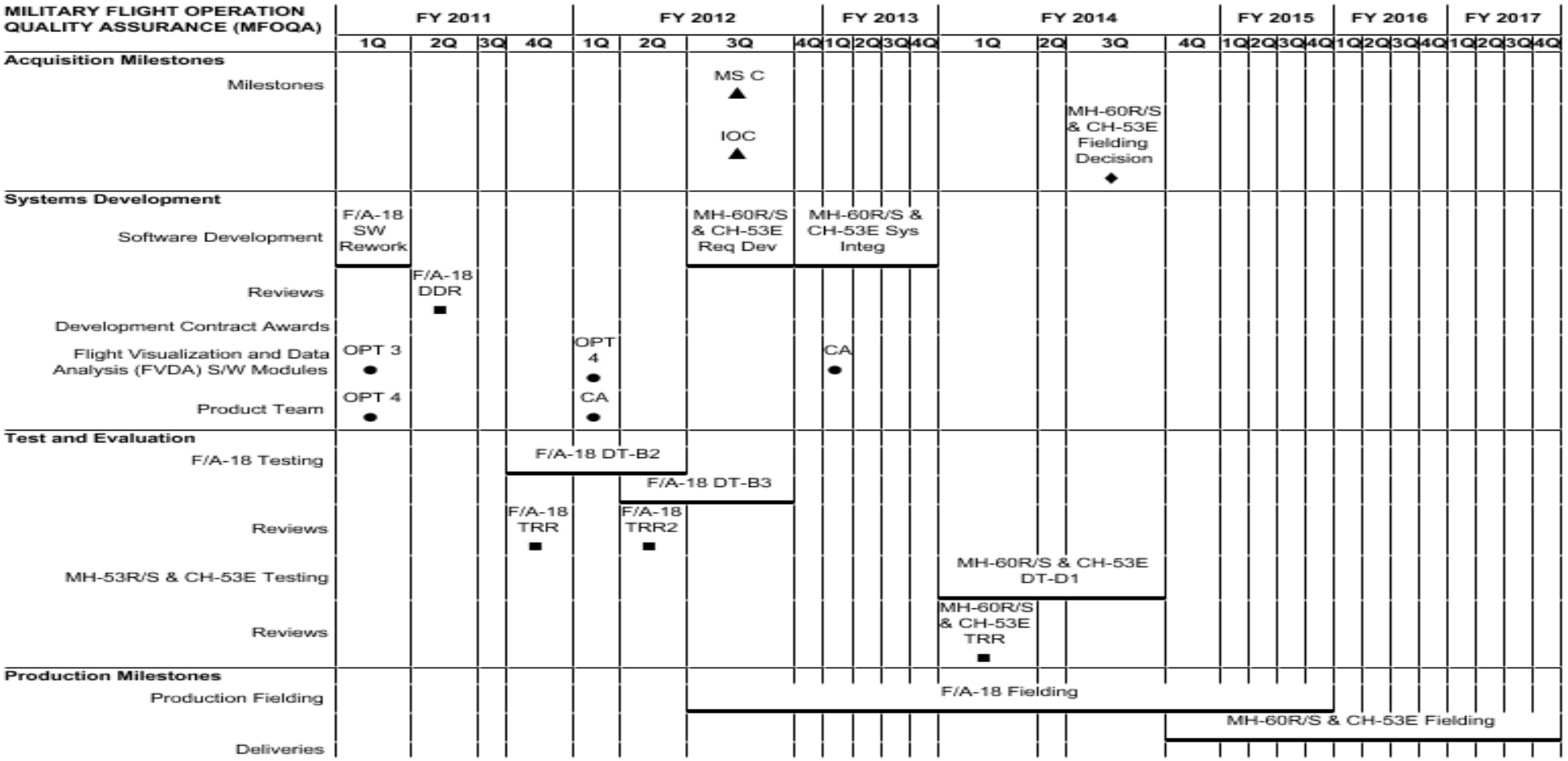
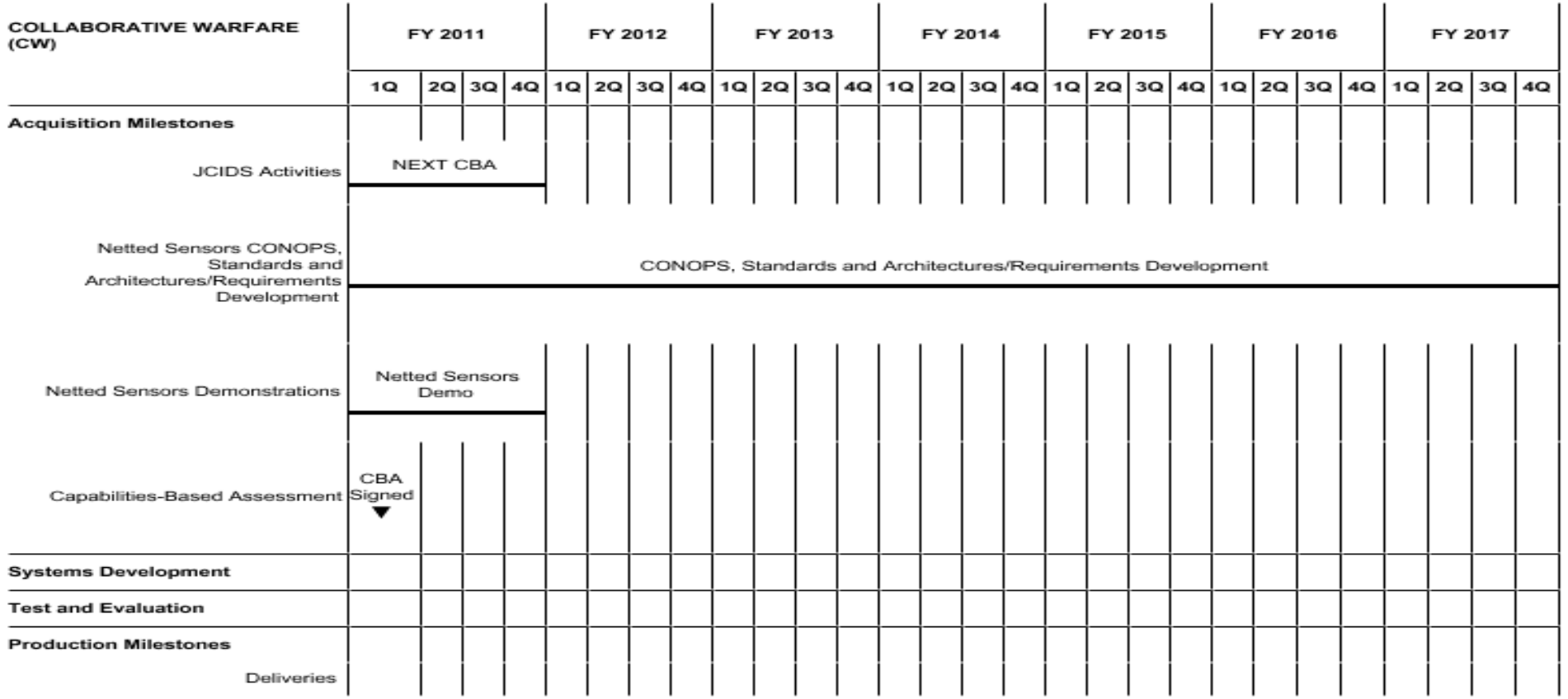


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

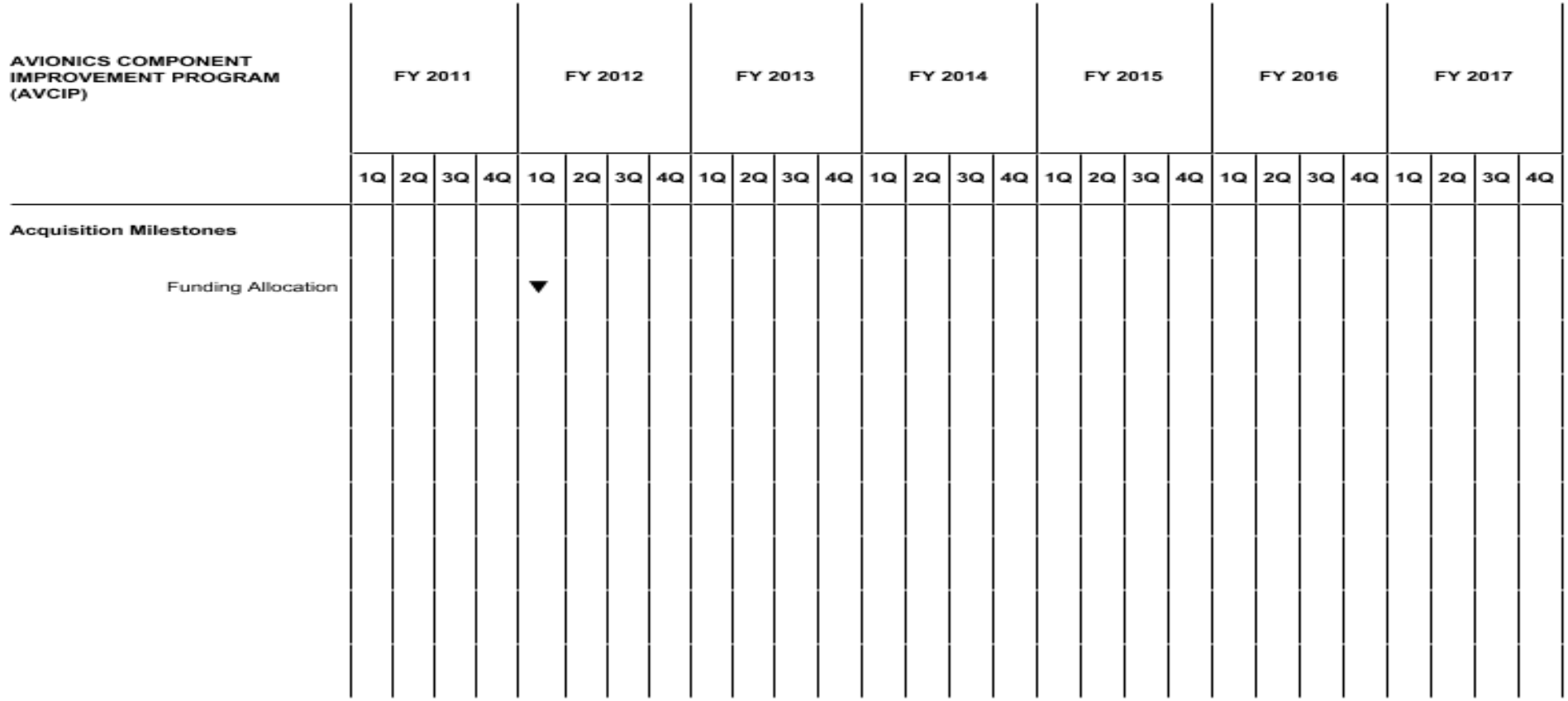
2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



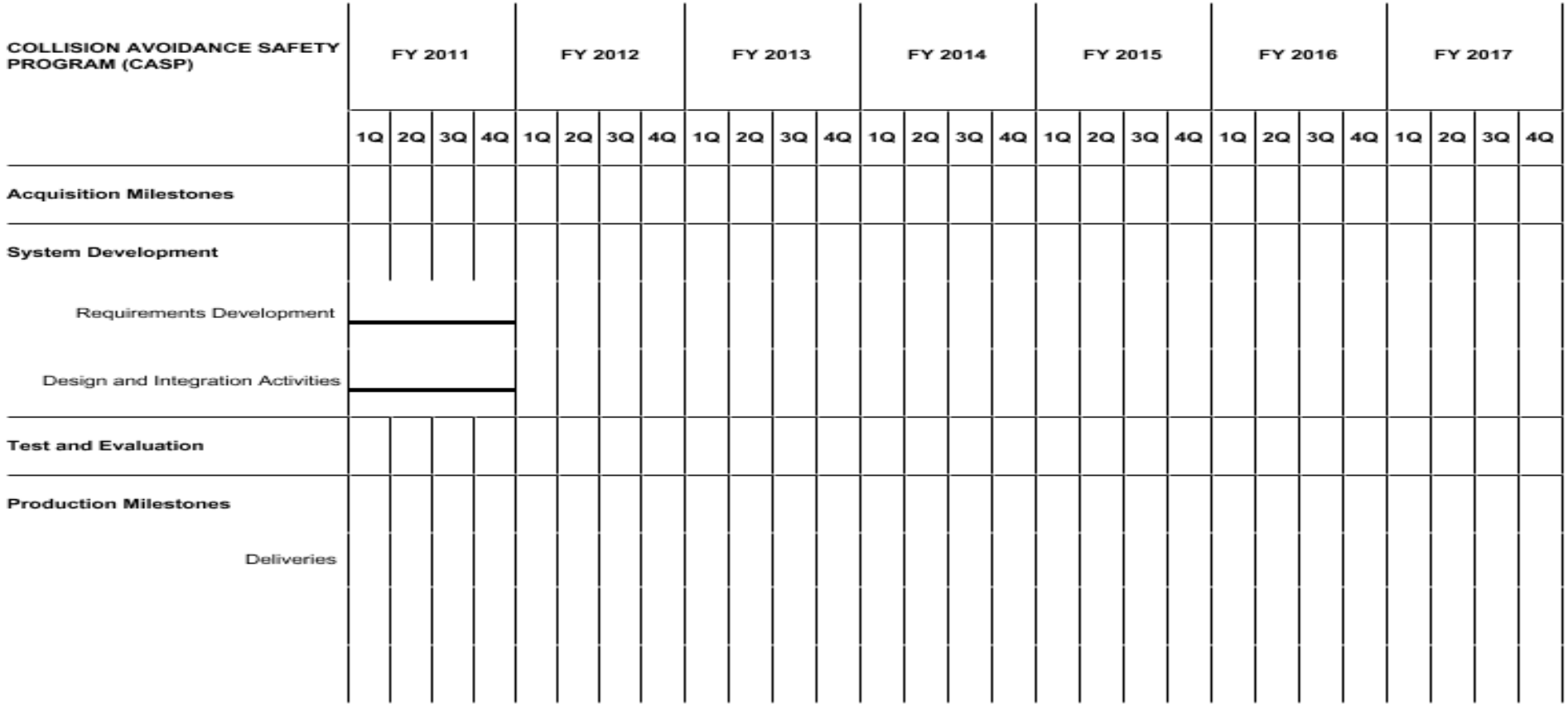
2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



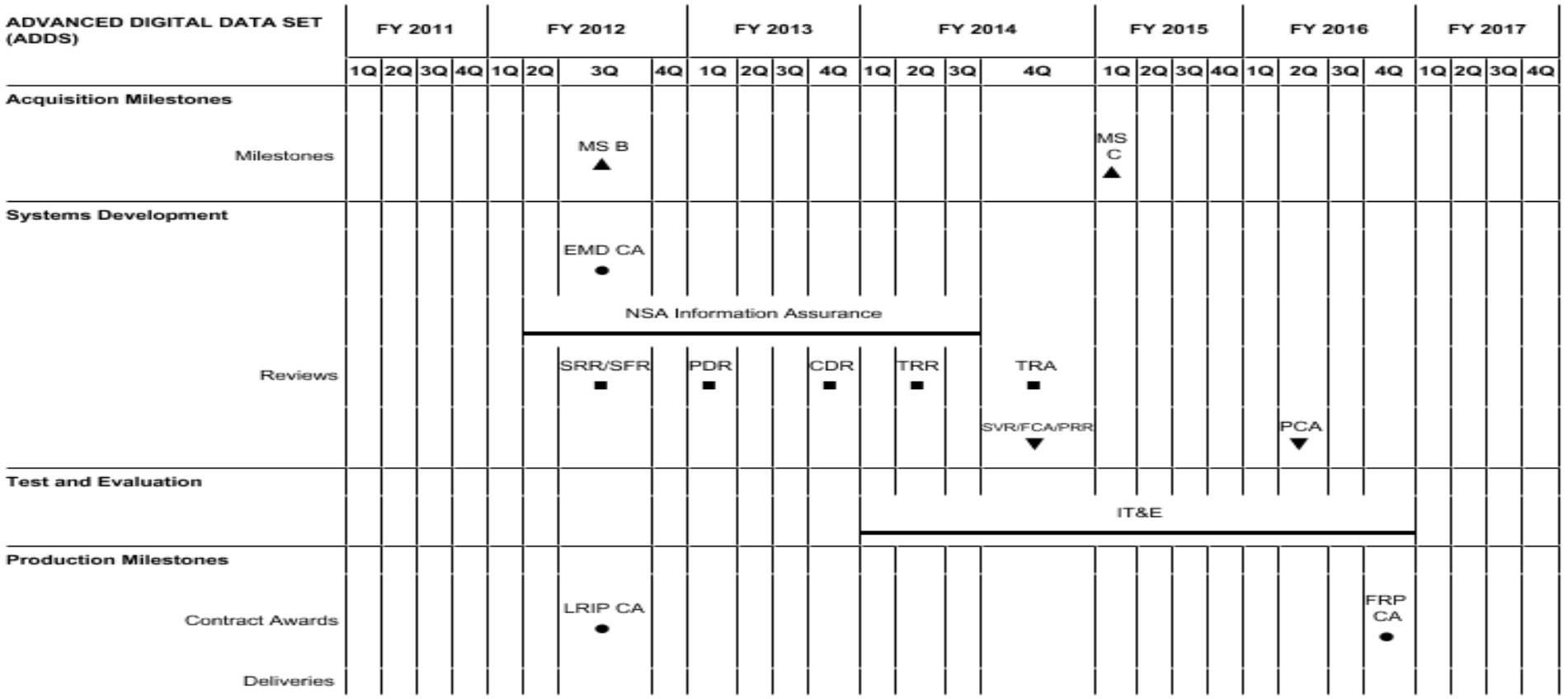
2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



2013PB - 0604215N - 0572

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*



2013PB - 0604215N - 0572

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADVANCED MISSION COMPUTERS AND DISPLAYS (AMCD)				
Acquisition Milestones: FCNS Network Processor Risk Reduction T/S	1	2011	1	2011
Acquisition Milestones: OSP3e Roadmap Risk Reduction T/S	1	2011	1	2011
COMMUNICATION, NAVIGATION, SURVEILLANCE/AIR TRAFFIC MGMT (CNS/ATM)				
Test and Evaluation: P-8A Integration/Certification 8.33 kHz, MODE S, Reduced Vertical Separation Minimums (RVSM, Required Navigation Performance (RNP RNAV)	1	2011	2	2012
Test and Evaluation: MH-53E Automatic Dependent Surveillance-Broadcast Integration/Certification	1	2013	3	2013
Test and Evaluation: Assist with Insertion of CNS/ATM technologies on and certification of developmental platforms	1	2011	4	2017
TACTICAL COMMUNICATIONS (TACCOM)				
Systems Development: GEN 5 Hardware Development for SATCOM P3I	1	2011	1	2011
Systems Development: GEN 5 Integrated Waveform Satellite Communications (SATCOM) S/W Development	1	2011	1	2012
Systems Development: GEN 5 Crypto Algorithm Assessment/Development	1	2011	1	2013
Systems Development: GEN 5 SATCOM P3I S/W Assessment/Development	1	2012	4	2015
Systems Development: Joint Precision Approach Landing System (S/W) Integration	4	2015	4	2017
Test and Evaluation: GEN 5 Joint Interoperability Test Command Certification (JITC)	1	2011	1	2011
Test and Evaluation: GEN 5 JTIC Certification1	1	2012	1	2012
Test and Evaluation: GEN 5 JTIC Certification2	4	2014	4	2014
Test and Evaluation: GEN 5 National Security Agency (NSA) Certification1	4	2012	4	2012
Production Milestones: GEN 5 Production Starts	2	2011	2	2011
Production Milestones: GEN 5 Evolution (Evol) S/W Releases 2	2	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: GEN 5 Evol S/W Releases 3	3	2012	3	2012
Production Milestones: GEN 5 Evol S/W Releases 4	3	2013	3	2013
Production Milestones: GEN 5 Evol S/W Releases 5	1	2015	1	2015
Production Milestones: GEN 5 Evol S/W Releases 6	2	2016	2	2016
Production Milestones: GEN 5 Evol S/W Releases 7	4	2017	4	2017
GROUND PROXIMITY WARNING SYSTEM/TERRAIN AWARNESS WARNING SYSTEM (GPWS/TAWS)				
Acquisition Milestones: Milestones: H-60 GPWS IOC	3	2011	3	2011
Acquisition Milestones: Milestones: H-1 GPWS IOC	2	2013	2	2013
Acquisition Milestones: Milestones: H-60 OBSTACLES MS B	3	2012	3	2012
Acquisition Milestones: Milestones: H-60 OBSTACLES MS C	4	2017	4	2017
Systems Development: H-60 Obstacles Government Software Development	3	2012	4	2015
Test and Evaluation: Developmental Testing: H-1 Developmental Testing (DT)	4	2012	4	2012
Test and Evaluation: Developmental Testing: H-60 TAWS Obstacles IT&E	4	2015	1	2017
Test and Evaluation: Operational Testing: H-1 Operational Testing (OT)	1	2013	1	2013
MILITARY FLIGHT OPERATION QUALITY ASSURANCE (MFOQA)				
Acquisition Milestones: Milestones: Milestone C (MS C)	3	2012	3	2012
Acquisition Milestones: Milestones: IOC	3	2012	3	2012
Acquisition Milestones: Milestones: MH-60R/S & CH-53E Fielding Decision	3	2014	3	2014
Systems Development: Software Development: F/A-18 Software Rework	1	2011	1	2011
Systems Development: Software Development: MH-60R/S & CH-53E Requirements Development	3	2012	3	2012
Systems Development: Software Development: MH-60R/S & CH-53E Systems Integration	4	2012	4	2013
Systems Development: Reviews: F/A-18 Delta Design Review	2	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Flight Visualization and Data Analysis (FVDA) S/W Modules: FVDA S/W Modules OPT3	1	2011	1	2011
Systems Development: Flight Visualization and Data Analysis (FVDA) S/W Modules: FVDA S/W Modules OPT4	1	2012	1	2012
Systems Development: Flight Visualization and Data Analysis (FVDA) S/W Modules: FVDA S/W Modules Contract Award RDTEN	1	2013	1	2013
Systems Development: Product Team: Product Team OPT4	1	2011	1	2011
Systems Development: Product Team: Product Team Contract Award RDT&EN	1	2012	1	2012
Test and Evaluation: F/A-18 Testing: F/A-18 DT-B2	4	2011	2	2012
Test and Evaluation: F/A-18 Testing: F/A-18 DT-B3	2	2012	3	2012
Test and Evaluation: Reviews: F/A-18 Test Readiness Review (TRR)1	4	2011	4	2011
Test and Evaluation: Reviews: F/A-18 TRR2	2	2012	2	2012
Test and Evaluation: MH-53R/S & CH-53E Testing: MH-60R/S & CH-53E DT-D1	1	2014	3	2014
Test and Evaluation: Reviews: MH-60R/S & CH-53E TRR	1	2014	1	2014
Production Milestones: Production Fielding: F/A-18 Fielding	3	2012	4	2015
Production Milestones: Production Fielding: MH-60R/S & CH-53E Fielding	4	2014	4	2017
Production Milestones: F/A-18: 1 Squadron R&D	3	2012	3	2012
Production Milestones: H-60R/S: 1 Squadron R&D	4	2014	4	2014
Production Milestones: CH-53E: 1 Squadron R&D	1	2014	1	2014
COLLABORATIVE WARFARE (CW)				
Acquisition Milestones: JCIDS Activities: Joint Capability Integration Development System Activities	1	2011	4	2011
Acquisition Milestones: Netted Sensors CONOPS, Standards and Architectures/ Requirements Development: Netted Sensors CONOPS, Standards, and Architectures/ Requirements Development	1	2011	4	2017
Acquisition Milestones: Netted Sensors Demonstrations: Netted Sensors Demonstrations	1	2011	4	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 0572: *JT Service/NV Std Avionics CP/SB*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Acquisition Milestones: Capabilities-Based Assessment: Capabilities-Based Assessment	1	2011	1	2011
AVIONICS COMPONENT IMPROVEMENT PROGRAM (AVCIP)				
Acquisition Milestones: Funding Allocation: -Funding Allocation	1	2012	1	2012
COLLISION AVOIDANCE SAFETY PROGRAM (CASP)				
System Development: Requirements Development: CASP Requirement Development Capabilities Development Document	1	2011	4	2011
System Development: Design and Integration Activities: CASP Design and Integrate Activities	1	2011	4	2011
ADVANCED DIGITAL DATA SET (ADDS)				
Acquisition Milestones: Milestones: Milestone B	3	2012	3	2012
Acquisition Milestones: Milestones: Milestone C	1	2015	1	2015
Systems Development: Engineering & Management Development Contract Award	3	2012	3	2012
Systems Development: NSA Information Assurance	2	2012	3	2014
Systems Development: Reviews: System Requirements Review/System Functional Review	3	2012	3	2012
Systems Development: Reviews: Preliminary Design Review	1	2013	1	2013
Systems Development: Reviews: Critical Design Review	4	2013	4	2013
Systems Development: Reviews: Test Readiness Review	2	2014	2	2014
Systems Development: Reviews: Test Readiness Assessment	4	2014	4	2014
Systems Development: Reviews: System Verification Review/Functional Configuration Audit/Program Readiness Review	4	2014	4	2014
Systems Development: Reviews: Physical Configuration Audit	2	2016	2	2016
Test and Evaluation: Developmental Testing	1	2014	4	2016
Production Milestones: Contract Awards: Low Rate Initial Production Contract Award	3	2012	3	2012
Production Milestones: Contract Awards: Full Rate Production Award Contract Award	4	2016	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 1857: *Calibration Standards*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1857: *Calibration Standards*	1.394	1.365	1.856	-	1.856	1.871	1.901	1.937	1.975	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

OPNAV sponsored (by instruction), Navy-wide program which addresses Metrology related RDT&E issues for navy weapon systems, shipboard platforms, Naval Air, and Fleet Ground Marines. It supports development of calibration standards (equipment, procedures and technical data) required to resolve Metcal related safety, obsolescence, new and emerging technology support and cost reduction issues. It funds Navy unique and lead service responsibilities in DoD and Joint Services Metrology Research Programs to develop calibration solutions. The line supports development of measurement requirements to verify performance of all test systems used to validate the operation of Navy weapon Systems with calibration standards traceable to the National Institute of Standards and Technology to calibrate, sustain and ensure performance accuracy.

This program also provides benefits and efficiencies in a joint collaborative environment within the Tri-Services. Projects are identified and defined so that they will meet the universal requirement. Development efforts are integrated in order to achieve the common capabilities required at minimum cost. This is also a regular and common business practice within the Navy Metrology Community where R&D efforts are communicated and integrated into the multiple testing and Monitoring Systems. This is done in support of Program Managers, Sponsors, and Principle Executive officers. As a result, common requirements are established, duplication of efforts are eliminated, and best value, high quality Metcal products are produced for the Navy.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Calibration Standards	1.394	1.365	1.856	-	1.856
Articles:	0	0	0		0
FY 2011 Accomplishments:					
($.936) Continue development of calibration standards (hardware) in support of chemical and biological detection systems.					
($.250) Begin development of portable calibration standards (hardware) in support of Fleet shipboard calibration enhancements.					
($.208) Continue development of standards in support for wireless micro electrical sensors in support of next generation DD(X) ships and Smart Carriers.					
FY 2012 Plans:					
($.133) Transition a calibration standard (hardware) in support of chemical and biological detection systems.					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 1857: *Calibration Standards*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
($.259) Transition a couple of electro optical measurement calibration standards (hardware) to support flight safety and operations. ($.188) Transition analytical metrology (processes) in support of automated interval and uncertainty analysis. ($.167) Continue development of calibration standards (hardware) in support of chemical and biological detection systems (chemical warfare agent detection systems). ($.234) Continue development of physical and mechanical calibration standards (hardware) in support of Fleet shipboard calibration enhancements. ($.252) Continue development of electro optical standards (hardware) in support of safety of flight operations. ($.132) Continue development of analytical metrology (processes) in support of automated interval and uncertainty analysis. ***FY 2013 Base Plans:*** ($ .759) Continue to develop calibration standards (hardware) in support of physical mechanical and chemical biological detection systems. ($.321) Continue development of physical and mechanical calibration standards in support of Fleet shipboard calibration enhancements. ($.776) Continue development of standards in support for wireless micro electrical sensors in support of next generation DD(X) ships and Smart Carriers.					
Accomplishments/Planned Programs Subtotals	1.394	1.365	1.856	-	1.856

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 1857: *Calibration Standards*

D. Acquisition Strategy

Funds provide for in-service engineering initiation of metrology research and developmental efforts of unique non-commercial hardware standards in the development of six key thrust technological areas which correspond to Chembio Defense, Microwave/Millimeter wave, Physical Mechanical, Electro-Optical, Analytical Metrology and Electrical/Electronic systems. These standards will ensure measurement accuracy in advanced and emerging combat weapon systems and associated test equipment. These hardware test standards will also provide for cost effective and efficient system maintenance and calibration measurements that reduce wrong test decisions and will result in lower maintenance cost and higher system performance reliability.

E. Performance Metrics

The U.S. Navy Metrology RDT&E Program will transition 4 current projects within the next 12 months in technology area of Electro Optical, Physical Mechanical, Nuclear, Biological and Chemical, and Analytical metrology in new calibration hardware and processes. Will continue the research and development of 5 projects in progress in the technology areas of Physical Mechanical, Electro Optical, Nuclear, Biological and Chemical, and Analytical metrology for the purpose of ensuring measurement accuracy in new emerging technology measurement requirements of Navy weapon systems. Success measures will be articulated through program goals and a balance score card strategy system.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 1857: *Calibration Standards*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSWC Corona:Corona, CA	4.181	0.700	Oct 2011	0.115	Jan 2013	-		0.115	0.000	4.996	
		Subtotal	4.181	0.700		0.115		-		0.115	0.000	4.996	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	WR	NSWC Corona:Corona, CA	1.276	0.300	Oct 2011	0.226	Oct 2012	-		0.226	0.000	1.802	
Government Engineering Support	WR	NSWC Corona:Corona, CA	2.170	0.325	Oct 2011	1.480	Oct 2012	-		1.480	0.000	3.975	
Defense Acquisition Workforce	Various	Various:Various	0.007	-		-		-		-	0.000	0.007	
Travel	WR	NSWC Corona:Corona, CA	0.064	0.040	Oct 2011	0.035	Oct 2012	-		0.035	0.000	0.139	
		Subtotal	3.517	0.665		1.741		-		1.741	0.000	5.923	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.698	1.365		1.856		-		1.856	0.000	10.919	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 1857: *Calibration Standards*

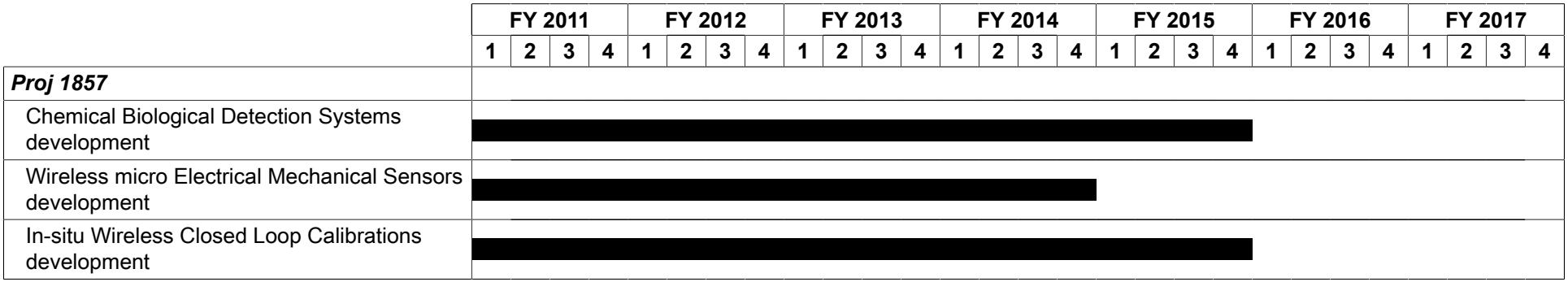


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604215N: *Standards Development*	**PROJECT** 1857: *Calibration Standards*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1857				
Chemical Biological Detection Systems development	1	2011	4	2015
Wireless micro Electrical Mechanical Sensors development	1	2011	4	2014
In-situ Wireless Closed Loop Calibrations development	1	2011	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2311: *Stores Planning and Weaponeering Module*	12.725	12.075	12.508	-	12.508	12.417	12.624	12.726	12.971	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project 2311, Stores Planning and Weaponeering Module: The Naval Aircraft Weaponeering Components (NAWC) project, now referred to as the Weaponeering and Stores Planning (WASP) components, are integrated software products that allow aircrew to determine the best combinations of weapons and delivery conditions to achieve the desired level of target damage, eliminate weapon delivery solutions that violate aircraft Type/Model/Series (T/M/S) specific safety-of-flight envelopes, and perform detailed weapons employment planning. WASP is approved by Air Warfare Division (N88) as a flight clearance implementation system for the F/A-18 A, A+, B, C, D, D (RC), E and F. WASP components will alert pilots if their planned weapon release conditions meet flight clearance limits, will result in bomb-to-bomb collisions, bomb-to-aircraft collisions, aircraft overstress, or excessive risk of aircraft loss/damage in the event of fuze early bursts. Weapon employment planning is fundamental to the Joint Capability Area (JCA) of Force Application and joint mission areas of Strike and Amphibious Warfare. WASP provides the Navy and Marine Corp with weaponeering capabilities that are critical requirements for Interdiction, Armed Reconnaissance (RECCE) and Close Air Support mission planning. Therefore, WASP product availability is critical to successful employment of the Joint Mission Planning System (JMPS) for the F/A-18 A-F. The WASP product encompasses a multitude of Government Furnished Information (GFI) software components and tools (aircraft target maneuver simulations, weapon flyout models, target probability of damage calculators). WASP products will require updates as emergent requirements for new aircraft T/M/S, stores and weapons are approved, and new flight clearances and flight restrictions are issued by Naval Air Systems Command Headquarters (NAVAIRSYSCOM).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Product Development	7.393	6.597	7.026	-	7.026
Articles:	0	0	0		0
Description: Includes associated system engineering design, development, installation, integration and software development for Weapons and Stores Planning (WASP) components V1.2.4, V3.0, V3.1, V3.1.1, V3.1.2, V3.2, V3.2.1, V3.3, V3.3.1 to support F/A-18 A-F. Naval Air Warfare Center Weapons Division, Joint Software Support Activity will develop and maintain the AV-8B Weapons and Release Planning tool using $.7M in FY11, $1M in FY12, and $.3M in FY13. Define requirements to integrate WASP components into the JMPS. Provide domain engineering support for weapons separation, aircraft loads, flutter, fuzing and safe escape for application to WASP. Provide analysis of new requirements, allocation of requirements, design oversight, and life cycle management of the WASP program. Develop new aircraft configuration, aircraft loading, weapon optimization, store release and delivery planning components for F/A-18 A-F new flight clearances and flight restrictions issued by NAVAIRSYSCOM. Provide configuration management, system administration, quality assurance,					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
documentation, metrics and software risk management for WASP. Acquire, integrate and modify numerous GFI software components and tools (aircraft target maneuver simulations, weapon flyout models, target probability of damage calculators, etc.) that are used for the WASP software development. Integrate WASP with Joint Standoff Weapon/Joint Direct Attack Munitions/Standoff Land-Attack Missile - Expanded Response and other weapons mission planning systems as required. ***FY 2011 Accomplishments:*** Complete WASP V1.2.4 for FY12 release to fleet and analyze requirements and start development for WASP V3.0. $.7M funding provided to NAWCWD, JSSA for WARP product development. ***FY 2012 Plans:*** Release V1.2.4 to the fleet 1QFY12. Continue development of V3.0. Provide $1M of funding to NAWCWD, JSSA for WARP product development. ***FY 2013 Base Plans:*** Release V3.0 to the fleet by 1QFY13, and continue development of V3.1. Provide $.3M of funding to Naval Air Warfare Center Weapons Division (NAWCWD), Joint Software Support Activity (JSSA) for Weapons and Release Planning (WARP) product development.					
Title: Test and Evaluation (T&E) ***Articles:*** ***Description:*** Provide test and evaluation for unit and system level testing; functional qualification testing; safety of flight certification testing; integration and standards compliance testing for Weaponeering and Stores Planning (WASP) versions V1.2.4, V3.0, V3.1, V3.1.1, V3.1.2, V3.2, V3.2.1, V3.3, V3.3.1. Provide Joint Mission Planning System (JMPS) Mission Planning Environment (MPE) Integration test support. Provide testing and test support to ensure all (to include internally developed software, externally developed Government Furnished Information (GFI)) components comply with Department of Navy (DoN) and Department of Defense (DoD) software mandates and directives. These include Integrated Shipboard Network System IT-21, DoD Information Assurance Certification and Accreditation Process, Navy Marine Corps Intranet (NMCI) and DoD Information Technology Portfolio Repository. All Fleet released software must comply with DoN and DoD software directives or will not be allowed to run on ship Local Area Networks (LANs) or NMCI. ***FY 2011 Accomplishments:***	2.539 0	2.669 0	2.378 0	-	2.378 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Continue test and evaluation of WASP V 1.2.4 in order to release to fleet and analyze test requirements for WASP V3.0. ***FY 2012 Plans:*** Complete test and evaluation of WASP V3.0 in order to release to fleet in FY13. Analyze test requirements for V3.1. ***FY 2013 Base Plans:*** Complete test and evaluation of WASP V3.1 in order to release to fleet in FY14. Analyze test requirements for V3.2.					
Title: Program Management/Systems Engineering ***Articles:*** ***Description:*** Provide program management and systems engineering support, which includes requirements definition and analysis, compliance with Naval Air Systems Command (NAVAIR) systems engineering technical review processes, Weaponeering and Stores Planning (WASP) acquisition documentation development and support, cost, schedule and performance management, contracting support (providing contract administration, preparing contract packages for award), compliance with external directives and providing financial support (accept, obligate, commit, and track funding). Provide travel for WASP Government personnel. Continue performing project management support for this program throughout the Future Years Defense Program/Plan (FYDP). ***FY 2011 Accomplishments:*** Continue project management and systems engineering support to the WASP for future releases of WASP to the fleet. ***FY 2012 Plans:*** Continue project management and systems engineering support to the WASP for future releases of WASP to the fleet. ***FY 2013 Base Plans:*** Continue project management and systems engineering support to the WASP for future releases of WASP to the fleet.	2.793 0	2.809 0	3.104 0	-	3.104 0
Accomplishments/Planned Programs Subtotals	12.725	12.075	12.508	-	12.508

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTE/3858: *Air Force Mission Planning*	83.555	69.918	72.037	0.000	72.037	78.534	90.995	92.164	0.000	Continuing	Continuing

D. Acquisition Strategy

WASP products, delivered annually, were developed in-house by NAVAIR consisting of Naval Air Warfare Center Aircraft Division and Naval Air Warfare Center Weapons Division engineers and support contractors. The team has now migrated to a smaller government team that provides functional expertise in aircraft safety-of-flight (air-vehicle stores compatibility, weapons separation, aircraft aerodynamic flutter, ground/flight loads, authorized fuze arm times, aircraft safe escape), guided weapons employment and weapons effects against targets, with the majority of the software development conducted by various contractors. The Government, engineering, test, and support teams (test facilities, functional qualification testing and certification/accreditation test) are supplemented with contractor labor.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes full aircraft loadout and weapons delivery safe escape planning. Objective value is < 15 minutes average time to plan a flight that includes full aircraft loadout and weapons delivery safe escape planning. End product is a pilot's z-diagram knee board card.

Interoperability: Threshold value is 100% stand alone value.
Objective value is 100% stand alone value.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development (5.1,6,9 Government Furnished Information (GFI), Occupancy (OCC))	WR	Naval Air Warfare Center Aircraft Division NAWCAD:Patuxent River, MD	17.001	0.142	Nov 2011	0.090	Nov 2012	-		0.090	Continuing	Continuing	Continuing
Product Development - Safe Escape (SEAL)	Various	Various:Various	30.225	0.391	Nov 2011	-		-		-	0.000	30.616	30.616
Product Development	WR	Air Force Seek Eagle:Eglin Air Force Base (AFB), FL	0.074	0.076	Nov 2011	0.079	Nov 2012	-		0.079	Continuing	Continuing	Continuing
Primary Software Development	C/CPFF	Lockheed Martin:Marlton, NJ	5.389	5.594	Nov 2011	-		-		-	0.000	10.983	10.983
Product Development - Weapons and Release Planning (WARP)	WR	Naval Air Warfare Center Weapons Division NAWCWD:China Lake, CA	0.700	0.394	Nov 2011	0.302	Nov 2012	-		0.302	Continuing	Continuing	Continuing
Prior year cost no longer funded in Future Years Defense Program/Plan (FYDP)	Various	Various:Various	26.492	-		-		-		-	0.000	26.492	
Primary Software Development/Cost Plus Fixed Fee (CPFF)	C/CPFF	Various:Various	-	-		6.555	Nov 2012	-		6.555	0.000	6.555	6.555
		Subtotal	79.881	6.597		7.026		-		7.026			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation Civilian (CIV) & OCC	WR	NAWCAD:Patuxent River, MD	18.191	1.206	Nov 2011	1.050	Nov 2012	-		1.050	Continuing	Continuing	Continuing
Test & Evaluation	WR	NAWCWD:Point Mugu, CA	0.528	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation MANTECH & WYLE	C/CPFF	Various:Various	8.250	1.463	Nov 2011	1.328	Nov 2012	-		1.328	0.000	11.041	11.041
Prior Year costs no longer funded in Future Years Defense Program/Plan (FYDP)	Various	Various:Various	0.377	-		-		-		-	0.000	0.377	
		Subtotal	27.346	2.669		2.378		-		2.378			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support Tecelote, shared costs, Materials	WR	Naval Air Warfare Center Aircraft Division NAWCAD:Patuxent River, MD	8.608	0.729	Nov 2011	0.718	Nov 2012	-		0.718	Continuing	Continuing	Continuing
Government Engineering Support Civilian (CIV) Sys Eng	WR	NAWCAD:Patuxent River, MD	5.617	0.631	Nov 2011	0.617	Nov 2012	-		0.617	Continuing	Continuing	Continuing
Program Management Support Brandes & MANTECH	Various	Various:Various	0.659	0.636	Nov 2011	0.513	Nov 2012	-		0.513	0.000	1.808	1.808
Government Engineering Support	WR	Naval Air Warfare Center Weapons Division NAWCWD:China Lake, CA	1.115	0.018	Nov 2011	0.018	Nov 2012	-		0.018	Continuing	Continuing	Continuing
Travel	WR	NAWCAD:Patuxent River, MD	1.261	0.030	Nov 2011	0.015	Nov 2012	-		0.015	Continuing	Continuing	Continuing
Systems Engineering Support	Various	Various:Various	0.684	0.765	Nov 2011	1.023	Nov 2012	-		1.023	0.000	2.472	2.472
Prior year costs no longer funded in FYDP	Various	Various:Various	0.663	-		-		-		-	0.000	0.663	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Govt Engineering Support: Mission Planning Environment (MPE) Integration	TBD	NAWCWD:Point Mugu, CA	-	-		0.200	Nov 2012	-		0.200	0.000	0.200	
		Subtotal	18.607	2.809		3.104		-		3.104			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	125.834	12.075		12.508		-		12.508			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604215N: *Standards Development*	**PROJECT** 2311: *Stores Planning and Weaponeering Module*

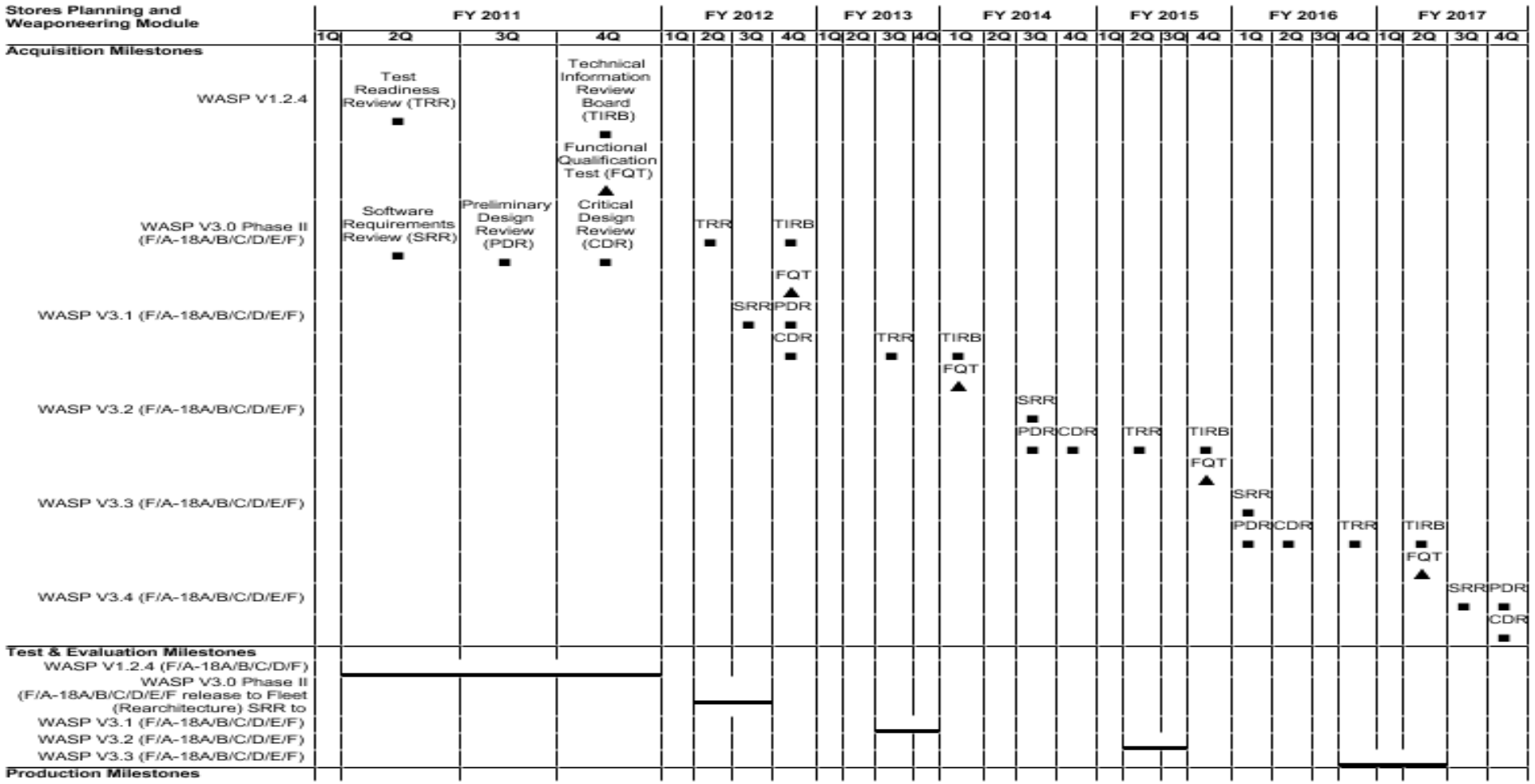
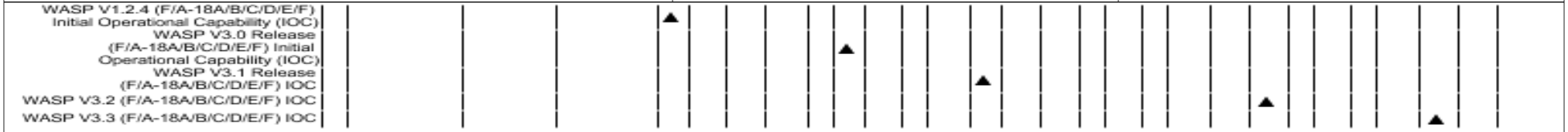


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*



2013PB - 0604215N - 2311

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604215N: *Standards Development*	**PROJECT** 2311: *Stores Planning and Weaponeering Module*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Stores Planning and Weaponeering Module				
Acquisition Milestones: WASP V1.2.4: Test Readiness Review	2	2011	2	2011
Acquisition Milestones: WASP V1.2.4: Technical Information Review Board	4	2011	4	2011
Acquisition Milestones: WASP V1.2.4: Functional Qualification Test	4	2011	4	2011
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Software Requirements Review	2	2011	2	2011
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Preliminary Design Review	3	2011	3	2011
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Critical Design Review	4	2011	4	2011
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Test Readiness Review	2	2012	2	2012
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Technical Information Review Board	4	2012	4	2012
Acquisition Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F): Functional Qualification Test	4	2012	4	2012
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Software Requirements Review	3	2012	3	2012
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Preliminary Design Review	4	2012	4	2012
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Critical Design Review	4	2012	4	2012
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Test Readiness Review	3	2013	3	2013
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Technical Information Review Board	1	2014	1	2014
Acquisition Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Functional Qualification Test	1	2014	1	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Software Requirements Review	3	2014	3	2014
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Preliminary Design Review	3	2014	3	2014
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Critical Design Review	4	2014	4	2014
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Test Readiness Review	2	2015	2	2015
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Technical Information Review Board	4	2015	4	2015
Acquisition Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Functional Qualification Test	4	2015	4	2015
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Software Requirements Review	1	2016	1	2016
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Preliminary Design Review	1	2016	1	2016
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Critical Design Review	2	2016	2	2016
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Test Readiness Review	4	2016	4	2016
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Technical Information Review Board	2	2017	2	2017
Acquisition Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Functional Qualification Test	2	2017	2	2017
Acquisition Milestones: WASP V3.4 (F/A-18A/B/C/D/E/F): Software Requirements Review	3	2017	3	2017
Acquisition Milestones: WASP V3.4 (F/A-18A/B/C/D/E/F): Preliminary Design Review	4	2017	4	2017
Acquisition Milestones: WASP V3.4 (F/A-18A/B/C/D/E/F): Critical Design Review	4	2017	4	2017
Test & Evaluation Milestones: WASP V1.2.4 (F/A-18A/B/C/D/F): Test and Evaluation	2	2011	4	2011
Test & Evaluation Milestones: WASP V3.0 Phase II (F/A-18A/B/C/D/E/F release to Fleet (Rearchitecture) SRR to: Test and Evaluation	2	2012	3	2012
Test & Evaluation Milestones: WASP V3.1 (F/A-18A/B/C/D/E/F): Test and Evaluation	3	2013	4	2013
Test & Evaluation Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F): Test and Evaluation	2	2015	3	2015
Test & Evaluation Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F): Test and Evaluation	4	2016	2	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2311: *Stores Planning and Weaponeering Module*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: WASP V1.2.4 (F/A-18A/B/C/D/E/F) Initial Operational Capability (IOC):	1	2012	1	2012
Production Milestones: WASP V3.0 Release (F/A-18A/B/C/D/E/F) Initial Operational Capability (IOC):	2	2013	2	2013
Production Milestones: WASP V3.1 Release (F/A-18A/B/C/D/E/F) IOC:	2	2014	2	2014
Production Milestones: WASP V3.2 (F/A-18A/B/C/D/E/F) IOC:	2	2016	2	2016
Production Milestones: WASP V3.3 (F/A-18A/B/C/D/E/F) IOC:	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2312: *Common Helicopters*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2312: *Common Helicopters*	0.894	0.889	0.879	-	0.879	0.565	0.560	0.582	0.671	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Automated mission planning systems to date have focused on developing planning capabilities for fixed-wing aircraft, while the unique planning requirements for helicopters have not been fully addressed. The unique and enhanced automated mission planning requirements that must be developed and implemented for helicopters include: data loading, an enhanced route editor (serpentine routing, hover), manipulation of higher fidelity (smaller scale) maps and imagery, enhanced performance tools (performance in and out of ground effect, performance degradation due to atmospheric conditions & elevation), and enhanced fidelity of landing zone, target zone, and threat analyses. The following type/model/series aircraft are supported by this PE: AH-1W/Z, UH-1N/Y, H-46/E, H-53D/E, H-60B/F/H/R/S and V-22. Common helicopter functionality will be developed for implementation in Joint Mission Planning System (JMPS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Common Helicopters	0.894	0.889	0.879	-	0.879
Articles:	0	0	0		0
Description: Continue development of Common Helicopter functionality and integration with JMPS Version 1.2.4, 1.3.5, 1.4 and Portable Flight Planning Station (PFPS) Version 3.3.1.					
FY 2011 Accomplishments: Develop and deliver two builds of legacy Common Mission Data Loader (CMDL) Unique Planning Component (UPC) Development Test (DT), develop and deliver CMDL .net UPC to DT, and develop and deliver three helicopter Weight and Power Calculator (WPC) modules to DT.					
FY 2012 Plans: Develop CMDL and Weapons Employment Zone Overlay Tool (WEZOT) compatibility with Windows 7, FW 1.2, 1.3 and 1.4 to DT.					
FY 2013 Base Plans: Complete CMDL and WEZOT compatibility with Windows 7, FW 1.2, 1.3 and 1.4.					
Accomplishments/Planned Programs Subtotals	0.894	0.889	0.879	-	0.879

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604215N: *Standards Development*	PROJECT 2312: *Common Helicopters*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTE/3858: *Air Force Mission Planning Systems*	83.555	69.918	72.037	0.000	72.037	78.534	90.995	92.164	0.000	Continuing	Continuing

D. Acquisition Strategy

Not Applicable.

E. Performance Metrics

Export Mission Data to Data Transfer Device (DTD): Threshold value is < 12 minutes to transfer navigation, communication, weapon system initialization settings and intelligence data.

Interoperability: Threshold value is 100% of top level Information Exchange Requirements (IERs) designated critical will be satisfied. Objective value is 100% of top level IERs will be satisfied.

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	54.404	17.654	6.866	-	6.866	3.570	4.934	-	-	0.000	87.428
1707: *MH-60R Development*	54.404	17.654	6.866	-	6.866	3.570	4.934	-	-	0.000	87.428

A. Mission Description and Budget Item Justification

This Program Element includes funding for the development support for the improvements to current systems for the MH-60R. The MH-60R Multi-Mission Helicopter provides battle group protection and adds significant capability in coastal littorals and regional conflicts. The MH-60R represents a significant avionics improvement to the H-60 series helicopters by enhancing primary mission areas of Undersea Warfare and Surface Warfare. Secondary mission areas include Search and Rescue, Vertical Replenishment, Naval Surface Fire Support, logistics support, personnel transport and Medical Evacuation.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	55.792	17.673	6.871	-	6.871
Current President's Budget	54.404	17.654	6.866	-	6.866
Total Adjustments	-1.388	-0.019	-0.005	-	-0.005
• Congressional General Reductions	-	-0.019			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.090	-			
• Program Adjustments	-	-	-0.016	-	-0.016
• Rate/Misc Adjustments	-	-	0.011	-	0.011
• Congressional General Reductions Adjustments	-0.298	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1707: *MH-60R Development*	54.404	17.654	6.866	-	6.866	3.570	4.934	-	-	0.000	87.428
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The primary mission areas of the MH-60R include Anti-Submarine Warfare and Surface Warfare. Secondary mission areas include Search and Rescue, Vertical Replenishment, Naval Surface Fire Support, logistics support, personnel transport and Medical Evacuation. The MH-60R provides direct support to the Carrier Strike Group and provides Link Communications Relay via VHF/UHF, Link-16, and Common Data Link (CDL) with the incorporation of Interface Design Specification Ship Air Upgrade ((SAU)-07-000) full data exchange via CDL. Ku-Band will be provided to DDG-1000, CVN-78 Class and LCS platforms. Aircraft Ship Integrated Secure and Traverse reduces operational requirements aboard ships by eliminating the need for hauldown capability and providing automatic movements for aircraft on deck. The MH-60R is Post-Milestone III; executing Pre-Planned Product Improvements (P3I) to Air Vehicle and Mission systems. P3I includes upgrades to communication, navigation, Identification Friend or Foe (IFF), Multi-Spectral Targeting System(MTS)/Forward Looking Infrared Radar (FLIR), Automatic Radar Periscope Detection and Discrimination (ARPDD), weapons, data link, safety, maintenance, airframe and mission planning systems. Identification, Friend or Foe (IFF) Mode 5 Interrogator capability is being embedded into the APS-147 Radar to provide positive determination of friendly combatants beyond visual range. The current magnesium gearbox is being replaced with aluminum gearbox to reduce corrosion and improve total ownership cost.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Avionics H/W and S/W Development	43.214	5.767	4.000
Articles:	0	0	0

Description: Supports aircraft integration, problem investigation and resolution, lab management and upgrades, hardware investigations, and repairs in support of the test program. Provides for Integrated Logistics Support and Program Management Board Support and subvendor support. Avionics hardware and software development and integration to include: P3I/Link-16, ARPDD, IFF Mode 5 interrogator, Communications, GPS, Acoustics and post processing. Mission planning, MTS/FLIR, Weapons, Stores and self defense, Data fusion, and Logistics products including Integrated Electronic Technical Manuals. ARPDD provides an automated periscope detection, classification, and tracking capability to reliably detect periscopes and masts, and reliably discriminate periscopes from clutter and confusion targets. This capability is suitable for air and surface platforms. The current magnesium gearbox is being replaced with aluminum gearbox to reduce corrosion and improve total ownership cost.

FY 2011 Accomplishments:

Continued ARPDD System Design and Development, P3I integration testing, IFF Mode 5, and ARPDD integrated testing.

FY 2012 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue Automatic Radar Periscope Detection and Discrimination (ARPDD) System Design Development(SDD), Pre-Planned Product Improvements (P3I) integration testing, Identification Friend or Foe (IFF) Mode 5, and ARPDD integrated testing. Begin aluminum gearbox development. ***FY 2013 Plans:*** Continue aluminum gearbox development.			
Title: Engineering and Logistics	1.622	3.278	0.831
Articles:	0	0	0
FY 2011 Accomplishments: Continued to provide engineering specialists, Integrated Logistics Support, Government Furnished Equipment, Support Equipment, Program Management, Contract Support Services, and travel to support P3I integration testing, Ship Air Upgrade (SAU) SAU-07-000 testing, ARPDD SDD, and conduct ARPDD integrated testing. ***FY 2012 Plans:*** Continue to provide engineering specialists, Integrated Logistics Support, Government Furnished Equipment, Support Equipment, Program Management, Contract Support Services, and travel to support P3I integration testing, SAU-07-000 testing, ARPDD SDD, and conduct ARPDD integrated testing. ***FY 2013 Plans:*** Continue to provide engineering specialists, Integrated Logistics Support, Government Furnished Equipment, Support Equipment, Program Management, Contract Support Services, and travel to support IFF Mode 5 Inerrogator development and Aluminum Gearbox development.			
Title: Avionics Testing and Evaluation	9.568	8.609	2.035
Articles:	0	0	0
FY 2011 Accomplishments: Continued to provide MH-60R Mission Avionics testing, Avionics Mission P3I, and ARPDD testing and evaluation efforts. Begin IFF Mode 5 Interrogator testing and evaluation efforts. ***FY 2012 Plans:*** Continue to provide MH-60R Mission Avionics testing, Avionics Mission P3I, and ARPDD testing and evaluation efforts. Continue IFF Mode 5 Interrogator testing and evaluation efforts. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue to provide MH-60R Mission Avionics testing and Identification, Friend or Foe (IFF) Mode 5 Interrogator testing and evaluation efforts. Begin aluminum Gearbox testing and evaluation.			
Accomplishments/Planned Programs Subtotals	54.404	17.654	6.866

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN-1 BLI:018200: *MH-60R*	1,021.086	984.956	842.762	0.000	842.762	985.397	1,211.220	1,363.844	82.716	0.000	12,280.317
• APN-6 BLI: 060510: *MH-60R*	52.286	27.737	0.353	0.000	0.353	0.443	0.581	1.310	0.000	0.000	298.297
• APN-5 BLI: 053000: *SH60 Series*	21.484	37.885	46.874	0.000	46.874	57.400	56.203	60.064	72.243	439.842	872.325

D. Acquisition Strategy

Initial Operating Capability (IOC) was achieved in Dec 05 and the Milestone III, Full Rate Production decision occurred in March 2006. As the SH-60B and SH-60F reach the end of their service life, the MH-60R serves as the replacement weapon system. The MH-60R weapon system began fielding in FY2006. The mission systems include Common Cockpit, Airborne Low Frequency Sonor, sonobuoy launcher, Commercial-off-the-Shelf Acoustics Processor, Electronic Support Measure, Mission planning, Multi-Spectral Targeting System (MTS) / Forward Looking Infrared Radar (FLIR) system, Multi Mission Radar, Automatic Radar Periscope Detection and Discrimination (ARPDD), Common Data Link (CDL) Hawklink, Integrated Self Defense and weapons capability. Pre-Planned Product Improvement (P3I) upgrades will be integrated, tested, and fielded to ensure increased capabilities are provided to the fleet user.

E. Performance Metrics

Successfully achieve IOC for the ARPDD upgrade to the MH-60R Multi-Mode Radar. Improve Electronic Support Measure (ESM) Mission Data Load performance prior to next operational deployment and determine if any long term ESM software/hardware fixes are required. Determine solutions to the Automatic Video Tracking lock and Eye-safe Laser Range Finder labeling prior to next operational deployment.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Dev, Avionics (LMSI)	SS/CPFF	Lockheed Martin:Owego, NY	853.898	2.167	Nov 2011	-		-		-	0.000	856.065	856.065
Primary Hdw Dev, Avionics (SAU)	SS/CPIF	Lockheed Martin:Owego, NY	16.582	-		-		-		-	0.000	16.582	16.582
Primary Hdw Dev, Airframe (SAC)	SS/FFP	Sikorsky:Stratford, CT	-	3.600	Mar 2012	4.000	Feb 2013	-		4.000	3.900	11.500	11.500
All Product Dev Cost from FY93-FY11	Various	Various:Not Specified	280.389	-		-		-		-	0.000	280.389	280.389
		Subtotal	1,150.869	5.767		4.000		-		4.000	3.900	1,164.536	1,164.536

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWC AD:Patuxent River, MD	5.582	0.669	Nov 2011	0.751	Nov 2012	-		0.751	0.000	7.002	
Government Engineering Support	WR	NAWC WD:China Lake, CA	15.810	2.009	Nov 2011	-		-		-	0.000	17.819	
Government Engineering Support	Various	Various:Various	4.292	0.500	Nov 2011	-		-		-	0.741	5.533	
All Product Dev Cost From FY93-FY11	Various	Various:Various	123.477	-		-		-		-	0.000	123.477	
		Subtotal	149.161	3.178		0.751		-		0.751	0.741	153.831	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWC AD:Patuxent River, MD	135.503	6.984	Nov 2011	1.480	Nov 2012	-		1.480	4.384	148.351	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operation Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	12.132	1.625	Nov 2011	0.555	Nov 2012	-		0.555	0.000	14.312	
All T&E costs from FY93-FY11	Various	various:various	11.688	-		-		-		-	0.000	11.688	
		Subtotal	159.323	8.609		2.035		-		2.035	4.384	174.351	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	24.589	-		-		-		-	0.000	24.589	
Travel	WR	NAWC AD:Patuxent River, MD	4.642	0.100	Nov 2011	0.080	Nov 2012	-		0.080	0.000	4.822	
All Mangement cost from FY03- FY11	Various	Various:Various	9.667	-		-		-		-	0.000	9.667	
		Subtotal	38.898	0.100		0.080		-		0.080	0.000	39.078	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,498.251	17.654		6.866		-		6.866	9.025	1,531.796	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	PROJECT 1707: *MH-60R Development*

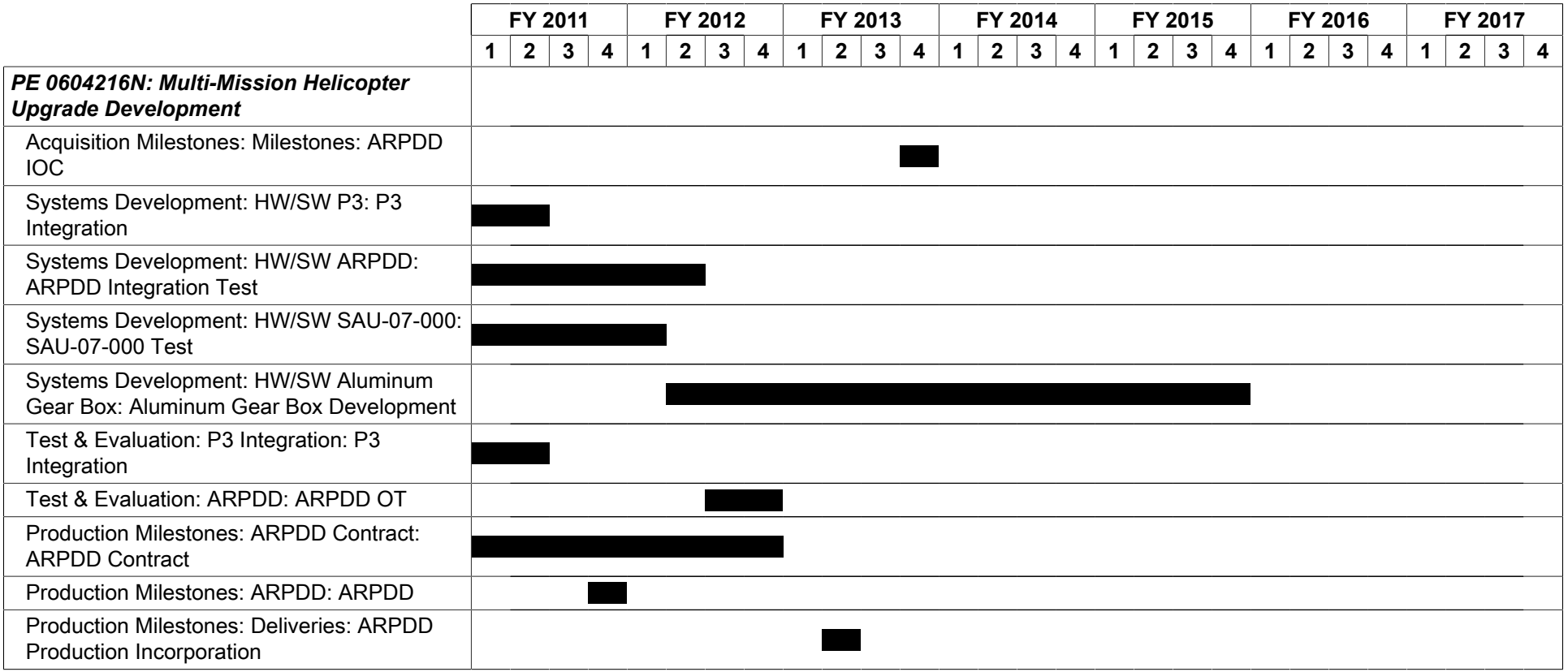


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604216N: *Multi-Mssn Helicopter Upgrade Dev*	**PROJECT** 1707: *MH-60R Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PE 0604216N: Multi-Mission Helicopter Upgrade Development				
Acquisition Milestones: Milestones: ARPDD IOC	4	2013	4	2013
Systems Development: HW/SW P3: P3 Integration	1	2011	2	2011
Systems Development: HW/SW ARPDD: ARPDD Integration Test	1	2011	2	2012
Systems Development: HW/SW SAU-07-000: SAU-07-000 Test	1	2011	1	2012
Systems Development: HW/SW Aluminum Gear Box: Aluminum Gear Box Development	2	2012	4	2015
Test & Evaluation: P3 Integration: P3 Integration	1	2011	2	2011
Test & Evaluation: ARPDD: ARPDD OT	3	2012	4	2012
Production Milestones: ARPDD Contract: ARPDD Contract	1	2011	4	2012
Production Milestones: ARPDD: ARPDD	4	2011	4	2011
Production Milestones: Deliveries: ARPDD Production Incorporation	2	2013	2	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	5.496	5.922	4.060	-	4.060	4.241	4.371	4.338	4.415	Continuing	Continuing
2345: *Fleet METOC Equipment*	3.987	4.436	2.615	-	2.615	2.751	2.865	2.821	2.872	Continuing	Continuing
2346: *METOC Sensor Engineering*	1.509	1.486	1.445	-	1.445	1.490	1.506	1.517	1.543	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Air/Ocean Equipment Engineering (AOEE) Program Element provides future mission capabilities to support naval combat forces. This program engineers and developmentally tests organic and remote sensors, communication interfaces, and processing and display devices. This equipment is engineered to measure, ingest, store, process, distribute and display conditions of the physical environment that are essential to the optimum employment and performance of naval warfare systems. AOEE also engineers capabilities for shipboard and shore-based tactical systems. A major thrust area for the AOEE program is to provide the engineering development of specialized equipment and measurement capabilities that are intended to monitor specific conditions of the physical environment in hostile and remote areas in response to fleet demand signals for increased sensing capability and capacity to support battlespace collections and prediction on short to intermediate time scales. With such capabilities, the war fighters' situational awareness of the operational effects of the physical environment are made more certain.

Major emphasis areas include the Meteorological and Oceanographic Future Mission Capabilities (METOC FMC) project and the Environmental Satellite Receiver Processor (ESRP) (comprised of AN/SMQ-11 (sea and shore configuration) and AN/FMQ-17 (shore configuration)) program.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	5.735	5.922	4.141	-	4.141
Current President's Budget	5.496	5.922	4.060	-	4.060
Total Adjustments	-0.239	-	-0.081	-	-0.081
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.030	-			
• SBIR/STTR Transfer	-0.180	-			
• Rate/Misc Adjustments	-	-	-0.081	-	-0.081
• Congressional General Reductions Adjustments	-0.029	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*

Change Summary Explanation

Technical: The Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program's primary focus has shifted from the Engineering and Manufacturing Development phase to the Production phase.

Schedule: The schedule for the Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program is no longer included in this exhibit as the primary focus of the program has shifted from the Engineering and Manufacturing Development phase to the Production phase.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2345: *Fleet METOC Equipment*	3.987	4.436	2.615	-	2.615	2.751	2.865	2.821	2.872	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides for the engineering and manufacturing development of sensors, communication interfaces, processing and display meteorological and oceanographic (METOC) equipment. This equipment is designed to provide future mission capabilities for war fighters to measure, ingest, store, process, distribute and display METOC parameters and derived products.

This project also exploits new government off-the-shelf /commercial off-the-shelf technologies, tactical sensors and web enablement for the Navy's computer-based tactical shipboard and shore capability used to predict and assess the operational effects of the physical environment on the performance of platforms, weapons and sensor systems. This project includes development of warfare specific mission planning modules to support unmanned systems with integration of data from environmental and tactical sensor systems, model forecast information and Geospatial Information & Services Databases. This project also supports development of autonomous environmental sensing systems for situational awareness and tactical decision aid/mission planner support, as well as iridium and advanced satellite communication integration in METOC sensor, vehicle control and mission planning systems that will be required to achieve Chief of Naval Operation objectives for information dominance and decision superiority.

Major emphasis areas include the Meteorological and Oceanographic Future Mission Capabilities (METOC FMC) project and the Environmental Satellite Receiver Processor (ESRP) (comprised of AN/SMQ-11 (sea and shore configuration) and AN/FMQ-17 (shore configuration)) program.

Decrease in the FY 2013 request is due to the decrease in efforts required for the Littoral Battlespace Sensing Unmanned Undersea Vehicles (LBS-UUV) program's Engineering and Manufacturing Development phase.

FY 2013 request provides for the continued development of advanced tools and techniques for METOC asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data, and the development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes, and continue the development to support infrastructure for advanced global and regional prediction systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)		FY 2011	FY 2012	FY 2013
Title: Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)		2.739	3.423	2.161
	Articles:	0	0	0
FY 2011 Accomplishments:				

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued advanced tools and techniques development efforts for Meteorology and Oceanography (METOC) asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continued development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes. ***FY 2012 Plans:*** Continue advanced tools and techniques development for Meteorology and Oceanography (METOC) asset allocation, METOC decision support applications and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continue development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command and control nodes. Begin development of support infrastructure for advanced global & regional prediction systems. ***FY 2013 Plans:*** Continue advanced tools and techniques development for METOC asset allocation, METOC decision support applications, and interfaces to tactical and strategic decision aids along with component and prototype efforts associated with acquiring environmental data. Continue development of an end-to-end methodology to collect, fuse, and integrate these data into Navy and DoD networks and command & control nodes. Continue development of support infrastructure for advanced global & regional METOC prediction systems.			
Title: Littoral Battlespace Sensors - Unmanned Undersea Vehicle (LBS-UUV)	0.850	0.737	0.168
Articles:	0	0	0
FY 2011 Accomplishments: Completed Littoral Battlespace Sensors ocean Gliders (LBS-G) Analysis of Alternatives, engineering studies, and cost estimates for the LBS-G Engineering Change Proposals (ECPs) as required. Corrected LBS-G software and hardware issues identified during Developmental Test and Evaluation (DT&E) conducted in FY10. Continued the Littoral Battlespace Sensors Autonomous Undersea Vehicles (LBS-AUV) Engineering and Manufacturing Development (EMD) Phase, including all required testing and Technical Reviews. Began development of the LBS-AUV Engineering Development Model (EDM). Began to prepare for DT&E of the LBS-AUV system. ***FY 2012 Plans:*** Continue to correct deficiencies on LBS-G systems via Engineering Change Proposals (ECPs) as appropriate. Deliver prototype LBS-AUV systems. Complete LBS-AUV Developmental Test and Evaluation (DT&E). Complete LBS-AUV EMD phase and obtain Milestone C. Correct any LBS-AUV software and/or hardware design deficiencies identified during DT&E. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct LBS-G and LBS-AUV engineering design studies as required. Develop system upgrades via ECPs, and correct any identified software and/or hardware deficiencies as required.			
Title: USMC Meteorological Mobile Facility (Replacement) Next Generation (METMF (R) NEXGEN) ***Articles:*** ***FY 2011 Accomplishments:*** Conducted Joint Interoperability Testing, Development Testing (DT), Independent Operational Test & Evaluation, Follow-On Operational Test and Evaluation, Operational Test Readiness Review, technical evaluations, operational assessments and ECP's, as required, on the METMF(R) NEXGEN Engineering Development Models (EDM).	0.100 0	-	-
Title: Environmental Satellite Receiver Processor (ESRP) ***Articles:*** ***FY 2011 Accomplishments:*** Completed annual software upgrade to integrate new METOC Satellite Sensors of Opportunity for the Polar Orbiting Environmental Satellite System (POES). Commenced the integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS) formerly National Polar Orbiting Satellite System (NPOESS) that was scheduled to replace and/or augment the Defense Meteorology Satellite Program (DMSP). ***FY 2012 Plans:*** Develop and test annual hardware and software updates to integrate new METOC Satellite Sensors of Opportunity available in the Geostationary Operational Environmental Satellite System (GOES) and the Polar Orbiting Environmental Satellite System (POES). Continue integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS). ***FY 2013 Plans:*** Develop and test annual hardware and software upgrades to integrate new METOC Satellite Sensors available in the Geostationary Operational Environmental Satellite System (GOES) and the Polar Orbiting Environmental Satellite System (POES). Continue integration of ESRP systems in support of Joint Polar Orbiting Satellite System (JPSS).	0.298 0	0.276 0	0.286 0
Accomplishments/Planned Programs Subtotals	3.987	4.436	2.615

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4226: *Meteorological Equip*	25.442	30.278	18.339	0.000	18.339	20.154	20.831	20.528	20.926	Continuing	Continuing
• RDTEN/0603207N/2341: *METOC Data Acquisition*	14.719	6.073	6.702	0.000	6.702	6.724	6.886	6.845	6.958	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEN/0603207N/2342: *METOC Data Assimilation and MOD*	14.750	10.636	11.127	0.000	11.127	9.875	9.854	9.827	9.986	Continuing	Continuing
• RDTEN/0604218N/2346: *METOC Sensor Engineering*	1.509	1.486	1.445	0.000	1.445	1.490	1.506	1.517	1.543	Continuing	Continuing

D. Acquisition Strategy

Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to Naval Research Laboratories and miscellaneous contractors, with management oversight by the Program Executive Officer for Command, Control, Communications, Computers and Intelligence.

E. Performance Metrics

Goal: Develop and engineer equipment to acquire meteorological and oceanographic (METOC) data in order to improve the accuracy of global and regional scale meteorological and oceanographic forecast models.

Metric: Tasks will address no less than 75% of applicable capability gaps and requirements, as identified by Resource and Requirements Sponsor(s). As tasks relate to exploitation of fleet sensors for METOC data (Through-the-Sensor), no less than 80% of approved initiatives will have a cost, schedule, performance and transition risk analysis completed within the past 12 months.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
METOC Future Mission Capabilities	WR	Naval Research Laboratory:Washington, DC	16.075	3.141	Oct 2011	1.943	Oct 2012	-		1.943	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	WR	SPAWAR System Centers:California, South Carolina	7.521	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/CPFF	RAYTHEON:Massachusetts	2.559	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	Various	Various:Various	18.899	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/CPFF	University of WA:Washington	0.250	0.250	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Gliders	C/CPIF	Teledyne Brown Engineering:Alabama	0.200	-		-		-		-	Continuing	Continuing	Continuing
METOC Future Mission Capabilities	C/FP	SAIC:Virgina	0.350	0.350	Dec 2011	0.304	Nov 2012	-		0.304	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	Hydroide:Pocasset, MA	-	0.395	Nov 2011	-		-		-	0.000	0.395	
		Subtotal	45.854	4.136		2.447		-		2.447			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
METOC Future Mission Capabilities	C/CPFF	SSA/CSC:MISC	1.312	-		-		-		-	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	SAIC:Virgina	0.350	0.300	Nov 2011	0.168	Nov 2012	-		0.168	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Littoral Battlespace Sensing - Autonomous Undersea Vehicle	C/FP	SPAWAR System Centers:San Diego, CA	0.150	-		-		-		-	0.000	0.150	
		Subtotal	1.812	0.300		0.168		-		0.168			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	OPTEVFOR:Virginia	0.424	-		-		-		-	Continuing	Continuing	Continuing
Littoral Battlespace Sensing - Unmanned Undersea Vehicle	WR	NSWC Carderock:Maryland	0.150	-		-		-		-	0.000	0.150	
METMF R NEXGEN	C/FP	Smiths Detection:Rhode Island	0.090	-		-		-		-	0.000	0.090	
		Subtotal	0.664	-		-		-		-			

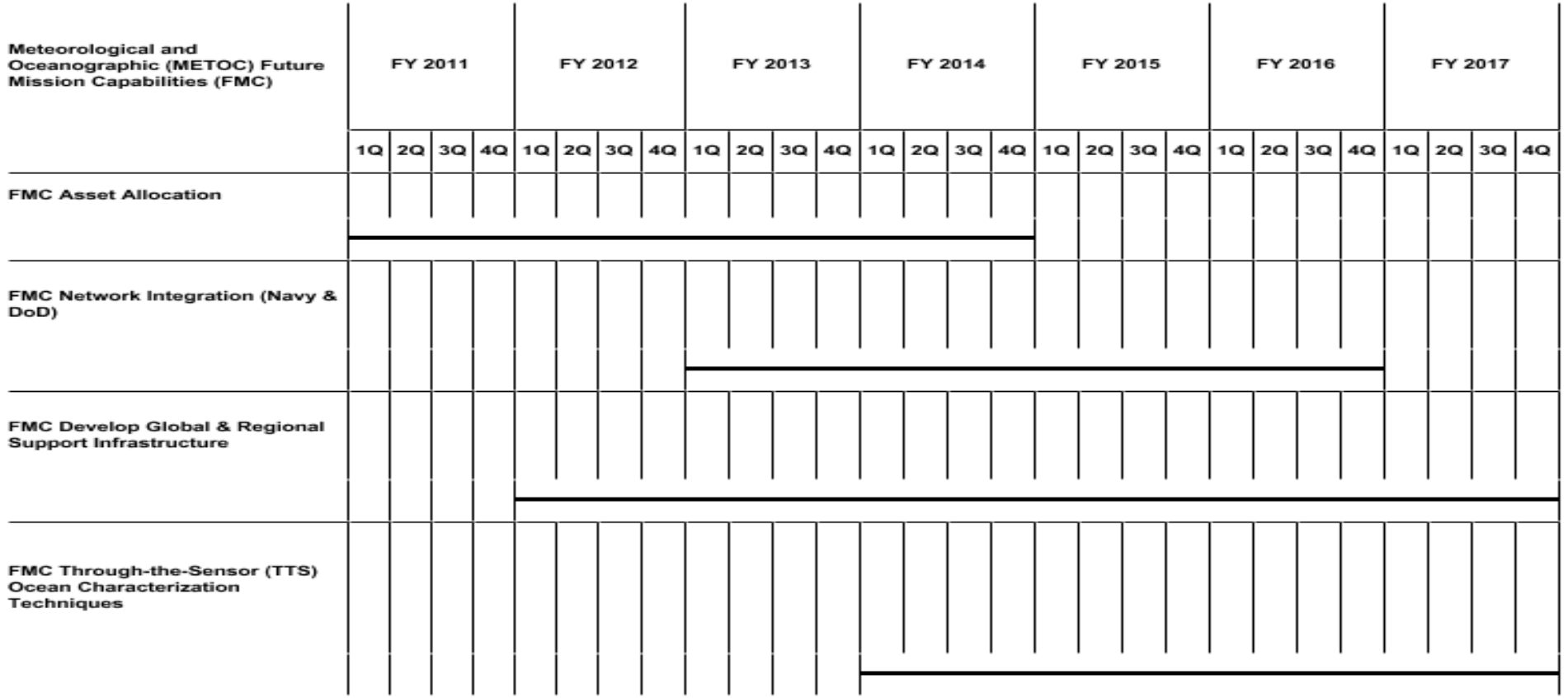
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	C/CPFF	SAIC:Virginia	0.400	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	0.400	-		-		-		-			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	48.730	4.436		2.615		-		2.615			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2345: *Fleet METOC Equipment*



2013DON - 0604218N - 2345

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604218N: *Air/Ocean Equipment Engineering*	**PROJECT** 2345: *Fleet METOC Equipment*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)				
FMC Asset Allocation:	1	2011	4	2014
FMC Network Integration (Navy & DoD):	1	2013	4	2016
FMC Develop Global & Regional Support Infrastructure:	1	2012	4	2017
FMC Through-the-Sensor (TTS) Ocean Characterization Techniques:	1	2014	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2346: *METOC Sensor Engineering*	1.509	1.486	1.445	-	1.445	1.490	1.506	1.517	1.543	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides for the engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement capabilities for obtaining near real-time, in-situ meteorological and oceanographic (METOC) data in hostile, remote, and denied areas. The project's objectives are to engineer near-term future mission sensing capabilities that are intended to survive the harsh littoral and deep-strike environments and also to meet demanding requirements for timeliness and accuracy. Engineering is performed within this project to ensure that air and safety certification for deployment from fleet aircraft or ships is met and that the proper data formats are engineered for electronic communications transmissions, human interface displays, and inputs to predictive models.

The major area of emphasis is the METOC Future Mission Capabilities (FMC) project.

FY 2013 request provides for the continued development of advanced sensor system support technologies and techniques for sensor deployment, data processing and performance metrics to optimize sensor performance and assess the viability of sensors and subsystems on unmanned and manned aircraft systems and autonomous undersea platforms for collection of automated METOC data and information.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Meteorological and Oceanographic (METOC) Future Mission Capabilities (FMC)	1.509	1.486	1.445
Articles:	0	0	0

FY 2011 Accomplishments:

Continued system development and demonstration of Meteorology and Oceanography (METOC) manned, unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continued the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and performance metrics to optimize sensor performance.

FY 2012 Plans:

Continue system development and demonstration of METOC manned, unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continue the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and analysis to include performance metrics to optimize sensor performance. Develop infrastructure to acquire, process and distribute METOC data and products.

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue system development and demonstration of METOC manned unmanned and automated sensors (to include integration of environmental sensors into a larger environmental sensing strategy). Continue the development of advanced sensor system support technologies and techniques for sensor deployment, data processing and analysis to include performance metrics to optimize sensor performance. Assess viability of sensors and subsystem sensors on unmanned and manned aircraft systems and autonomous undersea systems for collection of automated METOC data. Continue to develop infrastructure to acquire, process and distribute METOC data and products.			
Accomplishments/Planned Programs Subtotals	1.509	1.486	1.445

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEN/0603207N/2341: *METOC DATA ACQUISITION*	14.719	6.073	6.702	0.000	6.702	6.724	6.886	6.845	6.958	Continuing	Continuing
• RDTEN/0603207N/2342: *METOC DATA ASSIMILATION AND MOD*	14.750	10.636	11.127	0.000	11.127	9.875	9.854	9.827	9.986	Continuing	Continuing
• RDTEN/0604218N/2345: *FLEET METOC EQUIPMENT*	3.987	4.436	2.615	0.000	2.615	2.751	2.865	2.821	2.872	Continuing	Continuing

D. Acquisition Strategy

Acquisition and contracting strategies are to support engineering and manufacturing development of specialized, high resolution instrumentation systems and measurement techniques for obtaining near real-time in-situ meteorological and oceanographic (METOC) data in denied or remote areas by providing funds to miscellaneous performers.

E. Performance Metrics

Goal: Develop and engineer unique sensors to acquire METOC data in order to improve the accuracy of global and regional scale meteorological and oceanographic forecast models.

Metric: Tasks will address no less than 75% of applicable capability gaps and requirements, as identified by Resource Sponsor and Type Commander(s). No less than 75% of sensor engineering initiatives will be informed by an Analysis of Alternatives or market study to assess the state of the technology.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	WR	Naval Research Laboratory:Washington, DC	5.936	1.486	Oct 2011	1.445	Nov 2012	-		1.445	Continuing	Continuing	Continuing
Product Development	Various	MISC:MISC	11.750	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	17.686	1.486		1.445		-		1.445			

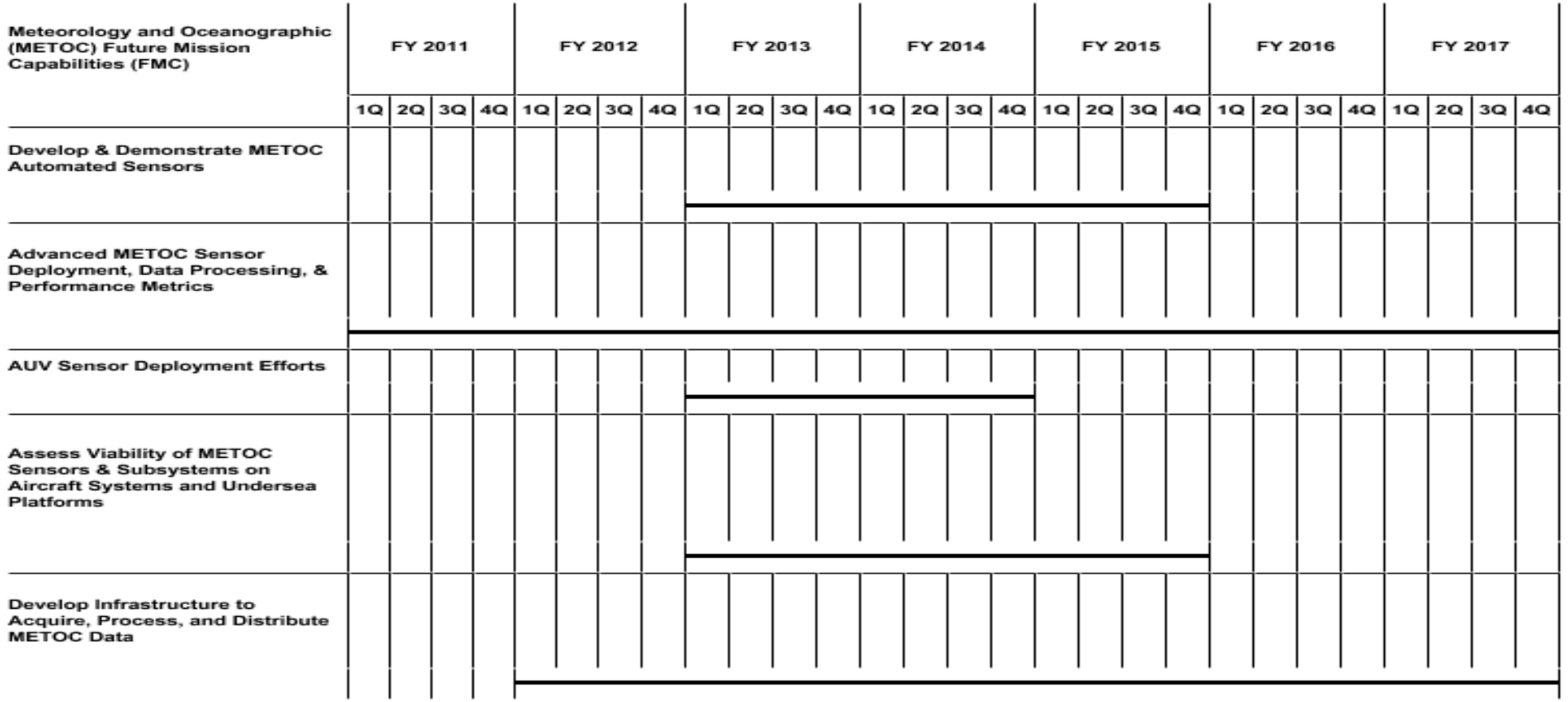
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Workforce	C/CPFF	Not Specified:Not Specified	0.008	-		-		-		-	0.000	0.008	0.008
		Subtotal	0.008	-		-		-		-	0.000	0.008	0.008

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	17.694	1.486		1.445		-		1.445			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*



2013DON - 0604218N - 2346

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604218N: *Air/Ocean Equipment Engineering*	PROJECT 2346: *METOC Sensor Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Meteorology and Oceanographic (METOC) Future Mission Capabilities (FMC)				
Develop & Demonstrate METOC Automated Sensors:	1	2013	4	2015
Advanced METOC Sensor Deployment, Data Processing, & Performance Metrics:	1	2011	4	2017
AUV Sensor Deployment Efforts:	1	2013	4	2014
Assess Viability of METOC Sensors & Subsystems on Aircraft Systems and Undersea Platforms:	1	2013	4	2015
Develop Infrastructure to Acquire, Process, and Distribute METOC Data:	1	2012	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	3.517	3.417	3.451	-	3.451	3.111	3.144	3.225	3.375	Continuing	Continuing
1152: *P-3 Sensor Integration*	1.462	1.356	1.377	-	1.377	1.316	1.332	1.361	1.405	Continuing	Continuing
3016: *Fatigue Life Mgmt Program*	2.055	2.061	2.074	-	2.074	1.795	1.812	1.864	1.970	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program provides for P-3C aircraft systems development and test in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21. The P-3C Sensor Integration project integrates advanced and future Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW) sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air Acoustic Rapid Cots Insertion (ARCI) efforts by replacing legacy MIL-SPEC UYS-1 with increasingly open, Commercial Off The Shelf-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness. Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Improved Extended Echo Ranging and Multistatic Acoustic Coherent family of Multi-Static active systems, ARCI, Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. The Over the Horizon (OTH) Wideband system will provide the P-3C ASuW Improvement Program aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real-time sensitive acoustic intelligence data which will maximize enemy detections, tracking and engagement opportunities.

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection techniques.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	3.574	3.417	3.496	-	3.496
Current President's Budget	3.517	3.417	3.451	-	3.451
Total Adjustments	-0.057	-	-0.045	-	-0.045
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.039	-			
• Program Adjustments	-	-	-0.055	-	-0.055
• Rate/Misc Adjustments	-	-	0.010	-	0.010
• Congressional General Reductions Adjustments	-0.018	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1152: *P-3 Sensor Integration*	1.462	1.356	1.377	-	1.377	1.316	1.332	1.361	1.405	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for P-3C aircraft systems development and test in subsurface and surface surveillance, search, detection, localization, classification, attack and communications in support of Sea Shield/Sea Power 21.

The P-3C Sensor Integration project integrates advanced and future Anti-Submarine Warfare (ASW) and Anti-Surface Warfare (ASuW) sensors, weapons systems, and supporting technology into legacy P-3C systems and phased capabilities upgrades. The program also advances Air Acoustic Rapid Cots Insertion (ARCI) efforts by replacing legacy MIL-SPEC UYS-1 with increasingly open, Commercial Off The Shelf-based architecture. Also, P-3 Sensor Integration will expand software and hardware technology of P-3 systems to integrate additional sensor and processing capabilities, environmental prediction tools, tactical decision aides, color capabilities and communications to improve aircrew tactical proficiency and battlespace awareness.

Sensor Integration is a continuous effort to integrate and test newly evolving ASW and ASuW technologies such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent (MAC) family of Multi-Static active systems, ARCI, Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. The Over the Horizon (OTH) Wideband system will provide the P-3C AIP aircraft the capability to conduct OTH Satellite communications which will allow the on-station aircraft to transmit real time sensitive acoustic intelligence data which will maximize enemy detections, tracking and engagement opportunities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: P-3 integration of ASW and ASuW sensors / weapon systems	1.462	1.356	1.377	-	1.377
Articles:	0	0	0		0
FY 2011 Accomplishments: Continued Sensor Integration effort to integrate and test newly evolving ASW and ASuW technologies such as IEER and MAC family of Multi-Static active systems, ARCI, Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Continue Sensor Integration effort to integrate and test newly evolving ASW and ASuW technologies such as IEER and MAC family of Multi-Static active systems, ARCI, Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements. ***FY 2013 Base Plans:*** Continue Sensor Integration effort to integrate and test newly evolving Anti-Submarine Warfare and Anti-Surface Warfare (ASuW) technologies such as Improved Extended Echo Ranging (IEER) and Multistatic Acoustic Coherent family of Multi-Static active systems, Air Acoustic Rapid Cots Insertion, Non-acoustic ASW sensors and systems, and future Technical Refresh insertions for obsolescence and processing improvements.					
Accomplishments/Planned Programs Subtotals	1.462	1.356	1.377	-	1.377

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0538: *P-3 Series*	191.662	170.466	82.105	66.300	148.405	36.768	5.899	6.343	4.030	0.000	4,970.512

D. Acquisition Strategy

The Air Deployable Active Receiver/IEER Operational Requirements Document (ORD) (Ser# 297(1)-05-97)) for 1152 was approved on 29 December 1997. The P-3 ASuW Improvement Program ORD (Ser#355-88-94) for 2417 was approved on 30 March 1994. The Acquisition Plan (AIR-93-08A Rev 2) was approved on 30 March 1998. The Acquisition Strategy Review (AIR-ASR-26A Rev 3) was approved 29 Nov 1999 which includes Over the Horizon Wideband system.

E. Performance Metrics

Successfully complete Developmental Test.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/FFP	LM:St. Paul, MN	8.626	-		-		-		-	0.000	8.626	8.626
Systems Engineering	SS/CPFF	LM:Manassas, VA	11.590	-		-		-		-	0.000	11.590	11.590
		Subtotal	20.216	-		-		-		-	0.000	20.216	20.216

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	VARIOUS:Various	4.340	-		-		-		-	0.000	4.340	
		Subtotal	4.340	-		-		-		-	0.000	4.340	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD:Pax River, MD	2.438	-		-		-		-	0.000	2.438	
		Subtotal	2.438	-		-		-		-	0.000	2.438	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	WR	SPAWARSYSC:Charleston, SC	0.263	-		-		-		-	0.000	0.263	
Government Engineering Support	WR	NAWCAD:Pax River, MD	4.454	1.256	Nov 2011	1.287	Nov 2012	-		1.287	5.017	12.014	
Travel	WR	NAWCAD:Pax River, MD	1.031	0.100	Oct 2011	0.090	Oct 2012	-		0.090	0.400	1.621	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*

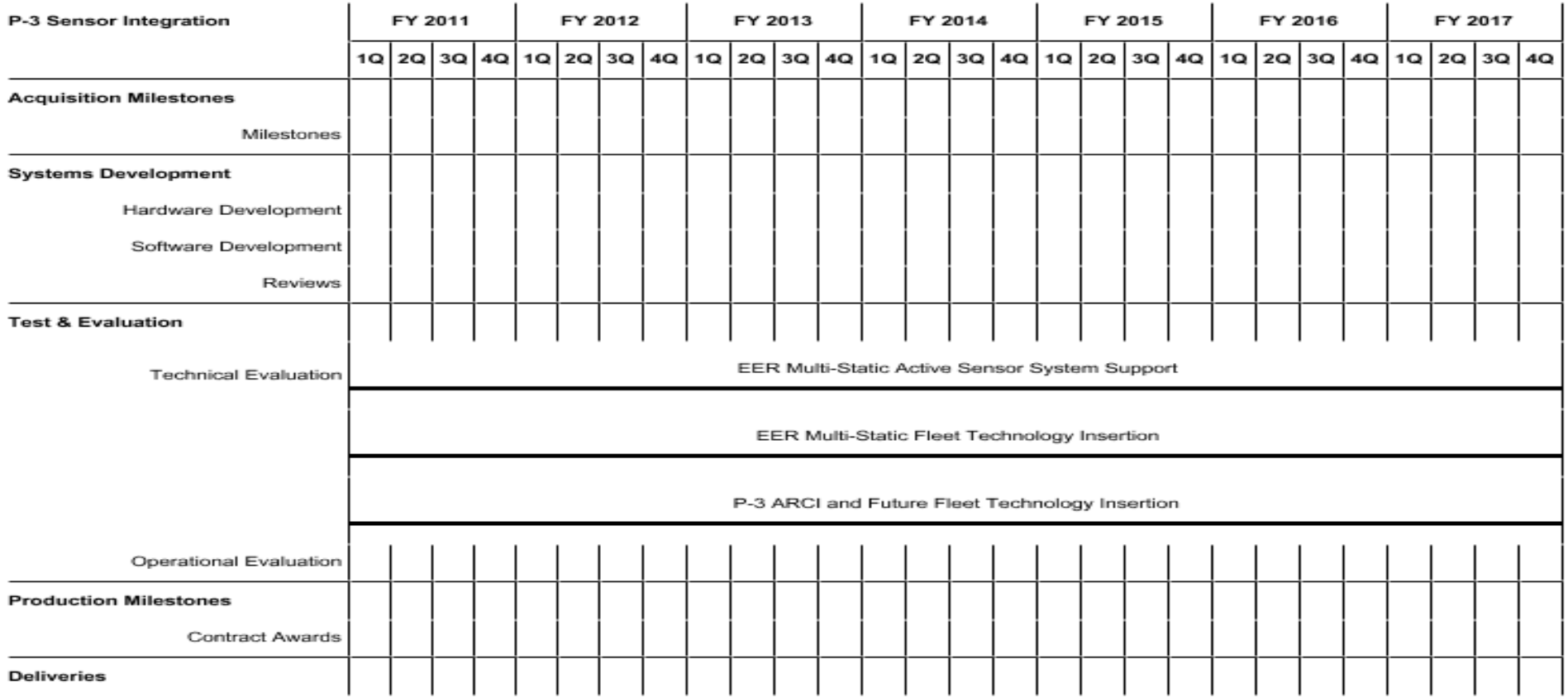
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	5.748	1.356		1.377		-		1.377	5.417	13.898	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	32.742	1.356		1.377		-		1.377	5.417	40.892	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*



2013OSD - 0604221N - 1152

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 1152: *P-3 Sensor Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
P-3 Sensor Integration				
Test & Evaluation: Technical Evaluation: EER Multi-Static Active Sensor System Support	1	2011	4	2017
Test & Evaluation: Technical Evaluation: EER Multi-Static Fleet Technology Insertion	1	2011	4	2017
Test & Evaluation: Technical Evaluation: P-3 ARCI and Future Fleet Technology Insertion	1	2011	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 3016: *Fatigue Life Mgmt Program*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3016: *Fatigue Life Mgmt Program*	2.055	2.061	2.074	-	2.074	1.795	1.812	1.864	1.970	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Fatigue Life Management Program is required to manage P-3/EP-3 inventory fatigue life and includes ongoing structural analysis, analyzing emergent structural issues, conducting engineering studies, assessing Fleet impact, and applying new technologies such as Non-Destructive Inspection techniques.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: P-3/EP-3 Fatigue Life Management	2.055	2.061	2.074	-	2.074
Articles:	0	0	0		0
FY 2011 Accomplishments: Fatigue Life Management Program: Managed P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Researched, tested and applied new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
FY 2012 Plans: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
FY 2013 Base Plans: Fatigue Life Management Program: Manage P-3/EP-3 inventory fatigue life including conducting structural analysis, analyzing structural issues, conducting engineering studies, assessing Fleet impact. Research, test and apply new Fatigue Inspection techniques to the P-3/EP-3 Fleet.					
Accomplishments/Planned Programs Subtotals	2.055	2.061	2.074	-	2.074

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0538: *P-3 Series*	191.662	170.466	82.105	66.300	148.405	36.768	5.899	6.343	4.030	0.000	4,970.512

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 3016: *Fatigue Life Mgmt Program*

D. Acquisition Strategy

The Fatigue Life Management Program leverages off of prior work done under P-3 Service Life Extension Program (2451). The Anti-Surface Warfare Improvement Program Operational Requirements Documents 355-88-94 was approved 30 March 94. Work will be performed by Lockheed Martin Aeronautical Systems and other industry participants along with the Naval Air Systems Command Structural Engineering Dept, AIR-4.3. This program supports the 7 June 2003 CNO approved P-3/ EP-3 Sustainment Bridge to Multi-Mission Maritime Aircraft.

E. Performance Metrics

Successful application of system engineering processes.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 3016: *Fatigue Life Mgmt Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPIF	LM:Marietta, GA	7.337	1.035	Jan 2012	1.095	Jan 2013	-		1.095	4.114	13.581	13.568
		Subtotal	7.337	1.035		1.095		-		1.095	4.114	13.581	13.568

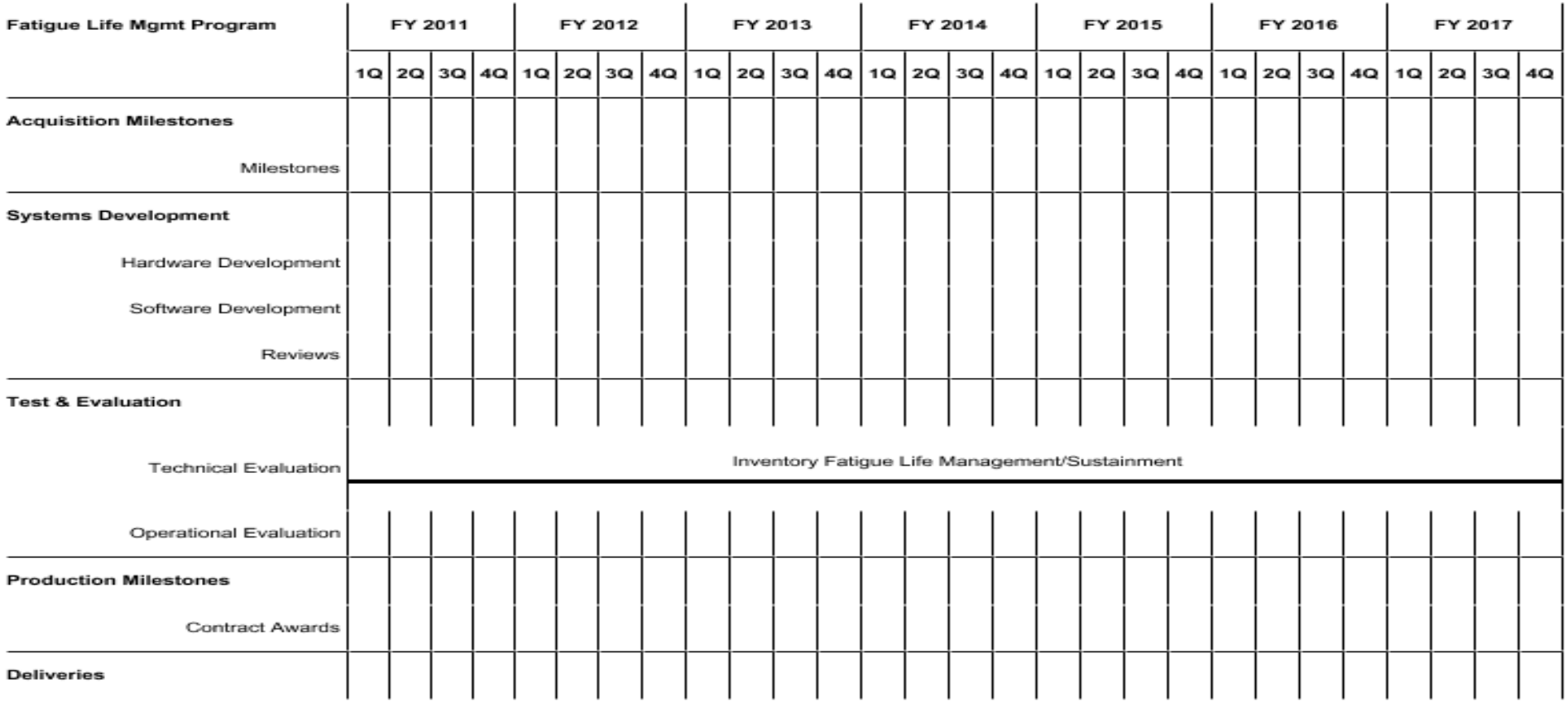
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	NAWCAD:PAX RIVER, MD	5.563	0.895	Nov 2011	0.861	Nov 2012	-		0.861	2.488	9.807	
Program Management Support	WR	VARIOUS:VARIOUS	0.270	-	Nov 2011	-		-		-	0.410	0.680	
Travel	WR	NAWCAD:PAX RIVER, MD	0.700	0.131	Oct 2011	0.118	Oct 2012	-		0.118	0.433	1.382	
		Subtotal	6.533	1.026		0.979		-		0.979	3.331	11.869	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	13.870	2.061		2.074		-		2.074	7.445	25.450	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 3016: *Fatigue Life Mgmt Program*



2013OSD - 0604221N - 3016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604221N: *P-3 Modernization Program*	PROJECT 3016: *Fatigue Life Mgmt Program*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Fatigue Life Mgmt Program				
Test & Evaluation: Technical Evaluation: Inventory Fatigue Life Management/ Sustainment	1	2011	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	3.685	9.944	13.071	-	13.071	11.221	10.291	10.482	10.691	Continuing	Continuing
3326: *NIWO Rapid Capabilities Development for CIC*	-	5.279	5.389	-	5.389	5.477	5.607	5.778	5.892	Continuing	Continuing
4011: *Naval Coastal Warfare Surv and C4I Sys*	3.685	4.170	6.698	-	6.698	4.770	3.718	3.740	3.816	Continuing	Continuing
9C86: *Combatant Craft Replacement*	-	0.495	0.984	-	0.984	0.974	0.966	0.964	0.983	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Naval Coastal Warfare (NCW) community consists of 22 Mobile Inshore Undersea Warfare (MIUW) units and 8 Harbor Defense Command (HDC) units operating Mobile Ashore Support Terminal IIIs (MAST IIIs). NCW also includes 14 Inshore Boat Units (IBU) comprised of 6 small craft (boats) each on which are installed C4I systems. The Mobile Inshore Undersea Warfare - System Upgrade (MIUW-SU), the primary system used by the NCW MIUW Units, is the only land-based and rapidly deployable mobile Navy system with the ability to conduct surface and subsurface surveillance in coastal and littoral areas. The system provides detailed contact information via various C4I systems to the tactical area commander based on radar, visual, thermal, electronic, and underwater acoustic sensor information. Missions supported with the MIUW-SU's are: OCONUS and INCONUS Force Protection, protecting port areas, high value assets, and surveilling the near shore areas. The MAST III is the C4ISR hub for the NCW Commander. MAST IIIs deploy to support Force Protection/Force Security Officer for Commander, Amphibious Group in its Harbor Defense and Coastal Sea Control missions.

In the aftermath of the attack on USS COLE and particularly post 11 SEP, the role, structure, and utilization for the NCW program has changed appreciably and continues to evolve in the face of developing world events. However, the core competencies resident in expeditionary NCW forces to conduct surveillance, C4I and patrol/interdiction have not changed.

NCW remains a specialized force constituted to accomplish specific tasks under specific conditions, but also agile enough to fill emergent and non-traditional roles. Post 11 SEP, NCW Groups and Units have been mobilized to perform force protection missions at different levels in all CinC area of responsibility (AOR)'s and within the continental United States in support of Maritime Homeland Security. This RDT&E exhibit supports the future direction of Naval Coastal Warfare as it is being determined externally by world events and internally by the progress of DoD initiatives to replace Cold War forces and capabilities with 21st century transformational forces and capabilities. NCW forces currently field legacy systems designed to counter more traditional military threats in a two Major Theater War scenario. Future NCW forces will develop into a highly effective, relatively low cost transformational force capable of operating anywhere in the world to perform a spectrum of force protection missions ranging from full scale port security/harbor defense operations during wartime to short duration point defense of high value units or facilities in operations other than war. This transformational force will be agile, tailorable, and scalable and will use applied technology to quickly detect, deter or interdict potential threats to DON Assets in the littoral environment. Next generation surface and subsurface surveillance systems, as well as enhanced C4I capabilities, are required to meet these operational objectives. These capabilities must be interoperable with higher and adjacent echelons of command (to include coalition allies) as well as with supporting elements to include joint forces.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*

Sea Eagle is an Advanced Concept Technology Demonstration (ACTD) with USN as lead service and USSOCOM as the Combatant Command sponsor. Sea Eagle will provide integrated and enhanced technologies in order to provide persistent, clandestine, and unattended monitoring of denied and sensitive maritime, littoral, and harbor areas. These sensors and
systems will be deliverable by Special Operational Forces (SOF) and networked in a multi-media (sea, air, land) system of systems approach. Sea Eagle will focus on close access networking, both wireless through air and underwater, to support networked tactical sensors. The special operations warfighter will tactically emplace Sea Eagle systems to provide targeted, tactical information that complements national and theater intelligence assets to enable a layered intelligence collection strategy.

Riverine Force will integrate and employ a variety of surface and air assets, special vehicles, weapons and appropriately trained personnel. Mission assets needed to support the operational capabilities will vary widely dependant on the Host Nations involved. The Riverine Squadron will deploy with inherent, but limited, force protection capabilities. The Modular Unmanned Scouting Craft Littoral (MUSCL) is man-portable "X-Class" Unmanned Surface Vehicle providing enhanced surveillance and reconnaissance capability to Naval Expeditionary Combat Command (NECC) Riverine forces.

Regional Maritime Awareness Capability (RMAC) - support GWOT by providing other USG Agencies with maritime traffic information that is not currently available. RMAC also provides enhanced regional security, safety, economic stability and environmental protection through shared maritime domain awareness (MDA).

Naval Irregular Warfare Office (NIWO) will provide for the identification and assessment of available technologies to confront irregular challenges (CIC) urgent and unfulfilled needs of the warfighter. It provides for the validation and combat demonstration of identified technologies and/or packages of technologies to meet Oversea Contingency Operation (OCO) goals. It also provides funding necessary to attract additional investment and sustainment. The goal of the NIWO office is to identify those requirements necessary to meet the immediate warfighter needs; integrate those existing unique and/or related capabilities that can best meet those warfighter needs; test those integrated capabilities; and then demonstrate in real time and/or during planned deployments all within an 8 month period. Those areas of capability to be investigated by the Navy IW office include any or all of the following:
- Persistent Intelligence Surveillance Reconnaissance (ISR)
- Close-in, expeditionary ISR
- Conventional forces support to SOF
- Rotary wing support to SOF
- All source intelligence fusion
- Littoral precision strike capability

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	3.733	9.944	10.158	-	10.158
Current President's Budget	3.685	9.944	13.071	-	13.071
Total Adjustments	-0.048	-	2.913	-	2.913
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.029	-			
• Program Adjustments	-	-	2.999	-	2.999
• Rate/Misc Adjustments	-	-	-0.086	-	-0.086
• Congressional General Reductions Adjustments	-0.019	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 3326: *NIWO Rapid Capabilities Development for CIC*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3326: *NIWO Rapid Capabilities Development for CIC*	-	5.279	5.389	-	5.389	5.477	5.607	5.778	5.892	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides efforts in support of the Navy Irregular Warfare (IW) Office. It provides for the identification and assessment of available technologies to confront irregular challenges (CIC) urgent and unfulfilled needs of the warfighter. It provides for the validation and combat demonstration of identified technologies and/or packages of technologies to meet Oversea Contingency Operation (OCO) goals. It also provides funding necessary to attract additional investment and sustainment. The goal of the Navy IW office is to: identify those requirements necessary to meet the immediate warfighter needs; integrate those existing unique and/or related capabilities that can best meet the warfighter needs; test those integrated capabilities; and then demonstrate in real time and/or during planned deployments all within an 8 month period.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Navy Irregular Warfare	-	5.279	5.389	-	5.389
Articles:		0	0		0
FY 2012 Plans: Identify, assess, integrate and test available persistent intelligence surveillance and reconnaissance (ISR) and all-source intelligence fusion technologies in support of the CIC mission supporting the warfighter. Additional efforts to validate and demonstrate identified ISR and intelligence fusion technologies. Other technologies assessed/demonstrated in support of CIC mission as available.					
FY 2013 Base Plans: Identify, assess, integrate and test available close-in expeditionary ISR and littoral precision strike technologies in support of the CIC mission supporting the warfighter. Additional efforts to validate and demonstrate identified ISR and littoral precision strike technologies. Other technologies assessed/demonstrated in support of CIC mission as available.					
Accomplishments/Planned Programs Subtotals	-	5.279	5.389	-	5.389

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 3326: *NIWO Rapid Capabilities Development for CIC*

D. Acquisition Strategy

N/A

E. Performance Metrics

To successfully conduct technology reviews to confront irregular warfare.

To successfully identify and validate identified technologies.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 3326: *NIWO Rapid Capabilities Development for CIC*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various:Various	-	5.279	Feb 2012	5.389	Feb 2013	-		5.389	0.000	10.668	Continuing
		Subtotal	-	5.279		5.389		-		5.389	0.000	10.668	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	5.279		5.389		-		5.389	0.000	10.668	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 3326: *NIWO Rapid Capabilities Development for CIC*

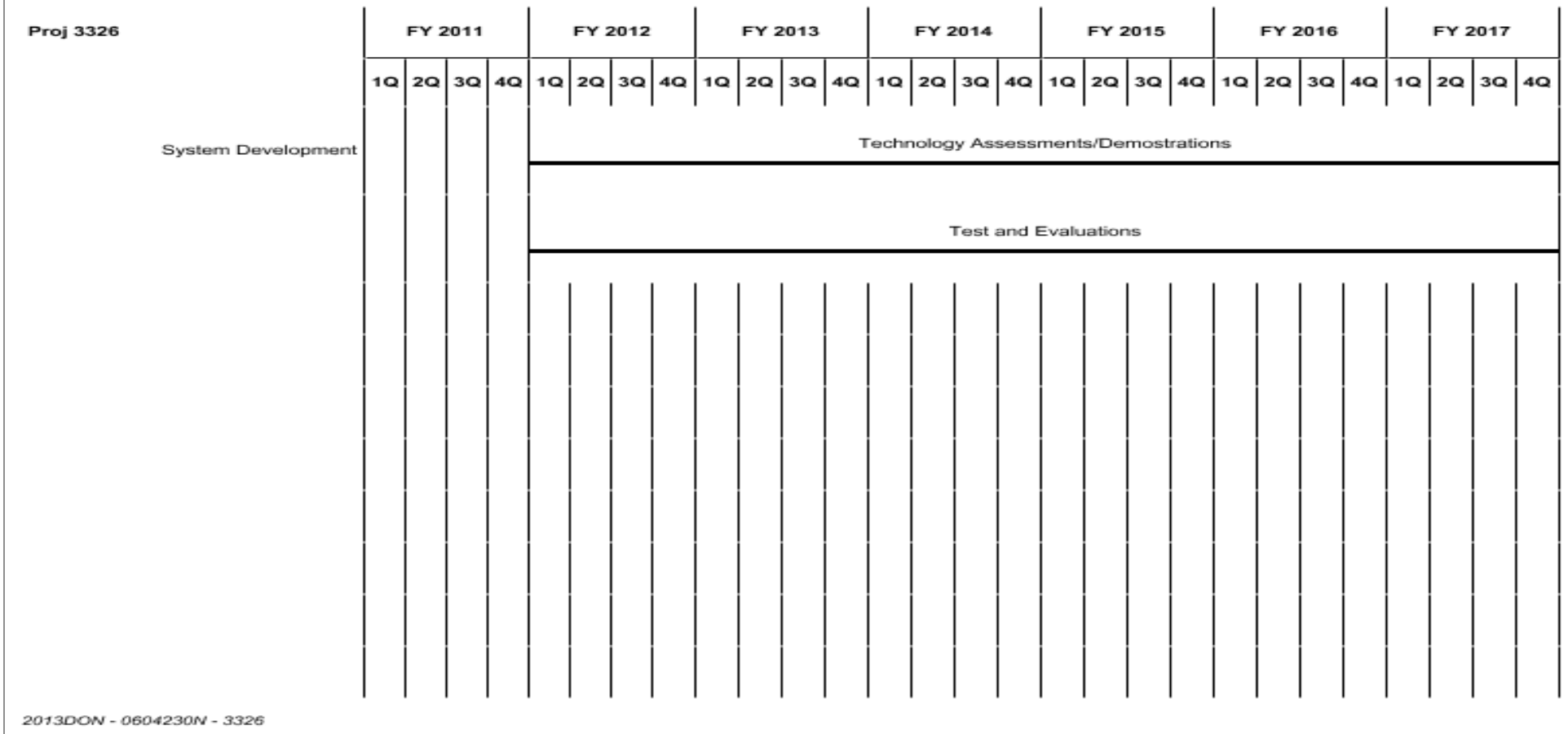


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604230N: *Warfare Support System*	**PROJECT** 3326: *NIWO Rapid Capabilities Development for CIC*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3326				
System Development: Technology Assessments/Demonstrations	1	2012	4	2017
System Development: Test and Evaluations	1	2012	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
4011: *Naval Coastal Warfare Surv and C4I Sys*	3.685	4.170	6.698	-	6.698	4.770	3.718	3.740	3.816	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Maritime Expeditionary Security Force (MESF), formerly Naval Coastal Warfare (NCW), consists of two Groups and ten Squadrons; nine regular and one special (Guam). Each squadron is organized by Boat Detachments, Security Detachments and Command and Control (C2) divisions. The C2 Division is comprised of Sensor Detachments (SENSDET) operating the Radar Sonar Surveillance Center (RSSC) and Communications Detachments (COMMSDET) operating the Mobile Ashore Support Terminal (MAST IIIs), each separately funded. The Radar Sonar Surveillance Center (RSSC) is the only land-based and rapidly deployable mobile Navy system with the ability to conduct surface and subsurface surveillance in coastal and littoral areas. The system provides detailed contact information via various C4I systems to the tactical area commander based on radar, visual, thermal, electronic, and underwater acoustic sensor information. Missions supported with the MIUW-RSSCs are: OCONUS and INCONUS Force Protection, protecting port areas, high value assets, and surveilling the near shore areas. The MAST III is the C4ISR hub for the NCW Commander. MAST IIIs deploy to support Force Protection/Force Security Officer for Commander, Amphibious Group in its Harbor Defense and Coastal Sea Control missions.

As stated in the Maritime Expeditionary Security Force (MESF) CONOPS dated 11 April 2007: The MESF organization will be established through realignment of the Naval Coastal Warfare (NCW) organizations (NCW Squadrons, Mobile Inshore Undersea Warfare Units, Inshore Boat Units, Mobile Security Squadrons, Mobile Security Detachments, Embarked
Security Detachments, and Embarked Security Teams) into the MESF structure. Further realignment will result in the integration of intelligence, VBSS, and additional waterborne and security detachments to support new mission capability and provide additional NCC / JFMCC capacity. In addition to enhancing readiness of the current force, MESF will deploy adaptive force packages (AFPs) tailored for the specific missions to achieve greater efficiency and combat readiness than the current NCW force. By establishing a professional warfare community and dedicated Maritime Expeditionary Security Force capable of meeting the full range of security requirements, MESF closes a critical gap essential to full mission readiness for MSO. MESF provides a structure that establishes a single integrated maritime security force with one standard for training, certification, employment, and tactics, techniques, and procedures (TTP). This funding supports the future direction of the MESF as it is being determined externally by world events and internally by the progress of DoD initiatives to replace Cold War forces and capabilities with 21st century transformational forces and capabilities. The associated developmental efforts will ultimately transition into an adaptive force package Navy Expeditionary Security System (NESS). MESF forces currently field legacy systems designed to counter more traditional military threats in a two Major Theater War scenario. Future MESF units will develop into a highly effective, relatively low cost transformational force capable of operating anywhere in the world to perform a spectrum of force protection missions ranging from full scale port security/harbor defense operations during wartime to short duration point defense of high value units or facilities in operations other than war. This transformational force will be agile, tailorable, and scalable and will use applied technology to quickly detect, deter or interdict potential threats to DoN assets in the littoral environment. Next generation surface and subsurface surveillance systems, as well as enhanced C4I capabilities, are required to meet these operational objectives. These capabilities must be interoperable with higher and adjacent echelons of command (to include coalition allies) as well as with supporting elements to include joint forces.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*

The Expeditionary Warfare Decision System (EWDS) (formerly Tactically Integrated Sensors (TIS)) software constitutes an upgrade to the MAST-RSSC and is being executed as a separate Abbreviated Acquisition Program. The AAP will
enable the deployment of a currently fielded Program of Record (POR) combat system (AN/SQQ-34C) known as Tactically Integrated Sensors (TIS) to the MESF units. TIS system restores the acoustic surveillance capability that has been eroded from the current RSSC suite. Additionally, future mult-spectal technologies are being looked at as
enabling capabilities to expand the situational awareness of the littoral region, providing additional tactical decision aids to the local area commander.

This funding supports the Identity Dominance System (IDS) as key enabler in support of the Joint Personnel Identity (JPI) program. OPNAV N857 conducted the NCW CBA and MES ICD. MESF forces have a mobile security mission that requires methodologies, procedures, equipment and the communications capacity to identify individuals who represent a
potential threat as a means to deter and eliminate individuals from conducting asymmetric/non-traditional attacks upon friendly forces, high value assets and coastal areas that NCW is charged with protecting. The Vessel Boarding Search and Seizure (VBSS) teams conducting Expanded Maritime Interception Operations also have a similar requirement
to identify individuals. The development of a device to support identity functions is captured in the Identity Dominance System Capability Development Document (IDS CDD). IDS will be used in the following environments: aboard ship and ashore in ports, the littorals and extended inland field environments worldwide. IDS will be employed in
maritime and very austere ashore environments and carried by individuals who are part of ship boarding parties and dismounted patrols. These mission and environmental demands dictate a portable, lightweight, rugged, and reliable system with intuitive and user friendly features. IDS biometric modalities may differ by mission profile,
requiring the authoritative response to the On-Scene Commander/Boarding Officer on whether to detain or further investigate an individual of interest.

Riverine Force will integrate and employ a variety of surface and air assets, special vehicles, weapons and appropriately trained personnel. Mission assets needed to support
the operational capabilities will vary widely dependant on the Host Nations involved. The Riverine Squadron will deploy with inherent, but limited, force protection capabilities. The Modular Unmanned Scouting Craft Littoral (MUSCL), is man-portable "X-Class" Unmanned Surface Vehicle providing enhanced surveillance and reconnaissance capability to Naval Expeditionary Combat Command (NECC) Riverine forces.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: MESF (Formerly NCW) Upgrades	0.873	2.438	5.291	-	5.291
Articles:	0	0	0		0
FY 2011 Accomplishments: MESF Upgrades - Continue research and development efforts to integrate emerging C4I technologies into MES units. Efforts will focus on improved satellite communications, integration with the next generation of naval					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
networks and improvements to network security applications. The next generation capabilities are based on the requirements in the Maritime Expeditionary Security Initial Capability Document (MES ICD). ***FY 2012 Plans:*** MESF Upgrades - Provide management support and development of new C4ISR capabilities for Naval Coastal Warfare forces. ***FY 2013 Base Plans:*** MESF Upgrades - Provide management support and development of new C4ISR capabilities for Naval Coastal Warfare forces.					
Title: Identity Dominance System	2.812	1.732	1.407	-	1.407
Articles:	0	0	0		0
FY 2011 Accomplishments: Identity Dominance System - Program Management acquisition preparations for a Milestone C for the IDS program of record and continued development of the IDS hardware and software. Additional efforts will focus on developmental and operational testing of the Identity Dominance System system in preparation for Full Rate Production. ***FY 2012 Plans:*** Identity Dominance System - Program Management acquisition preparations for a Milestone C for the IDS program of record and the design and development of the IDS device. Additional efforts will focus on continued developmental and operational testing of the Identity Dominance System and Full Rate Production. ***FY 2013 Base Plans:*** Continue operational testing of production representative IDS to ensure operational viability. Identify system improvements generated from operational testing. Provide corrective modifications to system to meet formal requirements.					
Accomplishments/Planned Programs Subtotals	3.685	4.170	6.698	-	6.698

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0203422N/8I20: *Maritime Expeditionary Security Force*	5.288	0.136	4.344	3.000	7.344	7.861	9.702	10.107	9.330	0.000	68.244

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0208147N/8128I: *Physical Security Equipment*	0.000	3.158	3.180	0.000	3.180	3.029	2.996	3.304	3.127	0.000	18.824

D. Acquisition Strategy

MESF (formerly NCW) - There are ten (10) MESF MAST III systems and twenty (20) MIUW-RSSC systems. The Naval Coastal Warfare systems, the Mobile Ashore Support Terminal (MAST III) and the MIUW Radar Sonar Surveillance Center (RSSC) AN/TSQ-108A(V)4 MOD 2 require the production of Engineering Change Packages (ECPs) for the purposes of technology refresh and to mitigate the impact of obsolescent components. This issue supports the development and testing of the ECP kits as well as the procurement of material of initial kits involved in testing. For the MAST III systems - AN/USC-60 baseband equipment upgrades and GCCS-M upgrades. Timeplex are no longer supported and will need to be replaced with Promina multiplexers. For the MIUW systems - Continuing efforts to provide an IP connectivity path using 1) VSAT for short ops requiring quick set ups using commercial SATCOM and 2) USC-67 (triband SHF) for longer ops using MILSATCOM.

IDS - The fundamental purpose of the IDS program is to provide the Navy and Marine Corps with an integrated and ruggedized capability to employ individual-oriented identity information in the conduct of maritime and expeditionary operations. Fieldable prototypes in response to the CENTCOM JUONS were evaluated in limited user assessments and
under stringent to meet Naval operational effectiveness and suitability. Additionally, a market survey conducted and concluded that no COTS or GOTS systems could meet the requirements in the IDS/JPI(V)1 program entered System Demonstration (SD) at Milestone B in 4QTR FY10, and the SD phase is planned to culminate in a Milestone C
decision in 1QTR FY12. The SBIR process was executed in a Phase I initiative as a risk mitigation step to enable the EMD Phase II process in developmental testing, design refinement, production representative level articles for evaluation/selection, and logistical support preparations to formulate the production decision. Production will be accomplished via a prime contractor to be selected during a competitive contracting process.

E. Performance Metrics

MESF: Successfully complete Preliminary Design Review (PDR), Critical Design Review (CDR) and Physical Configuration Audit (PCA) for Expeditionary Warfare Decision System (EWDS) (formerly Tactically Integrated Sensor (TIS)).

IDS: Conduct Milestone reviews in order to successfully achieve Milestone C. Successfully achieve IOC.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	C/CPFF	SSC CH:SSC SAN DIEGO	0.100	-		-		-		-	0.000	0.100	Continuing
Hardware/Software Development	WR	NSWC DAHLGREN:DAHLGREN	3.250	0.200	Feb 2012	0.560	Feb 2013	-		0.560	0.000	4.010	Continuing
Hardware/Software Development	WR	NSWC CRANE:CRANE	0.900	0.200	Feb 2012	0.560	Feb 2013	-		0.560	0.000	1.660	Continuing
Systems Engineering1	C/CPFF	SSC CH:SSC SAN DIEGO	0.547	-		-		-		-	0.000	0.547	Continuing
Systems Engineering2	WR	SSC CH:SSC SAN DIEGO	0.750	-		-		-		-	0.000	0.750	Continuing
Systems Engineering3	WR	NUWC:KEYPORT	0.850	-		-		-		-	0.000	0.850	Continuing
Systems Engineering4	WR	NSMRL:Not Specified	0.100	-		-		-		-	0.000	0.100	Continuing
Systems Engineering5	C/CPFF	SSC SD:SAN DIEGO	6.647	-		-		-		-	0.000	6.647	Continuing
Systems Engineering6	WR	NSWC:DAHLGREN	2.450	0.500	Feb 2012	0.640	Feb 2013	-		0.640	0.000	3.590	Continuing
Systems Engineering7	WR	NUWC:NEWPORT	0.080	0.200	Feb 2012	0.360	Feb 2013	-		0.360	0.000	0.640	Continuing
Training Development	WR	SSC CH:SSC SAN DIEGO	0.401	-		-		-		-	0.000	0.401	Continuing
Test Integration	WR	NUWC:KEYPORT	0.819	-		-		-		-	0.000	0.819	Continuing
Test Integration	WR	NSWC:CRANE	0.200	-		-		-		-	0.000	0.200	Continuing
		Subtotal	17.094	1.100		2.120		-		2.120	0.000	20.314	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Data	WR	SSC CH/SSC SD:SSC SAN DIEGO	0.381	0.100	Feb 2012	0.100	Feb 2013	-		0.100	0.000	0.581	Continuing
Technical Data	WR	NSWC:CRANE	0.250	-		-		-		-	0.000	0.250	Continuing
Technical Data	WR	NUWC:KEYPORT	0.250	0.170	Feb 2012	0.170	Feb 2013	-		0.170	0.000	0.590	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Data	MIPR	Coast Guard:Not Specified	0.175	-		-		-		-	0.000	0.175	Continuing
Technical Data	WR	NSWC:DAHLGREN	0.175	-		-		-		-	0.000	0.175	Continuing
Test Planning	WR	NUWC:KEYPORT	0.200	0.090	Feb 2012	0.090	Feb 2013	-		0.090	0.000	0.380	Continuing
Test Planning	WR	NSWC:CRANE	0.350	0.150	Feb 2012	0.150	Feb 2013	-		0.150	0.000	0.650	Continuing
Test Planning	WR	SSC CH/:SSC SAN DIEGO	0.200	0.250	Feb 2012	0.410	Feb 2013	-		0.410	0.000	0.860	Continuing
Test Planning - Non-Lethal	WR	NSWC:DAHLGREN	0.750	0.150	Feb 2012	0.470	Feb 2013	-		0.470	0.000	1.370	Continuing
Test Planning - IDS	WR	NSWC:DAHLGREN	0.450	0.250	Feb 2012	0.660	Feb 2013	-		0.660	0.000	1.360	Continuing
		Subtotal	3.181	1.160		2.050		-		2.050	0.000	6.391	

Management Services ($ in Millions)

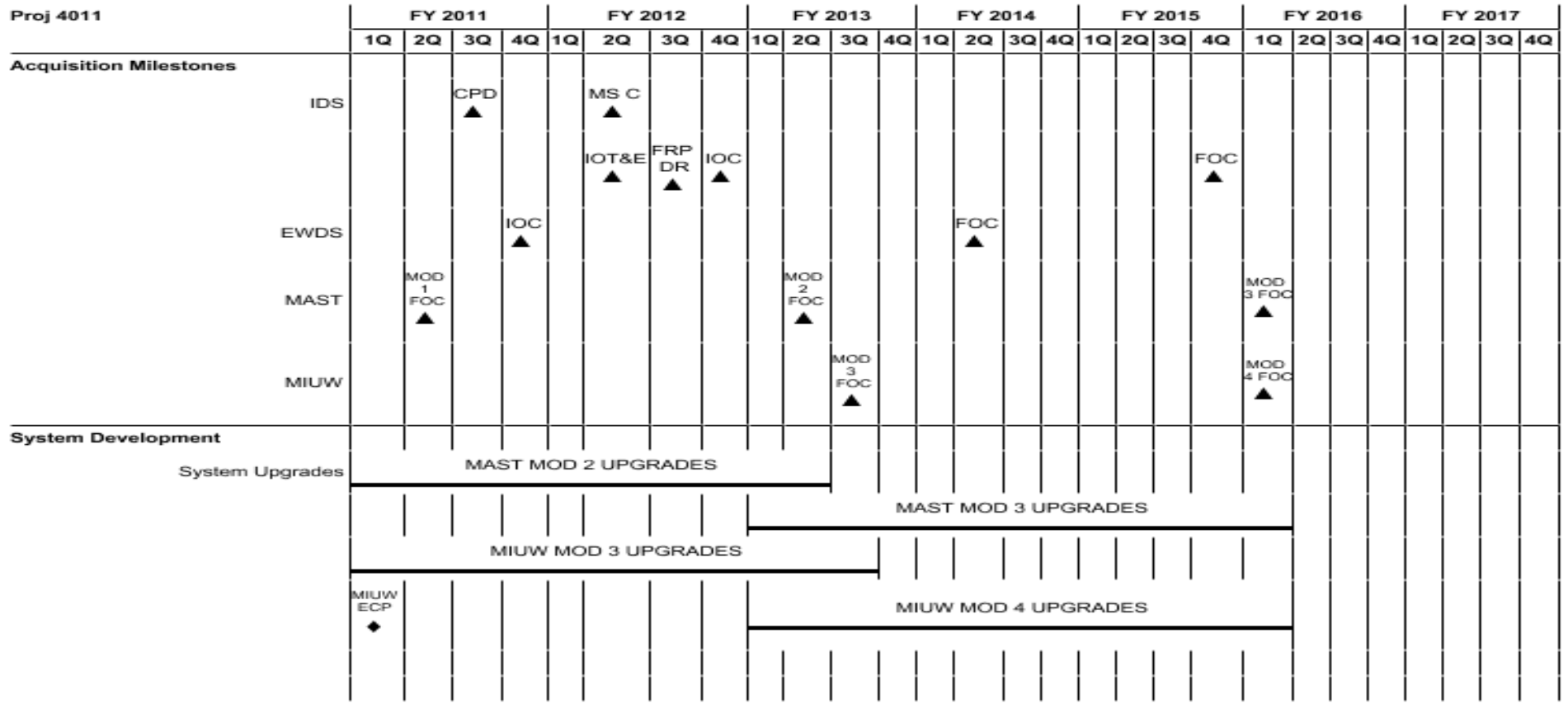
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	SSC CH:SSC SAN DIEGO	0.211	0.200	Feb 2012	0.360	Feb 2013	-		0.360	0.000	0.771	Continuing
Program Management Support	WR	NUWC:KEYPORT	0.100	-		-		-		-	0.000	0.100	Continuing
Program Management Support	WR	NSWC:DAHLGREN	2.942	0.703	Feb 2012	0.840	Feb 2013	-		0.840	0.000	4.485	Continuing
Program Management Support	WR	NSWC:CRANE	0.562	0.250	Feb 2012	0.400	Feb 2013	-		0.400	0.000	1.212	Continuing
Program Management Support	Various	Various:Various	2.478	0.727	Feb 2012	0.898	Feb 2013	-		0.898	0.000	4.103	Continuing
Travel	Various	Various:Various	0.085	0.030	Feb 2012	0.030	Feb 2013	-		0.030	0.000	0.145	Continuing
DAWDF	Various	Not Specified:Not Specified	0.040	-		-		-		-	0.000	0.040	Continuing
		Subtotal	6.418	1.910		2.528		-		2.528	0.000	10.856	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	26.693	4.170		6.698		-		6.698	0.000	37.561	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 4011: *Naval Coastal Warfare Surv and C4I Sys*



2013DON - 0604230N - 4011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604230N: *Warfare Support System*	**PROJECT** 4011: *Naval Coastal Warfare Surv and C4I Sys*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4011				
Acquisition Milestones: IDS: IDS MILESTONE C	2	2012	2	2012
Acquisition Milestones: IDS: IDS CPD	3	2011	3	2011
Acquisition Milestones: IDS: IDS IOT&E	2	2012	2	2012
Acquisition Milestones: IDS: IDS FRP DR	3	2012	3	2012
Acquisition Milestones: IDS: IDS IOC	4	2012	4	2012
Acquisition Milestones: IDS: IDS FOC	4	2015	4	2015
Acquisition Milestones: EWDS: EWDS (formerly TIS) AAP IOC	4	2011	4	2011
Acquisition Milestones: EWDS: EWDS (formerly TIS) AAP FOC	2	2014	2	2014
Acquisition Milestones: MAST: MAST III MOD 1 FOC	2	2011	2	2011
Acquisition Milestones: MAST: MAST III MOD 2 FOC	2	2013	2	2013
Acquisition Milestones: MAST: MAST III MOD 3 FOC	1	2016	1	2016
Acquisition Milestones: MIUW: MIUW v4 MOD 3 FOC	3	2013	3	2013
Acquisition Milestones: MIUW: MIUW v4 MOD 4 FOC	1	2016	1	2016
System Development: System Upgrades: MAST III MOD 2 UPGRADES	1	2011	2	2013
System Development: System Upgrades: MAST III MOD 3 UPGRADES	1	2013	1	2016
System Development: System Upgrades: MIUW v4 MOD 3 UPGRADES	1	2011	3	2013
System Development: System Upgrades: MIUW v4 ECP APPROVAL	1	2011	1	2011
System Development: System Upgrades: MIUW v4 MOD 4 UPGRADES	1	2013	1	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 9C86: *Combatant Craft Replacement*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9C86: *Combatant Craft Replacement*	-	0.495	0.984	-	0.984	0.974	0.966	0.964	0.983	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Combatant Craft Replacements will provide second generation Riverine Multi Mission Craft that will replace in-service Riverine Patrol Boats (RPBs) and Riverine Assault Boats (RABs). Combatant Craft replacements will: conduct inland waterway patrol and interdiction to preserve the rivers for friendly use as lines of communications; deny the use of rivers and waterways to waterborne and immediate shore sited hostile forces by barrier and interdiction operations; and, with augmentation of ground and air forces, locate and destroy hostile forces within a riparian area. Specific mission and capabilities will be identified in an NECC developed/OPNAV N85 approved Initial Capabilities Document (ICD). RDT&E funding will fund feasibility studies and procurement of mock-ups and prototype craft to demonstrate capabilities prior to production craft procurement.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Combatant Craft Replacement	-	0.495	0.984	-	0.984
Articles:		0	0		0
FY 2012 Plans: Conduct Future Combatant Craft feasibility design study(ies). Evaluate transition potential of the Riverine Patrol Boat (RPB) Advance Weapon Systems to interface with the Riverine Assault Boat (RAB), Riverine Command Boat (RCB) and Force Protection-Coastal (FP-C).					
FY 2013 Base Plans: Continue Future Combatant Craft feasibility design study(ies). Evaluate transition potential of the Riverine Patrol Boat (RPB) Advance Weapon Systems to interface with the Riverine Assault Boat (RAB), Riverine Command Boat (RCB) and Force Protection-Coastal (FP-C).					
Accomplishments/Planned Programs Subtotals	-	0.495	0.984	-	0.984

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Acquisition of RDT&E funded mockup and prototype craft for testing to be accomplished using "tailored" GSA procurements in accordance with a PMS325G approved/ OPNAV N85 endorsed Riverine Combatant Craft Replacement Acquisition Strategy.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 9C86: *Combatant Craft Replacement*

E. Performance Metrics

Successfully demonstrate system and prototype functionality to support approved Initial Capabilities Document (ICD).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 9C86: *Combatant Craft Replacement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Craft Feasibility Study	WR	NSWC:Carderock, MD	-	0.050	Dec 2011	0.181	Jan 2013	-		0.181	0.000	0.231	
Craft Mockup Award	WR	NSWC:Carderock, MD	-	0.400	Aug 2012	0.600	Jan 2013	-		0.600	0.000	1.000	
Craft Study Report	WR	NSWC:Carderock, MD	-	0.045	Sep 2012	0.203	Jan 2013	-		0.203	0.000	0.248	
		Subtotal	-	0.495		0.984		-		0.984	0.000	1.479	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.495		0.984		-		0.984	0.000	1.479	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604230N: *Warfare Support System*	PROJECT 9C86: *Combatant Craft Replacement*

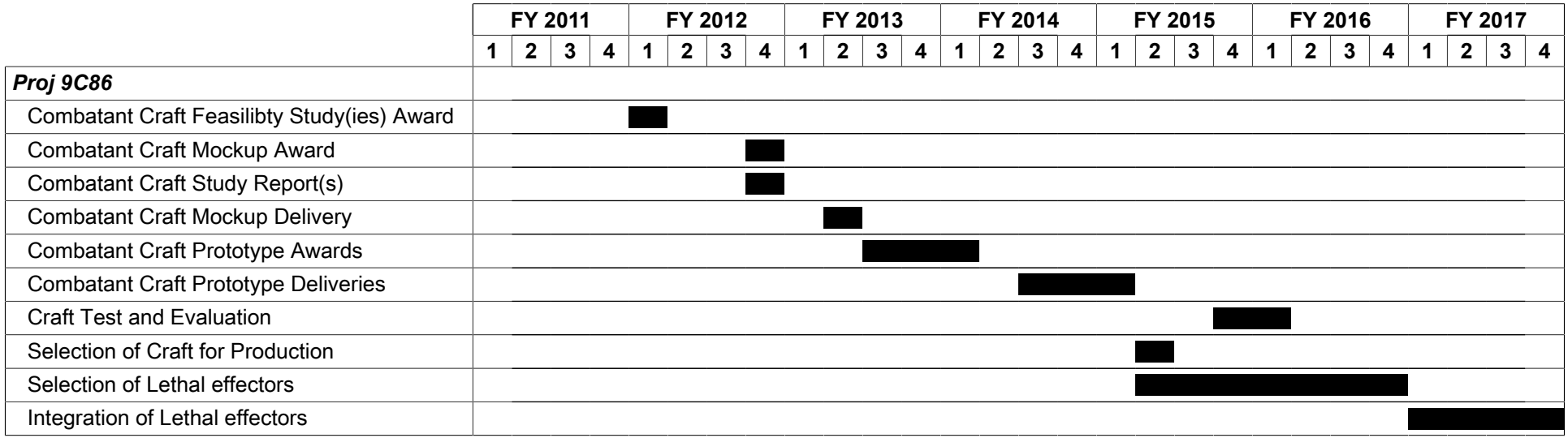


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604230N: *Warfare Support System*	**PROJECT** 9C86: *Combatant Craft Replacement*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9C86				
Combatant Craft Feasilibty Study(ies) Award	1	2012	1	2012
Combatant Craft Mockup Award	4	2012	4	2012
Combatant Craft Study Report(s)	4	2012	4	2012
Combatant Craft Mockup Delivery	2	2013	2	2013
Combatant Craft Prototype Awards	3	2013	1	2014
Combatant Craft Prototype Deliveries	3	2014	1	2015
Craft Test and Evaluation	4	2015	1	2016
Selection of Craft for Production	2	2015	2	2015
Selection of Lethal effectors	2	2015	4	2016
Integration of Lethal effectors	1	2017	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	87.273	77.245	71.645	-	71.645	51.697	46.125	55.548	55.572	Continuing	Continuing
0486.: *Tactical Support Center*	15.736	12.985	5.245	-	5.245	5.051	5.056	6.293	6.401	Continuing	Continuing
0709: *GCCS-M Maritime Applications*	25.219	17.576	5.330	-	5.330	1.852	1.868	1.889	1.922	Continuing	Continuing
2213: *Mission Planning*	18.098	20.468	25.195	-	25.195	15.815	11.939	16.136	15.755	Continuing	Continuing
2307: *Shipboard LAN/WAN*	0.433	0.308	0.313	-	0.313	-	-	-	-	0.000	1.054
2351: *MDA*	18.752	-	-	-	-	-	-	-	-	0.000	18.752
3032: *NTCSS (Naval Tactical Command Spt Sys)*	3.483	14.524	15.015	-	15.015	9.502	6.303	1.174	0.931	Continuing	Continuing
3320: *TRIDENT Warrior*	-	3.712	3.579	-	3.579	3.020	3.047	2.265	2.303	Continuing	Continuing
3323: *Maritime Tactical Command & Control (MTC2)*	-	0.003	7.441	-	7.441	7.305	10.908	21.651	22.016	Continuing	Continuing
3324: *Navy Air Operations Command and Control (NAOC2)*	-	2.283	4.983	-	4.983	4.281	2.174	1.136	1.156	Continuing	Continuing
9123: *FORCEnet*	5.552	5.386	4.544	-	4.544	4.871	4.830	5.004	5.088	Continuing	Continuing

Note

Project 0709 Global Command & Control System Maritime (GCCS-M) Applications: In FY 2012, the Navy Command Control Air Planning Capability effort was realigned from Global Command and Control System Maritime (GCCS-M) Maritime Applications (x0709) to the Navy Air Operations Command and Control (NAOC2) program (Project Unit x3324).

Project 2351 Maritime Domain Awareness (MDA): MDA RDTEN funding was realigned to Distributed Common Ground System-Navy (DCGS-N) PE 0305208N in FY 2012 and out.

Project 3320 Trident Warrior (TW): Funding transferred from Project 9123 FORCEnet into Project 3320 beginning in FY 2012.

Project 3323 Maritime Tactical Command & Control (MTC2): Beginning in FY 2013, the development of maritime tactical command and control capabilities will be realigned from Global Command and Control System Maritime (GCCS-M) Maritime Applications (Project Unit x0709) to the MTC2 program (Project Unit x3323).

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*

A. Mission Description and Budget Item Justification

The Tactical Command System upgrades the Navy's Command, Control, Computer and Intelligence (C3I) systems and processes C3I information for all warfare mission areas including planning, direction and reconstruction of missions for peacetime, wartime and times of crises.

Tactical Support Center: The Tactical Mobile program provides evolutionary systems and equipment upgrades to support the Maritime Component Commanders (Expeditionary Ashore) and Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct and control the tactical operations of Joint and Naval Expeditionary Forces and other assigned units within their respective area of responsibility. These operations include littoral, open ocean, and over land surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, antisubmarine warfare, mining, search and rescue, and special operations. The missions are supported by the Tactical Operations Centers (formerly Tactical Support Centers), the Mobile Tactical Operations Centers (formerly Mobile Operations Control Centers), and the Joint Mobile Ashore Support Terminal. TacMobile C2 systems are based on the Global Command and Control System - Maritime architecture which is Defense Information Infrastructure Common Operating Environment compliant.

Global Command and Control System - Maritime (GCCS-M): GCCS-M is the Maritime implementation of the Global Command and Control System (GCCS) Family of Systems (FoS). It supports decision making at all echelons of command with a single, integrated, scalable C4I system that fuses, correlates, filters, maintains and displays location and attribute information on friendly, hostile and neutral land, sea and air forces, integrated with available intelligence and environmental information. It operates in near real-time and constantly updates unit positions and other situational awareness data. GCCS-M also records data in appropriate databases and maintains a history of changes to those records. System users can then use the data to construct relevant tactical pictures using maps, charts, topography overlays, oceanographic overlays, meteorological overlays, imagery, and all-source intelligence information coordinated into a Common Operational Picture that can be shared locally and with other sites. Navy commanders review and evaluate the general tactical situation, plan actions and operations, direct forces, synchronize tactical movements, and integrate force maneuver with firepower. The system operates in a variety of environments and supports joint, coalition, and allied forces. GCCS-M is implemented Afloat and at Ashore fixed command centers. In FY2013, the program will complete the remaining tests of GCCS-M Increment 2 for group level ships and submarines. The program will continue integration efforts with other C2 / Command, Control, Communication and Computers systems within the Navy and Joint community, and will continue planning efforts for the transition of development efforts to the Maritime Tactical Command and Control (MTC2) program in support of Fleet requirements.

Mission Planning: The Joint Mission Planning System (JMPS) is the designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN) and United States Air Force (USAF). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS mission-planning environment is a combination of the JMPS framework, common capabilities, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. The following type/model/series (T/M/S) naval aircraft are supported by JMPS: F/A-18 A-F, E-2C, EA-6B, AV-8B, S-3, V-22, Chief of Naval Air Training (CNATRA), EA-18G, MV-22, C-2, MH-53E, Aircraft Carrier Intelligence Center (CVIC), SH-60B/F, HH-60H, CH-53D/E, CH-46E, UH-1N and VH-3/VH-60. All of the aforementioned T/M/S are required to transition to Microsoft Windows 7 before Microsoft XP support ends April 2014 by using Framework (FW) Version 1.3.5. Future JMPS platforms include: AH-1Z/W, UH-1Y, MH-60R/S, P-3, KC-130T/J, EP-3E, Broad Area Maritime Surveillance

(BAMS), follow-on version of P-8, E-2D, UH-1Y, H-53K, and C-130. The next JMPS architecture version (FW Version 1.4) will support net-centric goals by providing route "publish and subscribe" capabilities. Funding profile reflects required operating system upgrades due to emerging technology and Information Assurance (IA) requirements.

Shipboard Local Area Network (LAN)/Wide Area Network (WAN) : Integrated Shipboard Network System (ISNS): ISNS provides Navy ships with reliable, high-speed SECRET and UNCLASSIFIED LANs, providing the network infrastructure (switches and drops to the PC), Basic Network Information Distribution Services and access to the Defense Information Systems Network WAN, Secure and Nonsecure Internet Protocol Router Network (SIPRNET and NIPRNET) which are used by other hosted applications or systems such as Naval Tactical Command Support System, Global Command and Control System - Maritime, Defense Messaging System. Navy Standard Integrated Personnel System, Naval Mission Planning System, Theater Battle Management Core Systems, and Tactical Tomahawk Weapons Control System. It enables real-time information exchange within the ship and between afloat units, Component Commanders, and Fleet Commanders, and is a key factor in the implementation of the Navy's portion of Joint Vision 2020. Funding supports the design, development, and testing of the ISNS LAN for surface ships. ISNS includes integrated core services to provide a Service Oriented Architecture also known as Afloat Core Services (ACS) which is the mechanism to deliver the FORCEnet interface to the warfighter. ACS provides a composeable warfighting environment enabling dynamic configuration of capabilities tailored to meet specific warfighting missions. As the warfighting mission changes, the capabilities or services can be re-configured on the fly to meet the new warfighting requirement. This dynamic reconfiguration of services also known as "plug and fight" meets the composeable services vision of FORCEnet. ACS also provides the common core enterprise services and framework to allow organizations ubiquitous access to reliable, decision-quality information through a net-based services infrastructure and applications to bridge real-time and near-real-time Communities of Interest. The ACS will empower the end user to pull information from any available source, with minimal latency, to support the mission. Its capabilities will allow Department of the Navy as well as Global Information Grid users to task, post, process, use, store, manage, and protect information resources on demand for warfighters, policy makers, and support personnel. ACS will utilize a spiral process for delivering capability to the warfighter. The ISNS Inc 1, Sensitive Compartmented Information (SCI) Networks and Combined Enterprise Regional Information Exchange System (CENTRIXS) programs began migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES). ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment: ACS; and Multi-Level Security /Cross Domain Solutions.

Maritime Domain Awareness (MDA): MDA is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment. MDA objectives include the persistent monitoring of and ability to access and maintain data on vessels, cargo, people, and infrastructures; and the ability to collect, fuse, analyze, and disseminate information to decision makers to facilitate effective understanding. This initiative will identify, develop and transition data fusion and mining, replication, sharing and assessment tools to achieve MDA across the non-classified, unclassified and classified enclaves. Additionally, MDA will ensure capability integration with related activities and sites (both technologies and facilities). This warfighting enhancement is designed to achieve an all-source MDA capability, leveraging existing MDA initiatives in the developmental phase and ensuring the best products transition to strategic, operational and tactical users within the DCGS-N Increment 2 Program of Record. This includes the enhanced and future fusion and analysis capabilities defined in the Maritime Fusion and Analysis Services Initial Capabilities Document (MFAS ICD), DCGS Enterprise ICD, and the DCGS-N Increment 2 Gap Analysis. The products support all-source data fusion, development and replication of MDA and Intelligence Surveillance and Reconnaissance(ISR) related data gathered in various operations such as Expanded-Maritime Intercept Operations, sharing information with allies, and developing subject matter expertise and assessment tools to achieve MDA and enhance operational decision making.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*

Naval Tactical Command Support System (NTCSS): Enterprise Database and Maritime Logistics Data Network (MLDN): The NTCSS is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft.

Maritime Tactical Command and Control (MTC2): provides Navy with the ability to deliver maritime domain-unique tactical Command and Control (C2) capabilities from Maritime Operations Centers down to the lowest tactical unit of operations. MTC2 supports alignment and provides interoperability of Navy C2 with the DoD joint C2 way-forward. The program will fully align with joint C2 data and service exposure and consumption goals, architectures, and Net-Centric Enterprise Service efforts. These resources support the evolutionary acquisition, materiel solution analysis, technology development, engineering and software development of these capabilities.

Navy Air Operations Command and Control (NAOC2): integrates and tests Air Force produced systems that provide for an integrated and scalable planning system that provides standardized, secure, automated decision support for Air Force, Joint, and Allied commanders worldwide. These programs provide automated air operations planning, execution management and intelligence capabilities at the Force level to include Fleet Commanders, Numbered Fleet Commanders, Commander Carrier Strike Group, Commander Expeditionary Strike Group, Commander Landing Force, and Joint Task Force Commanders. NAOC2 includes Theater Battle Management Core System (TBMCS), Command and Control Air and Space Operations Suite (C2AOS), plus Command, Control and Information Services (C2IS). C2AOS and C2IS are being developed as Service Oriented Architecture (SOA) services to allow for scalability and integration with Common Computing Environments (CCE). Continuation of these efforts will significantly enhance the Joint Force Air Component Commander (JFACC) and Combined Air Operations Center (CAOC) personnel to plan daily air operations including strike, airlift, offensive and defensive air, and tanker missions in support of combat operations, addressing the requirement of war fighter of distributed planning and execution processes and significantly improving Joint interoperability. TBMCS continues a hardware transition to CCEs such as Consolidated Afloat Networks and Enterprise Services (CANES). Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environment. C2AOS and C2IS will replace TBMCS in a SOA environment while bringing more flexibility to the war fighter, planner, and executor. In FY2012, the program will continue efforts previously funded by Global Command and Control System Maritime (GCCS-M) to migrate Air Force delivered TBMCS software to the Navy unique CANES environment.

FORCEnet: Initiative's mission is to deliver Information Dominance by (a) accelerating the transformation to a Distributed, Networked force; (b) achieve interoperability based on Architectures and Standards; and (c) Experiment with, evaluate and employ the enabling technologies. Effort is a non-acquisition program that is the operational instantiation of FORCEnet. The end-state is a distributed network of weapons, sensors, Command and Control (C2), platforms and warriors.

Trident Warrior (TW): From FY 2012 forward, funding transferred from Project 9123 FORCEnet into Project 3320 Trident Warrior. TW enables early delivery of Net-Centric Operation/Warfare (NCO/W) capabilities to the warfighter via Fleet-directed Trident Warrior operational events with an emphasis on delivering Maritime Domain Awareness (MDA) with Maritime Operations Center (MOC) capability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	89.955	81.257	49.709	-	49.709
Current President's Budget	87.273	77.245	71.645	-	71.645
Total Adjustments	-2.682	-4.012	21.936	-	21.936
• Congressional General Reductions	-	-0.012			
• Congressional Directed Reductions	-	-4.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.889	-			
• SBIR/STTR Transfer	-2.086	-			
• Program Adjustments	-	-	21.882	-	21.882
• Rate/Misc Adjustments	-	-	0.054	-	0.054
• Congressional General Reductions Adjustments	-0.485	-	-	-	-
• Congressional Directed Reductions Adjustments	-2.000	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule:
TACTICAL SUPPORT CENTER (Project 0486):
Operational Test is scheduled for 2nd Qtr FY12. FRP is scheduled for 4th Qtr FY12.

Global Command and Control System - Maritime (GCCS-M) (Project 0709):
In March 2011, GCCS-M Increment 2 was declared to have reached its Initial Operational Capability (IOC) after successfully demonstrating Operational Suitability and Operational Effectiveness of the Unit Level (Patrol Coastal) variant to Commander Operational Test and Evaluation Force.

Due to the delay in release of Request For Proposal and subsequent Delivery Order Awards, the following events were delayed by 1 quarter; Group Level Final Engineering Drop, Development Test, Operational Assessment, Technical Evaluation, Operational Test, and Fielding Decision Review. Overall, the program incurred a six month delay in the Group Level development effort.

Global Force Management - Data Initiative (GFM-DI) development included in the GCCS-M baseline in FY 2013.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*

Mission Planning (Project 2213):
Acquisition Milestones:
JMPS V1.4 IOC 3Q FY13/ Removed from schedule - Due to USAF Increment IV (PE 0208006F) Critical Change Review, FW V1.4 will not achieve Windows 7 transition need date.
JMPS V1.3.5 IOC - Details added to the schedule in 4Q FY13. In order to accommodate the mission planning environment (MPE) and platform operational flight program (OFP) development schedules of EA-6B, V-22 and F/A 18, the program needs to acquire FW V1.3.5 because this is the only version that will offer the correct operating system, Windows 7, without significantly delaying the MPE and platform OFP development and test schedules.
System Development:
JMPS V1.4 OTRR 3Q FY12/Removed from schedule - Due to USAF Increment IV (PE 0208006F) Critical Change Review, FW V1.4 will not achieve Windows 7 transition need date.
JMPS V1.3.5 OTRR - Details added to the schedule in 1Q FY13. In order to accommodate the mission planning environment (MPE) and platform operational flight program (OFP) development schedules of EA-6B, V-22 and F/A 18, the program needs to acquire FW V1.3.5 because this is the only version that will offer the correct operating system, Windows 7, without significantly delaying the MPE and platform OFP development and test schedules.
JMPS FW 64 Bit Architecture Development - Details added to the schedule. Effort runs from 1Q FY15-4Q FY16
Development is required to transition from current FW 32 bit to 64 bit architecture. Failure to move to 64 bit may result in an inability to support future advanced platform mission planning needs based on processing space and capability.
Test and Evaluation
JMPS V1.4 OT 4Q FY12-1Q FY13/ Removed from schedule - Due to USAF Increment IV (PE 0208006F) Critical Change Review, FW V1.4 will not achieve Windows 7 transition need date.
JMPS V1.3.5 OT - Details added to the schedule. Effort runs 2Q-3Q FY13 - In order to accommodate the mission planning environment (MPE) and platform operational flight program (OFP) development schedules of EA-6B, V-22 and F/A 18, the program needs to acquire FW V1.3.5 because this is the only version that will offer the correct operating system, Windows 7, without significantly delaying the MPE and platform OFP development and test schedules.
JMPS FW 64 Bit Architecture Integration/Validation - Details added to the schedule. Effort runs from 1Q FY17-4Q FY17
Integration/Validation is required to transition from current FW 32 bit to 64 bit architecture. Failure to move to 64 bit may result in an inability to support future advanced platform mission planning needs based on processing space and capability.

Maritime Domain Awareness (MDA) (Project 2351):
MDA program schedule has been modified to reflect the transition of MDA capabilities as defined in the Maritime Fusion and Analysis Services (MFAS) Initial Capabilities Document (ICD) into the Distributed Common Ground System - Navy (DCGS-N) Program of Record (PoR) under DCGS-N Increment 2. Previously identified funding in FY 2012 and beyond has been realigned to DCGS-N RDTEN PE 0305208N.

Naval Tactical Command Support System (NTCSS) (Project 3032):
Increasing requirements in information security and functional capability have required shifts in the approach for systems design and development. The updated schedule reflects a more integrated plan to accomplish refined requirements, fact-of-life changes, and modernization of the NTCSS system. As development approaches and build requirements are solidified, changes to the schedule will reflect more accurate time frames for multiple NTCSS system builds.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*

Maritime Tactical Command and Control (MTC2) (Project 3323):
MTC2 will follow the DoD Rapid Information Technology Acquisition process. Milestone decisions are no longer applicable, but rather replaced by Build Decisions (BDs) and Fielding Decision Reviews (FDRs) for each release of new capabilities to the user community. The MTC2 Materiel Development Decision (MDD) will be documented and supported by a Build Decision (Release 1) which will authorize entry into the program's Incremental & Iterative Developmental & Deployment (IIDD) phase and development of intial software capabilities required by the fleet. A FDR will be conducted following the successful completion of an Operational Test. Subsequent tentative BDs/FDRs have been added to the schedule, which will be further updated as funding and user needs are finalized in the future.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0486.: *Tactical Support Center*	15.736	12.985	5.245	-	5.245	5.051	5.056	6.293	6.401	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Tactical/Mobile program provides evolutionary systems and equipment upgrades to support Maritime Component Commanders (Expeditionary Ashore) and Maritime Patrol and Reconnaissance Force Commanders with the capability to plan, direct, and control the tactical operations of Joint and Naval Expeditionary Forces and other assigned units within their respective area of responsibility. These operations include littoral, open ocean, and over land all-sensor surveillance, anti-surface warfare, over-the-horizon targeting, counter-drug operations, power projection, antisubmarine warfare, mining, search and rescue, and special operations.

The missions are supported by the Tactical Operations Centers (TOCs), the Mobile Tactical Operations Centers (MTOCs), and the Joint Mobile Ashore Support Terminals (JMASTs). Services provided include analysis and correlation of diverse sensor information; data management support; command decision aids; rapid data communication; mission planning, evaluation and dissemination of surveillance data and threat alerts to operational users ashore and afloat. Tactical/Mobile Command and Control systems are based on the Global Command and Control System - Maritime (GCCS-M) architecture, which is defense information infrastructure common operating environment compliant.

TOCs and MTOCs provide Command, Control, Communications, Computers and Intelligence (C4I) capability, air-ground, satellite and point-to-point communications systems; sensor analysis capabilities; avionics and weapons system interfaces and facilities equipment. MTOCs are scalable and mobile versions of the TOC for operations from airfields that do not have TOC support. This program assures that existing TOCs and MTOCs are modernized to fulfill their operational requirements. TOC/MTOC will continue to provide the ground Command and Control capabilities and C4I interfaces for the MPRF Family of Systems aircraft and systems evolution including P-3C aircraft updates to sensors and weapons systems, such as the anti-surface warfare maritime improvement program, and the Command Control Communications Computers for Anti-Submarine Warfare (C4 for ASW) P-3C aircraft upgrades, P-8A Multi mission Aircraft (MMA) Increment 1, as well as development of emergent, ground C4I support capabilities for the P-8A MMA Increment 2 and the Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS).

JMAST supports the Fleet commanders, Naval component commanders, and other military commanders from forward deployed bases or operational sites ashore that are not equipped with C4I facilities. It provides the Navy component, and other military commanders with flexible, mobile, organic response, to command, control and communicate with assigned forces via voice, video, and data media forms, during all aspects of military operations, including joint, combined, and coalition operations.

The TacMobile program follows an evolutionary acquisition approach, which provides a mechanism for adding a series of future capabilities that maintain and enhance the operational relevance of the systems provided, as well as augments improvements in airborne networking. Transformation of the TOC/MTOC Force to a more mobile, scalable, and Network-centric Services Oriented Architecture (SOA) configuration, convergence of TOC, MTOC to a single configuration, and as an integral component of the Maritime Patrol and Reconnaissance Force (MPRF) Family of Systems, operational Command, Control, Communications, Computers and Intelligence (C4I) integration support for new and upgraded Maritime Patrol and Reconnaissance Aircraft (MPRA) such as MMA, Aircraft Improvement Program, BAM UAS as well as other Command and Control and fighter aircraft are primary objectives.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

FY13: Funding supports TacMobile systems development to achieve interoperability with P-8A MMA Increment 2 and BAMS UAS, increased modularity, support for additional security enclaves, and enhancing flexibility and mobility, to offset the size/weight/cube of additional required aircraft interfaces developed to support P-8A MMA operations. Network-centric SOA and airborne C4I integration efforts continue as improvements to airborne and intelligence/surveillance/reconnaissance networking technologies are matured. Development will achieve interoperability with emerging MPRF aircraft and sensors while reducing TacMobile footprint enhancing mobility capability.

The DARK FUSION JCTD will provide intelligence analysts, joint warfighters, Combatant Commanders (COCOM) and other interagency senior decision makers significant maritime domain awareness (MDA) improvement, aimed at increased awareness of certain vessels and "dark" targets (e.g., smaller vessels, "fast movers/go fasts", semi-submersibles, non-emitting vessels, etc.) not being detected by current means, using newly developed and under-utilized data sources. These vessels may not be emitting their normal complement of maritime signals (e.g., not participating in the electro-magnetic spectrum).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Net Ready	0.900	0.789	0.638	-	0.638
Articles:	0	0	0		0
FY 2011 Accomplishments: Communications: Began investigation of technology readiness and overall maturity Level of Joint Tactical Radio System (JTRS) and other software definable radio options for applicability for incorporation into TacMobile communications architecture. Conduct developmental test and evaluation of cipher text routing wide band Beyond Line of Sight (BLOS) Internet Protocal (IP) solutions. Began integration of converged IP interoperability standards to the wide band BLOS networking systems. Investigated requirements for Range of Warfare Command and Control (ROWC2) reach-back IP connectivity options.					
FY 2012 Plans: Communications: Conduct operational test and evaluation of cipher text routing, Automated Digital Network System (ADNS) Architecture and Routing, wide band BLOS IP capabilities (Increment 2.1). Continue to investigate and develop analysis of alternatives of identified Joint Tactical Radio System (JTRS) and other software definable radio options for incorporation into TacMobile communications architecture (Tech Refresh 2.1.1). Continue investigation of requirements for ROWC2 reach-back IP connectivity options for communications continuity.					
FY 2013 Base Plans: Communications: Begin down select study of alternatives for identified Joint Tactical Radio System (JTRS) and/or other software definable radio options for incorporation into TacMobile communications architecture. Begin down select study for ROWC2 reach-back IP connectivity options for communications continuity.					
Title: Tactical Mobile Acoustic Support System (TACMASS)	0.745	0.736	0.736	-	0.736

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles:	0	0	0		0
FY 2011 Accomplishments: Analysis: Conducted Developmental Test and Evaluation of capabilities to support data standards and media interfaces for P-8A Multi mission Aircraft (MMA) Increment 1 Intelligence/Surveillance/Reconnaissance (ISR) and Anti Submarine Warfare sensor systems. Assessed and evaluated advanced multi static, digital and concurrent processing capabilities, automation capabilities, and advanced display formats. Completed development/integration of auto detection, tracking and screening capabilities to reduce acoustic analyst workload and increase Anti Submarine Warfare (ASW)probability of detection. Began development of enhanced broadband processing capabilities. Integrated acoustic intercept system updated screeners. Integrated analysis capabilities to support evolving data standards and media interfaces for Maritime Patrol Aircraft Intelligence/ Surveillance/Reconnaissance (ISR) and ASW sensor systems. Began development and integration of Improved and Advanced Multi-Static Acoustic Analysis capabilities required to support fielding of P-8A Multi mission Aircraft (MMA) Increment 2. Began analysis for development and integration of high altitude ASW capabilities. ***FY 2012 Plans:*** Conduct Operational Test and Evaluation of capabilities to support data standards and media interfaces for P-8A MMA Increment 1 ISR and ASW sensor systems (Increment 2.1). Continue development of enhanced broadband processing capabilities. Continue Integration of Acoustic Intercept System updated screeners. Continue Integration of analysis capabilities to support evolving data standards and media interfaces for maritime patrol aircraft ISR and ASW sensor systems. Continue development and integration of improved and advanced multi-static acoustic analysis capabilities required to support fielding of P-8A MMA Increment 2. Continue development and integration of high altitude ASW capabilities (Tech Refresh 2.1.1). ***FY 2013 Base Plans:*** Conduct development testing of selected enhanced broadband processing capabilities. Begin integration and developmental testing of acoustic intercept system updated screeners. Begin development and integration of analysis capabilities to support evolving data standards and media interfaces for maritime patrol aircraft ISR and ASW sensor systems. Begin integration and developmental testing of improved and advanced multi-static acoustic analysis capabilities required to support fielding of P-8A MMA Increment 2. Begin integration and developmental testing of high altitude ASW capabilities.(Tech Refresh 2.1.1) Establish analysis of alternatives for expeditionary post flight analysis capability. Begin requirements analysis for Advance Airborne Systems (AAS). (Increment 3)					
Title: Aircraft Interfaces	0.643	0.583	0.583	-	0.583

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles:	0	0	0		0
FY 2011 Accomplishments: Media: Conducted developmental test and evaluation of new ground support capabilities to support capabilities being developed for Maritime Patrol and Reconnaissance Aircraft (MPRA) incorporating P-8A MMA Increment 1. Continued to evaluate design requirements for those interfaces required to support broad area maritime surveillance unmanned aerial system to ensure platform Warfighting wholeness. Continued to evaluate and assess network-centric interfaces. Began review and analysis of integration requirements for P-8A MMA Increment 2.					
FY 2012 Plans: Media: Conduct operational test and evaluation of new ground support capabilities, to support those capabilities being developed for Maritime Patrol and Reconnaissance Aircraft (MPRA) incorporating P-8A Multi-mission Maritime Aircraft (MMA) Increment 1 (Increment 2.1). Continue to evaluate and design for those interfaces required to support Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) to ensure platform Warfighting wholeness. Continue to evaluate and assess network-centric interfaces. Continue analysis of integration requirements for P-8A MMA Increment 2. Begin development of those interfaces required to support P-8A MMA Increment 2 (Tech Refresh 2.1.1).					
FY 2013 Base Plans: Media: Continue to evaluate and design for those interfaces required to support BAMS UAS to ensure platform warfighting wholeness. Continue to evaluate and assess network-centric interfaces.(Tech Refresh 2.1.1). Begin developing testing of those interfaces required to support P-8A Increment 2. Begin requirements analysis for Advanced Airborne Systems (AAS). Begin analysis of integration requirements for P-8A Increment 3. (Increment 3)					
Title: Tactical Data Links	0.169	0.158	0.158	-	0.158
Articles:	0	0	0		0
FY 2011 Accomplishments: Continued to explore emergent Tactical Data Links (TADIL) standards and MPRA interface requirements, and develop alternatives for TacMobile TADIL transition roadmap. Conducted integrated developmental testing of TADIL in conjunction with P-8A MMA Increment 1. Began review and assessment of potential Link-11 sundown replacement options.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Conduct operational test and evaluation of TADIL capabilities to support data standards and media interfaces for P-8A MMA Increment 1 and legacy P-3C Orion Intelligence/Surveillance/Reconnaissance (ISR) and Anti Submarine Warfare tactical data exchange (Increment 2.1.1). Evaluate, assess, prioritize and down select analysis of alternatives options for TacMobile TADIL transition roadmap (Increment 3). ***FY 2013 Base Plans:*** Begin integration and commence developmental testing for selected option for TacMobile TADIL transition roadmap.					
Title: Enterprise Solutions	1.107	0.380	0.581	-	0.581
Articles:	0	0	0		0
FY 2011 Accomplishments: Began design of tactical mobile networking infrastructure to comply with net ready, Defense Information Systems Agency and Navy net-centric operating standards that support evolutionary transition to a Services Oriented Architecture (SOA) with cross domain accessibility. Conducted developmental/integrated, test and evaluation of network infrastructure to meet increased ISR data volume, provide redundant back-up and disaster recovery QOS. Continued investigation into modern navy networking infrastructure appropriate for a tactical and mobile environment that comply with net ready, Defense Information Systems Agency (DISA) and Navy net-centric operating standards that support evolutionary transition to a Services Oriented Architecture with Cross Domain accessibility. Began study of data at rest storage, data content management and security requirements for P-8A Multi mission Aircraft (MMA) Increment 2 and Broad Area Maritime Surveillance Unmanned Aircraft System (BAMS UAS) mission data. Continued research of available options for incorporation of appropriate Distributed Common Ground System Navy (DCGS-N) capabilities. ***FY 2012 Plans:*** Continue design of tactical mobile networking infrastructure to comply with net ready, DISA and Navy Net-Centric Operating standards that support evolutionary transition to a Consolidated Afloat Network Enterprise Services (CANES) compatible SOA with cross domain accessibility (Tech Refresh 2.1.1). Conduct operational test and evaluation of network infrastructure to meet increased Intelligence/Surveillance/Reconnaissance (ISR) data volume, provide redundant back-up and disaster recovery Quality of Service (QOS). Conduct operational testing and evaluation of network infrastructure to meet increased ISR data volume, provide redundant back-up and disaster recovery QOS, and architectural updates to maintain evolving information assurance standards. (Increment 2.1). Begin development of tactical and mobile architectural networking infrastructure that complies with net ready, DISA and Navy net-centric operating standards that support evolutionary transition to a SOA with					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
cross domain accessibility. Begin development of data at rest storage, data content management and security requirements for P-8A Increment 2.0 and BAMS UAS mission data (Tech Refresh 2.1.1). Assess available options for incorporation of appropriate DCGS-N capabilities (Increment 3). ***FY 2013 Base Plans:*** Begin integration and developmental testing of tactical mobile networking infrastructure to comply with net ready, DISA and Navy net-centric operating standards that support evolutionary transition to a CANES compatible SOA with multi-level enclaves accessibility. Begin developmental testing of data at rest storage, data content management and security requirements for P-8A Increment 2.0 and BAMS UAS mission data. Assess available options for incorporation of appropriate DCGS-N capabilities. (Increment 3)					
Title: Command and Control (C2)	0.202	0.202	0.402	-	0.402
Articles:	0	0	0		0
FY 2011 Accomplishments: Continued integration and developmental test and evaluation of Global Command and Control System - Maritime (GCCS-M) 4.0.3 to provide intelligence preparation of the battle space capabilities, access to Signal Intelligence (SIGINT), Electronic Warfare (EW), and general military intelligence database products, and COP management, display, and processing capabilities that meet information assurance standards and maintain interoperability. Began identification of follow on Command and Control (C2) prototype. Investigated and studied Maritime Patrol and Reconnaissance Force (MPRF) Commander Task Force (CTF) C2 requirements. Investigated C2 track data correlation and fusion tool options. ***FY 2012 Plans:*** Conduct Operational Test and evaluation of GCCS-M 4.0.3 to provide Intelligence Preparation of the Battle Space capabilities, access to SIGINT, EW, and general military intelligence database products, and COP management, display, and processing capabilities that meet information assurance standards and maintain interoperability (Increment 2.1). Continue integration of follow on C2 prototype. Develop analysis of alternatives for capabilities to support MPRF CTF C2 requirements and C2 track data correlation and fusion tool options. (Tech Refresh 2.1.1/Increment 3.0) ***FY 2013 Base Plans:*** Begin investigating GCCS-M 4.0.3 replacement options to provide Intelligence Preparation of the Battle Space capabilities, access to SIGINT, EW, and general military intelligence database products, and COP management, display, and processing capabilities that meet information assurance standards and maintains interoperability. Continue integration of follow on C2 prototype.(Tech refresh 2.1.1) Begin developmental test and integration					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
of a correlator, to support MPRF CTF C2 requirements and C2 track data correlation and fusion tool options. (Increment 3)					
Title: Mission Planning ***Articles:*** ***FY 2011 Accomplishments:*** Mission Planning: Conducted developmental test and evaluation of maritime patrol anti submarine warfare mission planning user environment, maritime patrol weapons planning environment, and TacMobile systems aircraft pre-flight insertion data outputs. Studied and evaluated P-8A multi-mission aircraft Increment 2 and broad area maritime surveillance unmanned aerial system mission planning requirements, to prepare for prototype development of alternatives.	1.383 0	-	-	-	-
Title: Maritime Patrol and Reconnaissance Force (MPRF) Interoperability/TacMobile Footprint Reduction ***Articles:*** ***FY 2011 Accomplishments:*** Architecture Engineering: Began design for integration of modular and hardware independent solutions to reduce mobile system architecture footprint. Began design for convergence of Tactical Operations Center (TOC) and Mobile Tactical Operations Center (MTOC) architecture toward common baseline to reduce platform unique training requirements and duplicative life cycle logistics costs. Began analyzing alternative courses of action for incorporating automation of TacMobile system functionality to reduce operator workload, to offset increasing Maritime Patrol and Reconnaissance Force (MPRF) Intelligence Surveillance and Reconnaissance (ISR) mission/function/task growth. Began design to achieve reduction and consolidation of MPRA media interface devices and to streamline data transfer rates. ***FY 2012 Plans:*** Conduct operational test and evaluation of maritime patrol anti-submarine warfare mission planning user environment, Maritime Patrol weapons planning environment, and TacMobile systems Aircraft Pre-flight Insertion Data outputs(Increment 2.1). Continue development of P-8A Multi Mission Aircraft (MMA) Increment 2 and Broad Area Maritime Surveillance Unmanned Aerial System (BAMS UAS) mission planning interoperability technical upgrades. Continue design for integration of modular and hardware independent solutions to reduce mobile system architecture footprint. Continue design for convergence of TOC and MTOC architecture toward common baseline to reduce platform unique training requirements and duplicative life cycle logistics costs. Begin development of automated TacMobile system functionality to reduce operator workload, to offset increasing MPRF Intelligence Surveillance and Reconnaissance (ISR) Mission/Function/Task growth. Continue	3.816 0	3.663 0	2.147 0	-	2.147 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
design to achieve reduction and consolidation of MPRA media interface devices and to streamline data transfer rates. Develop functionality that supports multiple security enclaves in an expeditionary operating environment (Tech Refresh 2.1.1/Increment 3). ***FY 2013 Base Plans:*** Begin developmental testing and evaluation of P-8A MMA Increment 2 and BAMS UAS mission planning interoperability upgrades. Begin developmental testing and integration of modular and hardware independent solutions to reduce mobile system architecture footprint. Begin developmental Testing for convergence of TOC and MTOC architecture toward common baseline to reduce platform unique training requirements and duplicative life cycle logistics costs. Continue development of automated TacMobile system functionality to reduce operator workload, to offset increasing MPRF ISR Mission/Function/Task growth. Continue design to achieve reduction and consolidation of MPRA media interface devices and to optimize data transfer rates. (Tech Refresh 2.1.1) Develop functionality that supports multiple security enclaves in an expeditionary operating environment.(Increment 3)					
Title: Dark Fusion ***Articles:*** ***Description:*** Dark Fusion ***FY 2011 Accomplishments:*** N/A ***FY 2012 Plans:*** Integrate DARK Fusion capability into the Office of Naval Intelligence S2A system Technical demonstrations, Operational demonstrations and formal assessments	6.771 0	6.474 0	-	-	-
Accomplishments/Planned Programs Subtotals	15.736	12.985	5.245	-	5.245

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/0204271N/2246: *MPRF Mission Support*	18.485	13.453	18.428	0.000	18.428	18.184	18.336	17.767	18.263	Continuing	Continuing
• OPN/0204660N/2906: *TacMobile*	9.778	10.876	11.886	3.603	15.489	18.232	18.099	15.713	16.153	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

D. Acquisition Strategy

Evolutionary Acquisition - Increment 2.0 provided enhanced Beyond Line of Sight (BLOS) global information grid reach back capability, and supports Maritime Situational Awareness connectivity enhancements for data exchange with Maritime Patrol and Reconnaissance Force (MPRF) aircraft and with Coalition data networks. It incorporates Anti Submarine Warfare (ASW) acoustical analysis improvements and new P-3 aircraft ASW interfaces. Increment 2.1 will support migration to follow on Global Command and Control System - Maritime (GCCS-M) version 4.0.3 and introduction of the P-8A Multi-mission Maritime Aircraft (MMA) Increment 1. Tech Refresh 2.1.1 will support technical engineer changes associated with the introduction of P-8A Multi-mission Maritime Aircraft (MMA) Increment 2, and the Broad Area Maritime Surveillance (BAMS) Unmanned Aerial System (UAS). Increment 3 will incorporate support for other MPRF Family of Systems FOS) aircraft and systems. The Dark Fusion Joint Capabilities Technical Demonstration (JCTD) acquisitions will be executed by the JCTD Technical Manager (TM). The TM is the Naval Research Laboratory (NRL).

E. Performance Metrics

The primary metrics utilized by the TacMobile program development process, include achieving/maintaining all required Interface Exchange Requirements (IER's) and successful achievement of 100% of key performance parameters for incremental upgrade threshold capabilities, as observed by Commander Operational Test Force representatives during operational evaluation. TacMobile Inc 2.1 development supports increased IER requirements of 486% from 112 to 544. Development to support these new IER's tapers off in FY-12 as Increment 2.1 enters the operational evaluation phase. Development focus then shifts to efforts required to retain fielded IER's and update IER's to comply with emerging and evolving standards associated with P-8A MMA Increment 2, and BAMS UAS, other MPRF FOS aircraft and systems, and evolving operational employment concepts.

Critical Operating Issues (COIs) and Measures of Performance (MOPs) are outlined in the Dark Fusion JCTD Implementation Directive. The JCTD will be conducting User Juries (UJs) for SME and analyst
feedback.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	SSC LANT; Northrop Grumman; SAIC:Charleston; SC; Pax River, MD	5.384	0.776	Oct 2011	0.647	Oct 2012	-		0.647	Continuing	Continuing	Continuing
Systems Engineering	C/CPIF	SSC LANT; Northrop Grumman, SAIC, BAH, Solute:Charleston, SC; Pax River, MD; San Diego, CA	28.274	0.480	Oct 2011	0.529	Oct 2012	-		0.529	Continuing	Continuing	Continuing
Training Development	C/CPIF	SSC LANT; SAIC; Solute:Charleston, SC; Pax River, MD; San Diego, CA	1.361	0.500	Nov 2011	0.400	Nov 2012	-		0.400	Continuing	Continuing	Continuing
Tech Mgmt, Fusion, SOA, IT, Admin,Security	Various	NRL:Washington,DC	4.159	4.197	Oct 2011	-		-		-	0.000	8.356	
ACINT w/ demo support and leave behind	Various	NRL:Washington DC	1.296	1.243	Oct 2011	-		-		-	0.000	2.539	
NTM GEOINT data sources and support	Various	NRL:Washington DC	0.791	0.287	Oct 2011	-		-		-	0.000	1.078	
		Subtotal	41.265	7.483		1.576		-		1.576			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/CPIF	SSC LANT; Northrop Grumman; SAIC:Charleston, SC; Pax River, MD	45.999	0.302	Nov 2011	0.302	Nov 2012	-		0.302	Continuing	Continuing	Continuing
Integrated Logistics Support	C/CPIF	SSC LANT; SAIC:Charleston, SC; Pax River, MD	0.350	0.225	Nov 2011	0.225	Nov 2012	-		0.225	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	WR	SSC LANT; SAIC;:Charleston, SC; Pax River, MD	0.275	0.175	Nov 2011	0.175	Nov 2012	-		0.175	Continuing	Continuing	Continuing
Technical Data	WR	SSC LANT; Northrop Grumman; SAIC:Charleston, SC; Pax River, MD	0.380	0.220	Oct 2011	0.220	Oct 2012	-		0.220	Continuing	Continuing	Continuing
Studies & Analyses	C/CPIF	SSC LANT; Northrop Grumman; SAIC; Solute:Charleston, SC; Pax River, MD; San Diego, CA	0.425	0.100	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
		Subtotal	47.429	1.022		1.022		-		1.022			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/CPIF	SSC LANT; SAIC:Charleston, NC; Pax River, MD	1.400	0.250	Nov 2011	0.440	Nov 2012	-		0.440	Continuing	Continuing	Continuing
Operational Test & Evaluation	MIPR	OPTEVFOR; SSC LANT; SAIC:Jacksonville, FL	4.236	1.050	Nov 2011	0.350	Nov 2012	-		0.350	Continuing	Continuing	Continuing
		Subtotal	5.636	1.300		0.790		-		0.790			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPIF	Northrop Grumman; SAIC; BAH; Solute:Pax	0.680	1.522	Oct 2011	0.946	Oct 2012	-		0.946	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

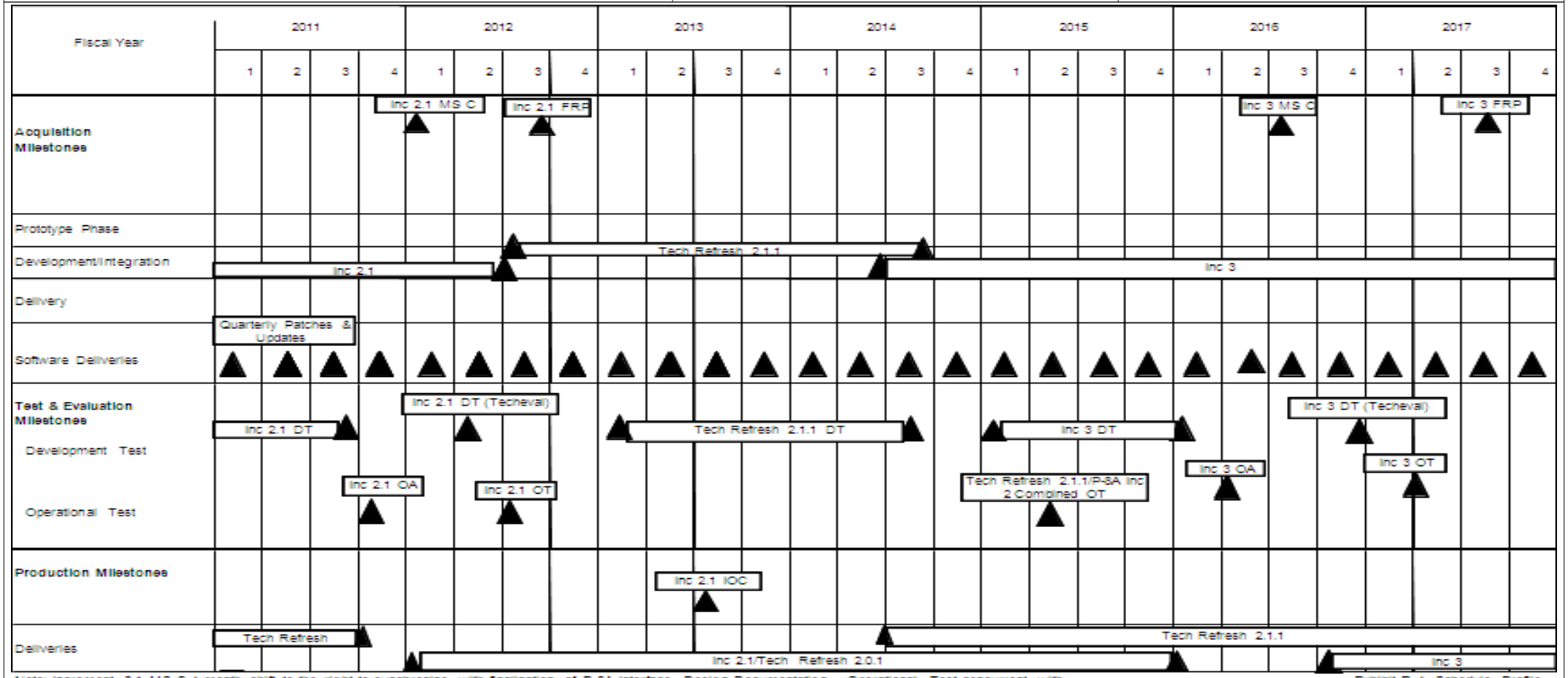
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		River, MD; Charleston, SC; San Diego, CA											
Government Engineering Support	WR	SSC LANT:Charleston, NC	1.321	0.384	Nov 2011	0.384	Nov 2012	-		0.384	Continuing	Continuing	Continuing
Program Management Support	C/CPIF	SSC LANT; PMW750; BAH; SAIC; Solute:Charleston, NC; San Diego, CA	13.060	0.494	Oct 2011	0.494	Oct 2012	-		0.494	Continuing	Continuing	Continuing
Travel	WR	PMW750:San Diego, CA	0.130	0.033	Nov 2011	0.033	Nov 2012	-		0.033	Continuing	Continuing	Continuing
CONOPS/TTPs Demos & MGMT Plan	Various	NRL:Washington DC	0.175	0.161	Oct 2011	-		-		-	0.000	0.336	
Joint Operational Utility Assess. Reports	Various	NRL:Washington DC	0.200	0.198	Oct 2011	-		-		-	0.000	0.398	
Transition system engineering support	Various	NRL:Washington DC	0.150	0.144	Oct 2011	-		-		-	0.000	0.294	
MITRE STE	Various	NRL:Washington DC	-	0.244	Oct 2011	-		-		-	0.000	0.244	
		Subtotal	15.716	3.180		1.857		-		1.857			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	110.046	12.985		5.245		-		5.245			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*



Note: Increment 2.1 MS C 4 month shift to the right to synchronize with finalization of P-8A Interface Design Documentation. Operational Test concurrent with P-8A Multi mission Aircraft (MMA) Increment 1 OT.

Acquisition Strategy adjustment changes what was Increment 3 to Technical Refresh 2.1.1. Changes Increment 4 to Increment 3.

Exhibit R-4, Schedule Profile

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 0486.L39				
Software Delivery (Quarterly)	1	2011	4	2017
Develop CONOPS/TTPS	1	2012	1	2013
Tech Refresh Delivery	1	2011	3	2017
Build and Test Fusion System & Sources	1	2012	1	2013
Conduct User Juries	3	2012	3	2012
Developmental Test (Increment 2.1)	1	2011	3	2011
Operational Assessment (Increment 2.1)	4	2011	4	2011
Technical Demonstrations	4	2012	4	2012
Operator Training	4	2012	4	2012
Milestone C (Increment 2.1)	1	2012	1	2012
Developmental Test (Increment 2.1 Tech Eval)	2	2012	2	2012
Operational Demonstrations & Assessments	4	2012	4	2012
Joint Military Utility Assessment Reports	4	2012	4	2012
Operational Test (Increment 2.1)	3	2012	3	2012
Full Rate Production (Increment 2.1)	4	2012	4	2012
Initial Operational Capability (Increment 2.1) (TOC/MTOC)	3	2013	3	2013
Developmental Test (Tech Refresh 2.1.1)	1	2013	3	2014
Combined Operational Test (Tech Refresh 2.1.1)	2	2015	2	2015
Developmental Test (Increment 3.0)	1	2015	1	2016
Operational Assessment (Increment 3.0)	2	2016	2	2016
Milestone C (Increment 3.0)	3	2016	3	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0486.: *Tactical Support Center*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Develpmental Test (Increment 3.0 Tech Eval)	4	2016	4	2016
Operational Test (Increment 3)	1	2017	1	2017
Full Rate Production (Increment 3)	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0709: *GCCS-M Maritime Applications*	25.219	17.576	5.330	-	5.330	1.852	1.868	1.889	1.922	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY 2012, the Navy Command Control Air Planning Capability effort was realigned from Global Command and Control System Maritime (GCCS-M) Applications (x0709) to the Navy Air Operations Command and Control (NAOC2) program (Project Unit x3324). In FY 2013, GCCS-M Increment 2 will transition development of maritime tactical command and control capabilities to the Maritime Tactical Command and Control (MTC2) program (Project unit x3323).

A. Mission Description and Budget Item Justification

GCCS-M is the Maritime implementation of the Global Command and Control System (GCCS) Family of Systems (FoS). It supports decision making at all echelons of command with a single, integrated, scalable C4I system that fuses, correlates, filters, maintains and displays location and attribute information on friendly, hostile and neutral land, sea and air forces, integrated with available intelligence and environmental information. It operates in near real-time and constantly updates unit positions and other situational awareness data. GCCS-M also records data in appropriate databases and maintains a history of changes to those records. System users can then use the data to construct relevant tactical pictures using maps, charts, topography overlays, oceanographic overlays, meteorological overlays, imagery, and all-source intelligence information coordinated into a Common Operational Picture that can be shared locally and with other sites. Navy commanders review and evaluate the general tactical situation, plan actions and operations, direct forces, synchronize tactical movements, and integrate force maneuver with firepower. The system operates in a variety of environments and supports joint, coalition, and allied forces. GCCS-M is implemented Afloat and at Ashore fixed command centers. In FY 2013, the program will complete the remaining tests of GCCS-M Increment 2 for group level ships and submarines. The program will continue integration efforts with other C2 / Command, Control, Communication and Computers systems within the Navy and Joint community, and will continue planning efforts for the transition of development efforts to the Maritime Tactical Command and Control (MTC2) program in support of Fleet requirements. In FY2013 the Global Force Management - Data Initiative (GFM-DI) development will be included in the GCCS-M baseline.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: GCCS-M Increment 2	22.319	17.576	3.497	-	3.497
Articles:	0	0	0		0
FY 2011 Accomplishments: Continued Global Command and Control System Maritime (GCCS-M) Increment 2 development, integration and testing, including transitioning GCCS-M Increment 2 on Force, Group and Unit Level ships to the Common Computing Environment (CCE)/Consolidated Afloat Networks Enterprise Services (CANES) environment. Completed Force Level Operational Test Event. Conducted Initial Operational Test & Events (IOT&E) for					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Increment 2 Unit Level software builds. Continued Group Level interface development. Awarded Command & Control, Multi-Award Contract (C2MAC) Delivery Orders for Combat System Interface (CSI) and C4I Web Services (CWS) and Mine Warfare Environmental Decision Aids Library (MEDAL) development. Began planning and analysis of maritime tactical command and control capabilities in support of fleet requirements. ***FY 2012 Plans:*** Continued development, integration, and testing of GCCS-M Increment 2 for Group Level ships. Continued transition of GCCS-M Increment 2 on Force, Group and Unit Level ships to the Common Computing Environment (CCE)/Consolidated Afloat Networks Enterprise Services (CANES) environment. Continued developing and testing interfaces with PEO IWS Combat Systems (AEGIS/Ship Self Defense System (SSDS)) and systems for other Services, Agencies, and traditional and non-traditional partners. Continued investigating and adopting Service Oriented Environment (SOE) to further the continued development of maritime tactical command and control capabilities. ***FY 2013 Base Plans:*** Complete development, integration, and testing of GCCS-M Increment 2 for Group Level ships. Complete transition of GCCS-M Increment 2 on Force, Group and Unit Level ships to the Common Computing Environment (CCE)/Consolidated Afloat Networks Enterprise Services (CANES) environment. Complete developing and testing interfaces with PEO IWS Combat Systems (AEGIS/Ship Self Defense System (SSDS)) and systems for other Services, Agencies, and traditional and non-traditional partners. Complete investigating and adopting Service Oriented Environment (SOE) to further the continued development of maritime tactical command and control capabilities.					
Title: Undersea Superiority/Undersea Forcenet ***Articles:*** ***FY 2011 Accomplishments:*** Finalized and completed Composeable FORCEnet (CFn) migration to the GCCS M Increment 2 Force Level baseline. Completed integration of additional data sources and interfaces as required to meet program objectives.	2.010 0	-	-	-	-
Title: Navy C2 Air Planning Capability ***Articles:*** ***FY 2011 Accomplishments:***	0.890 0	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
The Command and Control (C2) Air Planning Capability portion provided initial engineering for software application transition to an afloat Common Computing Environment (CCE) and requirements development to support increased Joint interoperability and enhanced capability including theater level planning plus distributed planning and execution processes.					
Title: Global Force Management - Data Initiative (GFM-DI) ***Articles:*** ***FY 2013 Base Plans:*** Vice Chairman Joint Chiefs of Staff (VCJCS) directed department-wide enterprise solution that enables visibility/ accessibility/sharing of data applicable to the entire DoD force structure. For the GFM-DI enterprise solution of the force structure, GCCS-M will be the data source for the Navy's force structure representation. Development of GFM-DI functionality will begin in FY2013.	-	-	1.833 0	-	1.833 0
Accomplishments/Planned Programs Subtotals	25.219	17.576	5.330	-	5.330

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2618: *Navy Command and Control System (GCCS-M only)*	5.554	5.938	8.150	0.000	8.150	8.789	6.823	0.000	0.000	0.000	35.254

D. Acquisition Strategy

Increment 2 delivers two different materiel solutions: (1) Force Level, based on the Global Command and Control System-Joint (GCCS-J) 4.2 or higher software, and (2) Group and Unit Level, based on the Office of Naval Research (ONR) extensible Common Operational Picture (XCOP) software. This approach satisfies the current validated requirements, supports the accelerated retirement of legacy systems, and reduces overall risk to the program. Each solution will integrate maritime-specific capabilities and will be scalable to the ship class.

The Global Command and Control System-Maritime (GCCS-M) Program Office promotes full and open competition by competitively awarding software and Fleet support engineering services contracts. Additionally, the Program Office has awarded a Command and Control (C2) Indefinite Delivery Indefinite Quantity (IDIQ) Multi-Award Contract (MAC) from which two delivery orders were awarded to SAIC, one of the C2 IDIQ MAC awardees.

E. Performance Metrics

GCCS-M Increment 2 leverages software investments by Defense Information Systems Agency (DISA) and ONR to realize both the Force Level and Group/Unit Level material solutions. This greatly reduces the integration and testing costs associated with each software release. The Force Level solution will reside on Common

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*

Computing Environment/Consolidated Afloat Networks and Enterprise Services (CCE/CANES) architecture; the Group/Unit Level solution will be implemented on the current/future infrastructure. These Increment 2 software-only solutions eliminate the GCCS-M hardware procurement, installation and sustainment costs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	SSC:SAN DIEGO, CA	49.704	5.746	Nov 2011	2.297	Nov 2012	-		2.297	Continuing	Continuing	Continuing
Software Development	SS/CPFF	NGMS:SAN DIEGO, CA	82.881	-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPIF	SAIC:SAN DIEGO, CA	9.898	3.558	Sep 2012	-		-		-	Continuing	Continuing	Continuing
Software Development	WR	SSC:SAN DIEGO, CA	-	6.451	Nov 2011	2.298	Jan 2013	-		2.298	0.000	8.749	
		Subtotal	142.483	15.755		4.595		-		4.595			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	SSC:SAN DIEGO, CA	2.675	0.706	Nov 2011	0.510	Nov 2012	-		0.510	Continuing	Continuing	Continuing
Operational Test & Evaluation	C/CPIF	COTF:NORFOLK, VA	5.705	0.498	Nov 2011	0.150	Nov 2012	-		0.150	Continuing	Continuing	Continuing
		Subtotal	8.380	1.204		0.660		-		0.660			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	SeaPort:SAN DIEGO, CA	3.923	-		-		-		-	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	SeaPort:SAN DIEGO, CA	21.239	0.617	Nov 2011	0.075	Nov 2012	-		0.075	Continuing	Continuing	Continuing
Acquisition Workforce	Various	UNKNOWN:UNKNOWN	0.101	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	25.263	0.617		0.075		-		0.075			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	176.126	17.576		5.330		-		5.330			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 0709: *GCCS-M Maritime Applications*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 0709: *GCCS-M Maritime Applications*

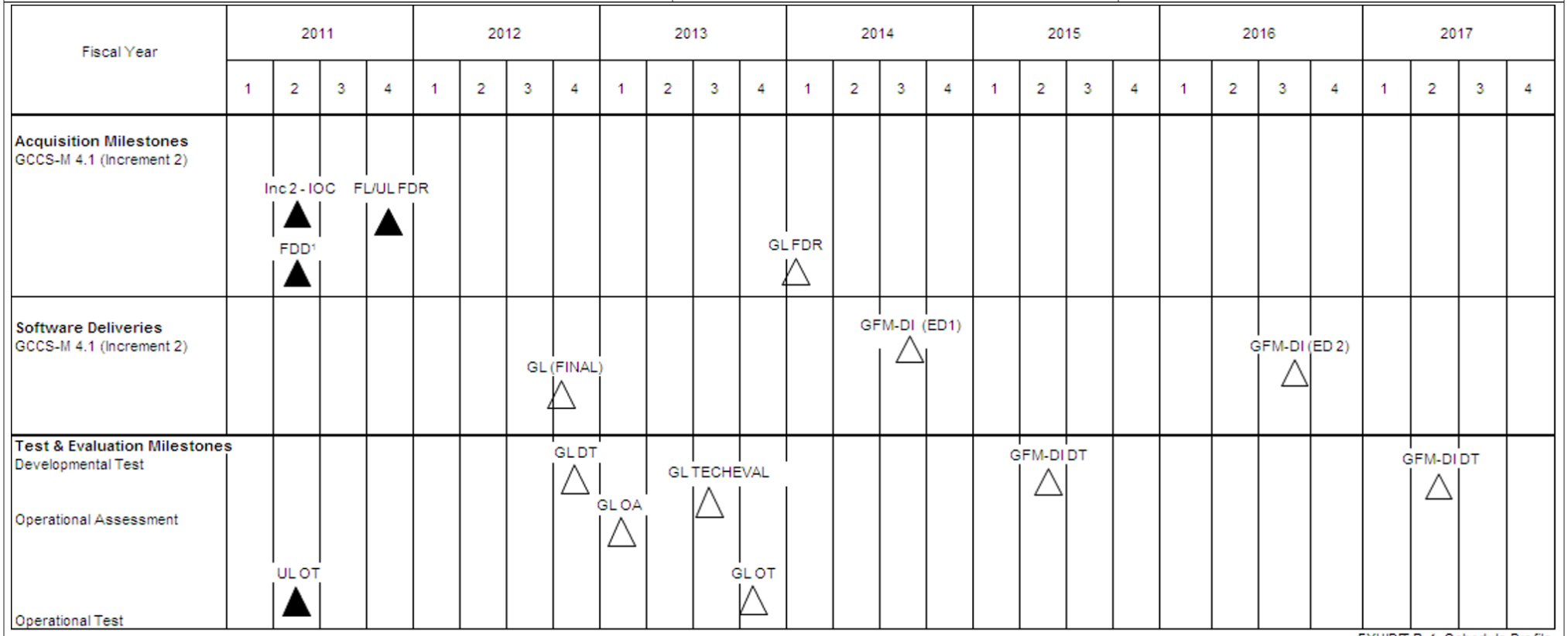


EXHIBIT R-4, Schedule Profile

Legend:

DT - Developmental Test	GFM-DI - Global Force Mgt - Data Initiative
ED - Engineering Drop	IOC - Initial Operational Capability
FDR - Fielding Decision Review	OA - Operational Assessment
FL - Force Level	OT - Operational Test
FDD - Full Deployment Decision	TECHEVAL - Technical Evaluation
GL - Group Level	UL - Unit Level

Notes:

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 0709: *GCCS-M Maritime Applications*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0709				
Increment 2 - Initial Operating Capability (IOC)	2	2011	2	2011
Full Deployment Decision (FDD)	2	2011	2	2011
Unit Level - Operational Test	2	2011	2	2011
Force/Unit Level - Full Decision Review (FDR)	4	2011	4	2011
Group Level - Software Delivery (FINAL)	4	2012	4	2012
Group Level - Development Test	4	2012	4	2012
Group Level - Operational Assessment	1	2013	1	2013
Group Level - Technical Evaluation	3	2013	3	2013
Group Level - Operational Test	4	2013	4	2013
Group Level - Fielding Decision Review	1	2014	1	2014
Global Force Management - Data Initiative - Engineering Drop 1	3	2014	3	2014
Global Force Management - Data Initiative - Development Test 1	2	2015	2	2015
Global Force Management - Data Initiative - Engineering Drop 2	3	2016	3	2016
Global Force Management - Data Initiative - Development Test 2	2	2017	2	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2213: *Mission Planning*	18.098	20.468	25.195	-	25.195	15.815	11.939	16.136	15.755	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Mission Planning: The Joint Mission Planning System (JMPS) is the designated automated mission planning system for the Navy. JMPS enables weapon system employment by providing the information, automated tools, and decision aids needed to rapidly plan aircraft, weapon, or sensor missions, load mission data into aircraft and weapons, and conduct post-mission analysis. JMPS is a mission critical system which is a co-development effort between the United States Navy (USN) and United States Air Force (USAF). Common requirements are identified and capabilities are developed and prioritized in an evolutionary approach. An individual JMPS mission-planning environment is a combination of the JMPS framework, common capabilities, and the necessary system hardware required to satisfy mission planning objectives. Most Tactical Naval Aviation platforms are dependent solely on JMPS to plan precision guided munitions, sensor systems, tactical data links, secure voice communications, and basic Safety of Flight functions. The following type/model/series (T/M/S) naval aircraft are supported by JMPS: F/A-18 A-F, E-2C, EA-6B, AV-8B, S-3, V-22, Chief of Naval Air Training (CNATRA), EA-18G, MV-22, C-2, MH-53E, Aircraft Carrier Intelligence Center (CVIC), SH-60B/F, HH-60H, CH-53D/E, CH-46E, UH-1N and VH-3/VH-60. All of the aforementioned T/M/S are required to transition to Microsoft Windows 7 before Microsoft XP support ends April 2014 by using Framework (FW) Version 1.3.5. Future JMPS platforms include: AH-1Z/W, UH-1Y, MH-60R/S, P-3, KC-130T/J, EP-3E, Broad Area Maritime Surveillance (BAMS), follow-on version of P-8, E-2D, UH-1Y, H-53K, and C-130. The next JMPS architecture version (FW Version 1.4) will support net-centric goals by providing route "publish and subscribe" capabilities. Funding profile reflects required operating system upgrades due to emerging technology and Information Assurance (IA) requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: JMPS Framework (FW) Version V1.3.5 , V1.4 & Common Capabilities	2.002	0.740	0.500	-	0.500
Articles:	0	0	0		0
Description: Due to the end of Microsoft support for Windows XP in April 2014, there is a requirement to change to Windows Operating System (OS) 7. FW Version 1.4 will incorporate Windows OS 7 and provide additional capabilities for all naval aircraft to include Service Oriented Architecture, air drop, air refueling and enhanced installation. Funding for FW 1.4 will be used to support system engineering processes, management interface controls, software architectural analysis, requirements management and a centralized website for Mission Planning Environment (MPE) developers. A reduction to USAF Increment IV (PE 0208006F) led to a Critical Change Review in accordance with Weapon Systems Acquisition Reform Act (WSARA), causing FW Version 1.4 to be delayed. In order to accommodate the MPE and platform operational flight program (OFP) development schedules of EA-6B, V-22 and F/A-18, which also require the use and testing of Windows OS 7, the program needs to acquire FW Version 1.3.5 as an interim solution. Since MPE and platform OFP					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
development may take up to 2 years to prepare for a new OS, FW Version 1.3.5 will incorporate the correct OS without significantly delaying the MPE and platform OFP development and test schedules. Migration to .NET environment in FW 1.4 will enable interoperability improvements through utilization of services and will be supported by the Global Information Grid-Enterprise Services. Common Capabilities software updates augment core mission planning capabilities across multiple aircraft. ***FY 2011 Accomplishments:*** JMPS Framework (FW) 1.3.5 Development Test and JMPS FW 1.4 Development. ***FY 2012 Plans:*** Complete JMPS FW 1.4 development and testing. Resolve JMPS FW 1.3.5 deficiencies. ***FY 2013 Base Plans:*** Conduct FW 1.3.5 testing with the objective to Initial Operational Capability (IOC) Windows 7 compatible system.					
Title: Joint Mission Planning System Expeditionary (JMPS-E) ***Articles:*** ***Description:*** JMPS Expeditionary (JMPS-E): The goal of the JMPS-E team is to produce a scalable, tailorable, mission planning and execution monitoring tool for Amphibious Squadron staffs. The primary focus of this system is to provide an automated capability to assist planners with mission analysis, course of action development and automated creation of doctrinal orders based on planning data in the system. Current expeditionary planning is done manually on paper charts. JMPS-E will provide a digital map enabling better response times to changing plans, easier distribution of planning artifacts and a reduction in human error during the planning process. The variety and geographically separated nature of forces involved with Ship to Shore Maneuver amplifies the need for web-based technologies to enable collaborative planning, improve overall situational awareness and enable the monitoring of mission execution from different locations. The primary outputs are tasking orders, route plans, battlespace geometries and decision briefs. The system will also incorporate modeling and simulation tools to rehearse and deconflict mission plans. This capability will be initially fielded using Framework Version 1.2.4. ***FY 2011 Accomplishments:*** JMPS-E Version 1.0.0 Interim fleet released for CPR-6/USS Bataan. ***FY 2012 Plans:***	0.323 0	0.237 0	1.295 0	-	1.295 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Full Operational Capability fielding to seven Amphibious Squadrons (PHIBRONs). ***FY 2013 Base Plans:*** Develop, integrate and test JMPS-E Version 1.0.2 to satisfy Windows 7 requirement.					
Title: Mission Planning Environment (MPE) Integration and Test	15.773	19.491	23.400	-	23.400
Articles:	0	0	45		45
Description: Mission Planning Environment (MPE) Integration and Test efforts support the Navy's developmental testing/operational testing, integration and system of system testing for MPE fielding. Efforts consist of integration of components provided by various developers into a platform-centric MPE and testing of the integrated MPE. MPE integration and testing results in a consistent and repeatable system configuration that enables stability and reliability. Current budget supports the integration and testing of 17 MPEs in FY11. Due to the end of Microsoft support for Windows XP in April 2014, there is a MPE requirement to change to Windows Operating System (OS) 7. ***FY 2011 Accomplishments:*** Integration and test of seventeen (17) MPEs : AV-8B H60 3.0, C-2A 3.0, CH-53K 1.0, C/KC-130 1.0 & 2.0, E-2C 4.0, E-2D 1.0, EA-6B I2B4 3.1 and I3B5 6.0, F/A-18 H8E/2.4.0 and 25X/2.5.X, Marine Helo 2.1 and 3.0, MH-60 R/S 1.0, MH-53E 1.0, V-22 1.2, P-3 3.0. ***FY 2012 Plans:*** Integration and test of nineteen (19) MPEs planned: AV-8B H61 4.0 and H70 5.0, BAMS 1.0, C-2A 3.0, C/KC-130 2.0 & 3.0, E-2C 5.0, E-2D 1.0 and 2.0, EA-6B I3B6 7.0, F/A-18 H8E/2.4.0 and 25X/2.4.X and H10E/27X, Marine Helo 3.0, MH-60 R/S 2.0, MPRF 2.0, NLH 2.0, V-22 2.0, VH-3/VH-60 2.0. ***FY 2013 Base Plans:*** Due to the end of Microsoft support for Windows XP in April 2014, there is a MPE requirement to change to Windows Operating System (OS) 7. Additional test and requirement verifications will be required to ensure product stability to satisfy all platforms. Continue integration and test of 32 MPEs : AV-8B H61 4.0, BAMS 1.0, C-130 1.0 and 2.0, C-2A 3.0, CH-53K 1.0, CNATRA 1.0, E-2C 4.0 and 5.0, E-2D 1.0 and 2.0, EA-6B I3B5 6.0 and I3B6 7.0, F/A-18 H8E/2.4.0, 25X/2.5.0, H10E/27X/3.0 and 27X/3.1, Marine Helo 2.1, 3.0 and 4.0, MH-60R/S 1.0 and 2.0, NLH 2.0, P-3 3.0, P-8 1.0 and 2.0, TacMobile 1.0 and 2.0, V-22 1.2, 2.0 and 3.0, VH-3/VH-60 2.0.					
Accomplishments/Planned Programs Subtotals	18.098	20.468	25.195	-	25.195

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/287600: *Naval Mission Plng System*	7.756	8.941	9.958	0.000	9.958	10.070	14.376	10.641	10.613	Continuing	Continuing
• RDTE/3858: *Mission Plng Systems*	83.555	69.918	72.037	0.000	72.037	78.534	90.995	92.164	0.000	Continuing	Continuing

D. Acquisition Strategy

Engineering Manufacturing Development efforts. The strategy entails a two-phased evolutionary approach to acquire the initial JMPS development effort. Phase I was a combined United States Air Force (USAF) / United States Navy (USN) effort that obtained various studies, extensive joint requirements analysis, design to cost estimates, an architecture concept, and development statement of work. The Program's Phase I was planned to identify reduced costs strategies through software reuse from both USN Tactical Automated Mission Planning Systems and USAF Air Force Mission Support Systems (AFMSS) legacy mission planning programs. Additionally, this phase provided a risk reduction plan by identifying the most effective migration of existing mission planning systems. Phase I was awarded to two contractors, Post Phase I during the down select process, one contractor was selected to develop the JMPS architecture work and Version 1.0 basic flight planning components. Phase II focused on strike planning requirements (i.e., support Precision Guided Missions and other tactical data load intensive missions) in order to migrate platforms from legacy mission planning systems to JMPS. The USAF continued development of JMPS Version 1.3 and has contractual control of the program which is facilitated via a Mission Planning Enterprise Contract. The USN continued limited development in JMPS Version 1.2 which is focused on helicopter platform migrations. USN integration and fielding strategy changed to support a Mission Planning Environment focus, where framework and common components are integrated as bundled packages and fielded by airwings. The completion of Phase II is targeted for JMPS Version 1.4, which focuses on migration to a .net architecture and rejoins the multi-service enterprise to reduce costs through co-development. As platforms plan their migration to JMPS, the acquisition strategy, plan, and baseline will be updated in order to drive the retirement of legacy mission planning systems.

E. Performance Metrics

Average time to plan a flight: Threshold value is < 1 hour average time to plan a flight that includes a Military Training Route (MTR), routing to and from the MTR, kneeboard card production, Instrument Flight Rules (IFR) flight planning materials and a Data Transfer Device (DTD) Load.
Objective value is < 30 minutes average time to plan a flight that includes a MTR, routing to and from the MTR, kneeboard card production, IFR flight planning materials and a DTD Load.

Interoperability: Threshold value is 100% of top level Interoperability Exchange Requirements (IERs) designated critical will be satisfied.
Objective value is 100% of top level IERs will be satisfied.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Software Development/Common Capabilities(CCs)	MIPR	USAF:Hanscom AFB, MA	0.003	0.001	Mar 2012	-		-		-	Continuing	Continuing	Continuing
Primary Software Development/Framework (FW)	MIPR	USAF:Hanscom AFB, MA	21.318	0.739	Feb 2012	0.439	Feb 2013	-		0.439	Continuing	Continuing	Continuing
Primary Software Development/Joint Mission Planning System Expeditionary (JMPS-E)	MIPR	USAF:Hanscom AFB, MA	4.624	0.150	Feb 2012	0.488	Feb 2013	-		0.488	Continuing	Continuing	Continuing
Award Fees 8%	MIPR	USAF:Hanscom AFB, MA	1.670	0.074	Feb 2012	0.103	Feb 2013	-		0.103	Continuing	Continuing	Continuing
Primary Software Development	Various	Various:Various	19.603	2.325	Jan 2012	2.396	Jan 2013	-		2.396	Continuing	Continuing	Continuing
No Longer Funded in FYDP	Various	Various:Various	83.882	-		-		-		-	0.000	83.882	
		Subtotal	131.100	3.289		3.426		-		3.426			

Remarks

PB11 was incorrectly titled Primary Hardware Development. Correction made to Primary Software Development. 6% award fees based on actual awards placed on various Hanscom AFB contracts.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	C/FFP	Lockheed Martin:Marlton, NJ	1.346	0.962	Jan 2012	-		-		-	0.000	2.308	2.308
Integrated Logistics Support	WR	NAWCWD:Point Mugu, CA	0.500	0.453	Nov 2011	0.447	Nov 2012	-		0.447	Continuing	Continuing	Continuing
No Longer Funded FYDP	WR	SPAWAR:Philadelphia, PA	11.538	-		-		-		-	0.000	11.538	
		Subtotal	13.384	1.415		0.447		-		0.447			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Integrated Logistics Support Lockheed Martin was changed to the correct Contract Method C/FFP.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng Integration & Test	WR	NAWCWD:Point Mugu, CA	58.647	13.214	Nov 2011	16.739	Nov 2012	-		16.739	Continuing	Continuing	Continuing
Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	1.001	0.350	Nov 2011	1.815	Nov 2012	-		1.815	Continuing	Continuing	Continuing
		Subtotal	59.648	13.564		18.554		-		18.554			

Remarks

System Eng Integration & Test (NAWCWD) increase in FY12 and FY13 due to new MPE requirement for Operating System update (Windows 7). Test and Evaluation (COTF) increase in FY13 due to independent Operational Test events for MPEs during Windows 7 transition.

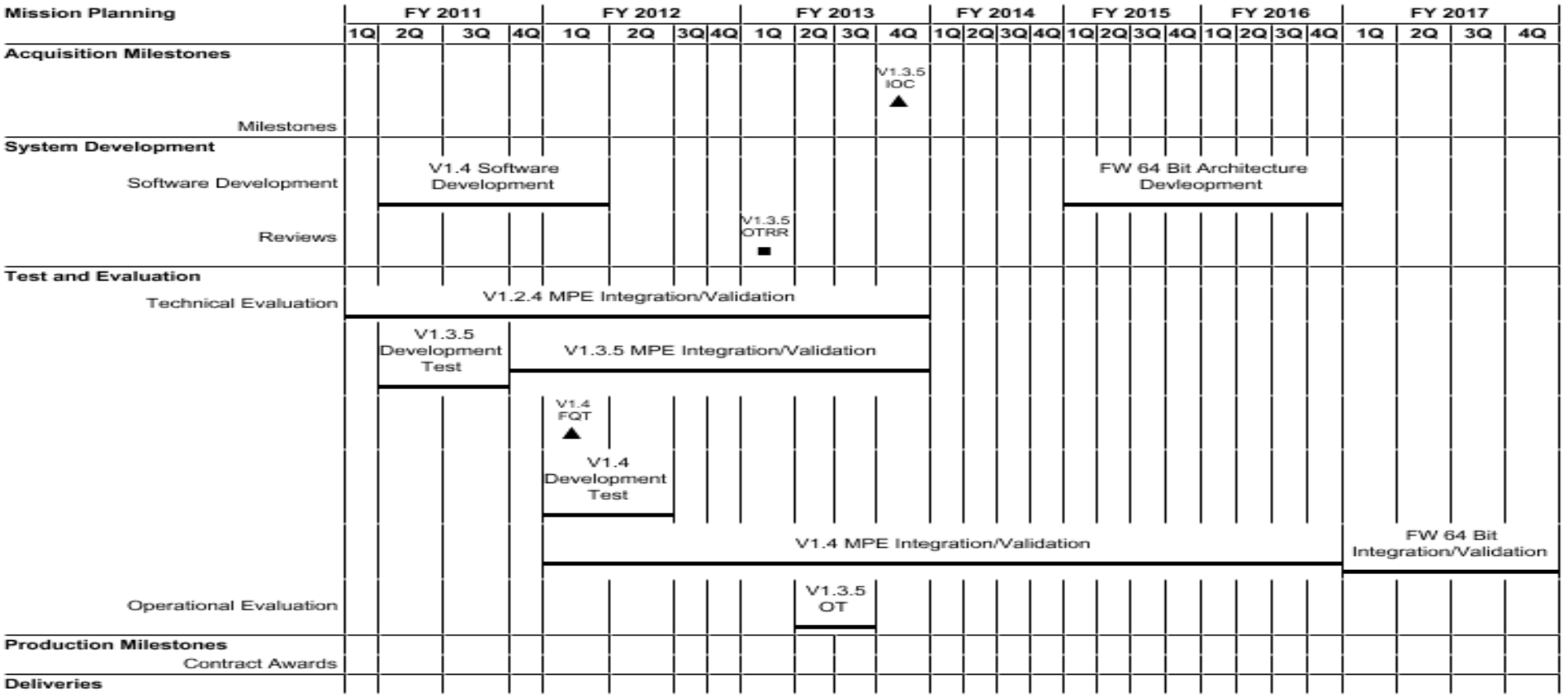
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCAD:Patuxent River, MD	30.151	2.200	Nov 2011	2.768	Nov 2012	-		2.768	Continuing	Continuing	Continuing
		Subtotal	30.151	2.200		2.768		-		2.768			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	234.283	20.468		25.195		-		25.195			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*



2013DON - 0604231N - 2213

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2213: *Mission Planning*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Mission Planning				
Acquisition Milestones: JMPS V1.3.5 Initial Operational Capability (IOC)	4	2013	4	2013
System Development: Software Development: JMPS V1.4 Software Development	2	2011	1	2012
System Development: Software Development: JMPS FW 64 Bit Architecture Development	1	2015	4	2016
System Development: Reviews: JMPS V1.3.5 Operational Test Readiness Review (OTRR)	1	2013	1	2013
Test and Evaluation: Technical Evaluation: JMPS V1.2.4 MPE Integration/Validation	1	2011	4	2013
Test and Evaluation: Technical Evaluation: JMPS V1.3.5 Development Test	2	2011	3	2011
Test and Evaluation: Technical Evaluation: JMPS V1.3.5 Mission-Planning Environment (MPE) Integration/Validation	4	2011	4	2013
Test and Evaluation: Technical Evaluation: JMPS V1.4 Functional Qualification Test (FQT)	1	2012	1	2012
Test and Evaluation: Technical Evaluation: JMPS V1.4 Development Test	1	2012	2	2012
Test and Evaluation: Technical Evaluation: JMPS V1.4 MPE Integration/Validation	1	2012	4	2016
Test and Evaluation: Technical Evaluation: JMPS FW 64 Bit Integration/Validation	1	2017	4	2017
Test and Evaluation: Operational Evaluation: JMPS V1.3.5 Operational Test (OT)	2	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2307: *Shipboard LAN/WAN*	0.433	0.308	0.313	-	0.313	-	-	-	-	0.000	1.054
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Shipboard LAN / WAN / Integrated Shipboard Network System (ISNS) provides Navy ships, including submarines, and Ashore sites with reliable, high-speed SECRET and UNCLASSIFIED Local Area Networks (LAN)s and wireless network technologies. The LAN provides Basic Network Information Distribution Services (BNIDS) and access to the Defense Information Systems Network (DISN) Wide Area Network (WAN) (Secure and Nonsecure Internet Protocol Router Network -SIPRNet and NIPRNet). It provides the network infrastructure and services to enable real-time information exchange within the ship and between afloat units, Component Commanders, and Fleet Commanders. It is a key factor in the implementation of the Navy's portion of Joint Vision 2020 and the migration of existing legacy systems into the IT-21 strategy. Program funding supports the design, development and testing of the ISNS LAN for surface ships, shore sites, and SubLAN for submarines.

The ISNS program maximizes the use of both Commercial off the Shelf (COTS) software and hardware. Engineering and technical support is provided so that existing systems will keep pace with hardware and software that continues to be commercially supported. ISNS uses a combination of high speed wired and wireless switches, routers, access points, servers, workstations and operating system software technologies to provide network access to classified and unclassified applications for use by ship's force, embarked units, embarked commanders and their staffs. Under the Navy's information modernization strategy, full synchronization of shipboard networks, mission and information applications, radio/satellite communications, and shore data dissemination infrastructure are necessary to ensure end-to-end mission capability. The Integrated Shipboard Networking System program is closely synchronized on a ship by ship basis with over 460 different systems of application configurations including the following: Global Command and Control System Maritime (GCCS-M), Navy Tactical Command Support System (NTCSS), Navy Standard Integrated Personnel System (NSIPS), Theatre Medical Information Program - Maritime (TMIP-M), Defense Messaging System (DMS), Automated Digital Network System (ADNS), Global Broadcasting System (GBS), Tactical Tomahawk Weapons Control System (TTWCS) and Information Security (INFOSEC) programs. The ISNS program provides the infrastructure to support implementation/fielding of these programs. The LAN modernization rate must keep pace with hardware and software that is supported commercially in order to provide a supportable and secure FORCEnet infrastructure. ISNS includes Afloat Core Services (ACS) which is the mechanism to deliver the FORCEnet interface to the warfighter. ACS provides a composeable warfighting environment enabling dynamic configuration of capabilities tailored to meet specific warfighting missions. As the warfighting mission changes, the capabilities or services can be re-configured on the fly to meet the new warfighting requirement. This dynamic reconfiguration of services also known as "plug and fight" meets the composeable services vision of FORCEnet. ACS also provides the common core enterprise services and technical framework to allow organizations ubiquitous access to reliable, decision-quality information through a net-based services infrastructure and applications to bridge real-time and near-real-time communities of interest (COI). ACS will empower the end user to pull information from any available source, with minimal latency, to support the mission. Its capabilities will allow Department of the Navy as well as Global Information Grid (GIG) users to task, post, process, use, store, manage and protect information resources on demand for warfighters, policy makers and support personnel. ACS will utilize a spiral process for delivering capability to the warfighter.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

The ISNS Inc 1, Sensitive Compartmented Information (SCI) Networks and Combined Enterprise Regional Information Exchange System (CENTRIXS) programs began migration to ISNS Inc 2/Consolidated Afloat Networks and Enterprise Services (CANES). ISNS Inc 2/CANES will serve to transition numerous Fleet networks to a single, adaptive, available, secure computing network infrastructure while delivering enhanced technologies in: Integrated Voice, Video and Data; Common Computing Environment (CCE); ACS; and Multi-Level Security (MLS)/Cross Domain Solutions (CDS).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)

	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Integrated Shipboard Network System (ISNS)	0.433	0.308	0.313	-	0.313
Articles:	0	0	0		0
FY 2011 Accomplishments: Continued transition support from ISNS Increment 1 to CANES Inc 1 through continued consolidation of Afloat LANs and Enterprise Services aboard ships and Ashore sites. Continued development of replacement solutions for End of Life (EOL) equipment as EOL occurs. Developed replacement solutions for End of Sale (EOS) equipment/software as EOS occurs.					
FY 2012 Plans: Continue development of replacement solutions for End of Life (EOL) equipment as EOL occurs. Develop replacement solutions for End of Sale (EOS) equipment/software as EOS occurs. Support Certification and Accreditation activities for efforts under development. Continue support of at sea demonstrations.					
FY 2013 Base Plans: Continue development of replacement solutions for End of Life (EOL) equipment as EOL occurs. Develop replacement solutions for End of Sale (EOS) equipment/software as EOS occurs. Complete Certification and Accreditation efforts for ISNS variants.					
Accomplishments/Planned Programs Subtotals	0.433	0.308	0.313	-	0.313

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/3050/ISNS: *ISNS*	113.307	98.755	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	483.276

D. Acquisition Strategy

This program will transition fully to CANES in FY13.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2307: *Shipboard LAN/WAN*

E. Performance Metrics

The Shipboard LAN/WAN/Integrated Shipboard Network System (ISNS) development efforts are nearing completion and are currently 99.1% completed. The ISNS program will fully transition to CANES in FY 2013. ISNS development and testing against ISNS variants as well as Early Adopter Common Computing Envrionment (CCE) testing on the Lincoln Strike Group met and exceeded all measures of effectiveness and suitability of the system.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2351: *MDA*	18.752	-	-	-	-	-	-	-	-	0.000	18.752
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY 2012 MDA RDTEN funding was realigned to DCGS-N PE 0305208N.

A. Mission Description and Budget Item Justification

Maritime Domain Awareness (MDA): MDA is the effective understanding of anything associated with the global maritime domain that could impact the security, safety, economy or environment. MDA objectives include the persistent monitoring of and ability to access and maintain data on vessels, cargo, people, and infrastructures; and the ability to collect, fuse, analyze, and disseminate information to decision makers to facilitate effective understanding. This initiative will identify, develop and transition data fusion and mining, replication, sharing and assessment tools to achieve MDA across the non-classified, unclassified and classified enclaves.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: MDA	12.286	-	-	-	-
Articles:	0				
FY 2011 Accomplishments: MDA Spiral 1: Supported initial Interoperability testing for fielded capabilities following the introduction of the Enterprise Node in Q3FY11. Maritime Fusion and Analysis Services (MFAS) Increment and Information Intelligence Access, Data Sharing and Dissemination (I2ADSD) Increment: Transitioned the MFAS and I2ADSD pre-acquisition efforts to support DCGS-N Increment 2 Activities. Completed a DCGS-N Material Development Decision in Q3 FY2011 that will allow the development and assessment of prototype MFAS and multi-intelligent ISR fusion and analytical capabilities to address key gaps identified in the MFAS ICD, MFAS Analysis of Alternatives, the DCGS Enterprise ICD, and the DCGS-N Increment 2 Gap Analysis. Completed a DCGS-N MFAS Analysis of Alternatives, developed a DCGS-N Capabilities Description Document and conducted initial prototyping activities. Began requirements analysis and system design for DCGS-N Increment 2 releases.					
Title: DLB	6.466	-	-	-	-
Articles:	0				
FY 2011 Accomplishments: Deep Lightning Bolt/Rapid Capability Development (DLB/RCD):					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 2351: *MDA*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Navy transformational initiative focused on the introduction of technologies that will enhance Navy's Sea Power 21 objectives and support network centric warfare & operations. The low cost initiative provided ability to react immediately to newly discovered technology(s), enemy threat(s) or to respond to significant & urgent safety situations through special, tailored procedures which: - Integrated and demonstrated hardware/software solutions for immediate or near term deployment - Expedited technical, programmatic & financial decisions in order to make emergent technologies available to the Fleet in a timely manner - Expedited, within statutory limitations, the procurement & contracting processes. - Developed and installed an integrated hardware/software prototype at Commander Third Fleet Headquarter and Commander Sixth Fleet Headquarter in support of network centric warfare operations.					
Accomplishments/Planned Programs Subtotals	18.752	-	-	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Maritime Domain Awareness (MDA) Spiral 1 Fielded Project (also known as Spiral 1 Prototype) entered the sustainment phase based on direction by Assistant Secretary of the Navy, Research, Development and Acquisition (ASN RDA) in 4QFY09. MDA Spiral 1 will be maintained and sustained until it can transition or be replaced by a Program of Record capability.

E. Performance Metrics

Maritime Domain Awareness (MDA): MDA Spiral 1 Fielded is in compliance with Net-Centric Enterprise Solutions for Interoperability guidance and conforms to the Net-Centric Enterprise Services standards; fuses multiple disparate data sources, analyzes MDA activity to identify potential threats to security of the United States and US interests and forces around the world.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3032: *NTCSS (Naval Tactical Command Spt Sys)*	3.483	14.524	15.015	-	15.015	9.502	6.303	1.174	0.931	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Naval Tactical Command Support System (NTCSS) is a multi-function program designed to provide standard tactical support information systems to various afloat and associated shore-based fleet activities. The mission is to provide the Navy and Marine Corps with an integrated, scalable system that supports the management of logistical information, personnel, material and funds required to maintain and operate ships, submarines, and aircraft. FY2013 funding:

(1) Supports the design, development, and testing of One NALCOMIS (Naval Aviation Logistics Command/Management Information System), which will consolidate organizational and depot level aviation maintenance into a single system. This will provide streamlined maintenance management for Navy and Marine Corps aviation.
(2) Supports design, development, and migration of NTCSS into the MLDN (Maritime Logistics Data Network) concept of operations featuring multi-UIC (Unit Identification Code), which will provide a consolidated logistics management system by combining logistics data from multiple fleet operational platforms into a single database management system ashore with bi-directional replication and transactional capabilities.
(3) Provides for the design, development and testing of the Single Supply Baseline (SSB), which will integrate the functionality provided by several legacy logistics applications into a single application baseline.
(4) Provides for the transition of the current, client-server architecture to a service-oriented architecture (SOA) and web-based services. This will align with the initiative to bring Navy systems into a common computing environment afloat, interface with Navy Enterprise Resource Planning (ERP) ashore, and provide a more flexible system platform with greater responsiveness to security, information assurance, functional, and system requirements and with greater speed to capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: NTCSS (Naval Tactical Command Spt Sys)	3.483	14.524	15.015	-	15.015
Articles:	0	0	0		0
Description: Maintenance and Supply Management Capability					
FY 2011 Accomplishments: Continued design, development, and testing efforts for NTCSS One NALCOMIS, multi-unit identification code (UIC), and enterprise database system. Continued design, development, and testing efforts for NTCSS product improvements of service-oriented architecture (SOA) and web-based services.					
FY 2012 Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Continue design, development, and testing efforts for NTCSS One NALCOMIS, multi-UIC, and enterprise database system. Continue design, development, and testing efforts for NTCSS product improvements of SOA and web-based service. Begin design, development and testing efforts for Single Supply Baseline (SSB) with upgrades to Ships Store (Retail Operations Management (ROM)) and Food Services (Food Services Management (FSM)) products. ***FY 2013 Base Plans:*** Continue design, development, and testing efforts for NTCSS One NALCOMIS (Naval Aviation Logistics Command/Management Information System), Single Supply Baseline, multi-UIC, and enterprise database system. Continue design, development, and testing efforts for NTCSS product improvements of SOA and web-based service.					
Accomplishments/Planned Programs Subtotals	3.483	14.524	15.015	-	15.015

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2611: *Naval Tactical Command Support System*	33.176	33.017	35.732	0.000	35.732	30.323	33.851	19.856	19.334	81.147	742.783

D. Acquisition Strategy

The NTCSS Acquisition Strategy is defined in its Single Acquisition Management Plan (SAMP) dated February 2004. This SAMP provides the acquisition strategy and implementation plans for all NTCSS applications and is based on the following six tenants: Migration to Optimized Software Architecture, Migration to Personal Computer (PC) Workstations and UNIX/NT Servers, Migration to the Common Operating Environment (COE), Business Process Improvements, Focused Logistics, and Streamlined Acquisition Process. The SAMP provides a single point of focus and presents these efforts in an integrated and coordinated fashion.

E. Performance Metrics

One NALCOMIS reduces NTCSS Aviation software baseline configuration management support by 50%. Additionally, the NTCSS Aviation system hardware requirement realizes a 50% reduction at Fleet Readiness Centers (ashore) and Aircraft Intermediate Maintenance Departments (afloat). Over the Future Years Defense Plan (FYDP), Service-Oriented Architecture (SOA) for NTCSS will lower system maintenance costs by $15.7M when compared to maintaining the current, client-server architecture.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	SSC:North Charleston, SC	0.668	-		-		-		-	0.000	0.668	0.668
Systems Engineering	C/CPFF	SeaPort:San Diego, CA	1.451	0.500	Nov 2011	0.406	Nov 2012	-		0.406	Continuing	Continuing	Continuing
Licenses	Various	SSC:San Diego, CA	0.700	-		-		-		-	0.000	0.700	0.700
Software Development	WR	SSC:Norfolk, VA	18.537	12.960	Nov 2011	13.746	Nov 2012	-		13.746	Continuing	Continuing	Continuing
Integrated Logistics Support	C/CPFF	SeaPort:San Diego, CA	0.200	0.300	Nov 2011	0.243	Nov 2012	-		0.243	Continuing	Continuing	Continuing
Configuration Management	WR	SSC:San Diego, CA	0.460	-		-		-		-	0.000	0.460	
Technical Data	WR	SSC:San Diego, CA	0.200	-		-		-		-	0.000	0.200	
		Subtotal	22.216	13.760		14.395		-		14.395			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWC:Patuxent River, MD	0.400	0.250	Nov 2011	0.203	Nov 2012	-		0.203	Continuing	Continuing	Continuing
Operational Test & Evaluation	C/CPIF	COTF:Norfolk, VA	0.785	-		-		-		-	0.000	0.785	
		Subtotal	1.185	0.250		0.203		-		0.203			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	SeaPort:San Diego, CA	0.896	-		-		-		-	0.000	0.896	0.896
Government Engineering Support	WR	SSC:San Diego, CA	0.279	-		-		-		-	0.000	0.279	0.279
Program Management Support	C/CPFF	SeaPort:San Diego, CA	0.432	0.514	Nov 2011	0.417	Nov 2012	-		0.417	Continuing	Continuing	Continuing
		Subtotal	1.607	0.514		0.417		-		0.417			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	25.008	14.524		15.015		-		15.015			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 3032: *NTCSS (Naval Tactical Command Spt Sys)*

EXHIBIT R4, Schedule Profile — **DATE:** February 2012

APPROPRIATION/BUDGET ACTIVITY	**PROGRAM ELEMENT NUMBER AND NAME**	**PROJECT NUMBER AND NAME**
RDT&E,N/BA-5	0604231N - Tactical Command System	3032 NTCSS Enterprise Database and MLDN

Fiscal Year	2011				2012				2013				2014				2015				2016				2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Milestones NTCSS																												
Engineering Milestones NTCSS Open Architecture (OA) Build 1: One NALCOMIS 5.30													TRR	PRR														
NTCSS Open Architecture (OA) Build 2: Single Supply Baseline Release 1				SRR				CDR							TRR	PRR												
NTCSS Open Architecture (OA) Build 3: One NALCOMIS 5.35												SRR	CDR			TRR		PRR										
NTCSS Open Architecture (OA) Build 4: One NALCOMIS 5.40																SRR	CDR				TRR	PRR						
NTCSS Open Architecture (OA) Build 5: Single Supply Baseline Release 2																	SRR	CDR			TRR	PRR						
NTCSS Open Architecture (OA) Build 6: Single Supply Baseline Release 3																							SRR	CDR			TRR	PRR
Test & Evaluation Milestones NTCSS																Build 1 OT	Build 2 OT			Build 3 OT				Build 4/5 OT				
Software Deliveries NTCSS																		Build 1	Build 2			Build 3				Build 4/5		

Exhibit R-4, Schedule Profile

CDR: Critical Design Review PRR: Production Readiness Review SRR: System Requirements Review TRR: Test Readiness Review

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 3032: *NTCSS (Naval Tactical Command Spt Sys)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3032				
NTCSS Open Architecture Build 1- Test Readiness Review (TRR)	1	2014	1	2014
NTCSS Open Architecture Build 1- Production Readiness Review (PRR)	2	2014	2	2014
NTCSS Open Architecture Build 1- Operational Test (OT)	4	2014	4	2014
NTCSS Open Architecture Build 1- Delivery	2	2015	2	2015
NTCSS Open Architecture Build 2- System Requirements Review (SRR)	4	2011	4	2011
NTCSS Open Architecture Build 2- Critical Design Review (CDR)	4	2012	4	2012
NTCSS Open Architecture Build 2- Test Readiness Review (TRR)	3	2014	3	2014
NTCSS Open Architecture Build 2- Production Readiness Review (PRR)	4	2014	4	2014
NTCSS Open Architecture Build 2- Operational Test (OT)	1	2015	1	2015
NTCSS Open Architecture Build 2- Delivery	3	2015	3	2015
NTCSS Open Architecture Build 3- System Requirements Review (SRR)	4	2013	4	2013
NTCSS Open Architecture Build 3- Critical Design Review (CDR)	1	2014	1	2014
NTCSS Open Architecture Build 3- Test Readiness Review (TRR)	4	2014	4	2014
NTCSS Open Architecture Build 3- Production Readiness Review (PRR)	2	2015	2	2015
NTCSS Open Architecture Build 3- Operational Test (OT)	4	2015	4	2015
NTCSS Open Architecture Build 3- Delivery	2	2016	2	2016
NTCSS Open Architecture Build 4- System Requirements Review (SRR)	4	2014	4	2014
NTCSS Open Architecture Build 4- Critical Design Review (CDR)	1	2015	1	2015
NTCSS Open Architecture Build 4- Test Readiness Review (TRR)	1	2016	1	2016
NTCSS Open Architecture Build 4- Production Readiness Review (PRR)	2	2016	2	2016
NTCSS Open Architecture Build 4- Operational Test (OT)	4	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3032: *NTCSS (Naval Tactical Command Spt Sys)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
NTCSS Open Architecture Build 4- Delivery	2	2017	2	2017
NTCSS Open Architecture Build 5- System Requirements Review (SRR)	1	2015	1	2015
NTCSS Open Architecture Build 5- Critical Design Review (CDR)	2	2015	2	2015
NTCSS Open Architecture Build 5- Test Readiness Review (TRR)	1	2016	1	2016
NTCSS Open Architecture Build 5- Production Readiness Review (PRR)	2	2016	2	2016
NTCSS Open Architecture Build 5- Operational Test (OT)	4	2016	4	2016
NTCSS Open Architecture Build 5- Delivery	2	2017	2	2017
NTCSS Open Architecture Build 6- System Requirements Review (SRR)	3	2016	3	2016
NTCSS Open Architecture Build 6- Critical Design Review (CDR)	4	2016	4	2016
NTCSS Open Architecture Build 6- Test Readiness Review (TRR)	3	2017	3	2017
NTCSS Open Architecture Build 6- Production Readiness Review (PRR)	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3320: *TRIDENT Warrior*	-	3.712	3.579	-	3.579	3.020	3.047	2.265	2.303	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Trident Warrior was transferred from Project 9123 into Project 3320 beginning in FY12.

A. Mission Description and Budget Item Justification

Trident Warrior enables early delivery of Net-Centric Operation/Warfare capabilities to the warfighter via Fleet-directed Trident Warrior operational events with a strong emphasis on delivering Maritime Domain Awareness with Maritime Operations Center capability. Integrates stand-alone systems and efforts to achieve substantially enhanced capability, demonstrates/tests these capabilities in both laboratory and operational environments, and evaluates their effectiveness. Develops supporting concepts and Concept of Operations to improve warfighting effectiveness. Coordinates FORCEnet efforts with other Service/Joint/Department of Defense/National efforts to ensure Joint/Interagency/Allied/Coalition applicability and interoperability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Trident Warrior	-	3.712	3.579	-	3.579
Articles:		0	0		0
FY 2012 Plans: -Focuses on operational experimentation of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance technologies during the Navy's premier annual Fleet Experimentation (FLEX) events. The primary goal is to validate information dominance capabilities, maritime warfighting policy and procedures, and interoperability between United State and Coalition partners. -Provide systems engineering and analysis to rapidly identify emergent fleet needs and capability shortfall, assessing risk, validating cost and delivering capability. Find solutions for the Office of the Chief of Naval Operations/Commander, U.S. Fleet Forces Command selected capability gaps and package them for operational use, favoring cost effective, disruptive technologies. Facilitate the successful transition of identified technology capabilities into Programs of Record. This process will deliver Program Objective Memorandum recommendations and supporting roadmaps based on assessments of capability gaps with a focus on technologies that respond to irregular, catastrophic and disruptive technology insertion. -The majority of Trident Warrior experimentation occurs during operational at-sea venues where new and emerging capabilities are integrated with current fleet units and either demonstrated or evaluated on their potential military utility. The Sea-based venue works on an 18-month cycle and focuses on the readiness of					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
higher Technology Readiness Level technologies in a Maritime-based environment. The at-sea portion of Trident Warrior will be executed in two phases: phase one will be executed in conjunction with the Rim of the Pacific exercise in Third Fleet by both US and coalition participants, and phase two will be executed in conjunction with the VALIANT SHIELD exercise by US participants. -Continue to develop FY13 Trident Warrior FLEX plan and begin to develop FY14 Trident Warrior FLEX plan. ***FY 2013 Base Plans:*** -Continue to focus on operational experimentation of Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) technologies during the Navy's premier, annual Fleet Experimentation (FLEX)events. The primary goal is to validate information dominance capabilities, maritime warfighting policy and procedures, and interoperability between the United States (U.S.) and Coalition partners. -Continue to provide systems engineering and analysis to rapidly identify emergent fleet needs and capability shortfall, assessing risk, validating cost and delivering capability. Find solutions for the Office of the Chief of Naval Operations/Commander, U.S. Fleet Force Command selected capability gaps and package them for operational use, favoring cost effective, disruptive technologies. Facilitate the successful transition of identified technology capabilities into Programs of Record. This process will deliver Program Objective Memorandum recommendations and supporting roadmaps based on assessments of capability gaps with a focus on technologies that respond to irregular, catastrophic and disruptive technology insertion. -The majority of Trident Warrior experimentation occurs during operational at-sea venues where new and emerging capabilities are integrated with current fleet units and either demonstrated or evaluated on their potential military utility. The Sea-based venue works on an 18-month cycle and focuses on the readiness of higher Technology Readiness Level technologies in a Maritime-based environment. The at-sea portion of Trident Warrior will be executed in two phases. The venues to be determined, will be operational venues which support the experimental objectives of information dominance. -Continue to develop FY14 Trident Warrior FLEX plan and begin to develop FY15 Trident Warrior FLEX plan.					
Accomplishments/Planned Programs Subtotals	-	3.712	3.579	-	3.579

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Trident Warrior is an annual operational experiment and is not associated with acquisition efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

E. Performance Metrics

Confirmation of Fleet and Joint Interoperability with technology candidates, Information Assurance Certification and Accreditation, and alignment with current C4ISR Technology Roadmaps as well as related Program Executive Office objectives and projected architectures.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Trident Warrior (TW)	WR	Fleet Forces Command:San Diego, CA	-	0.101	Dec 2011	0.097	Dec 2012	-		0.097	Continuing	Continuing	Continuing
Trident Warrior (TW)	WR	Naval Postgraduate School:Monterey, CA	-	1.032	Nov 2011	0.996	Nov 2012	-		0.996	Continuing	Continuing	Continuing
Trident Warrior (TW)	WR	SSC Atlantic:Charleston, SC	-	0.469	Jan 2012	0.453	Jan 2013	-		0.453	Continuing	Continuing	Continuing
Trident Warrior (TW)	WR	SSC Pacific:San Diego, CA	-	0.550	Nov 2011	0.528	Nov 2012	-		0.528	Continuing	Continuing	Continuing
Trident Warrior (TW)	C/CPFF	AUSGAR Technolgies Inc.:San Diego, CA	-	1.560	Dec 2011	1.505	Dec 2012	-		1.505	Continuing	Continuing	Continuing
		Subtotal	-	3.712		3.579		-		3.579			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	3.712		3.579		-		3.579			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

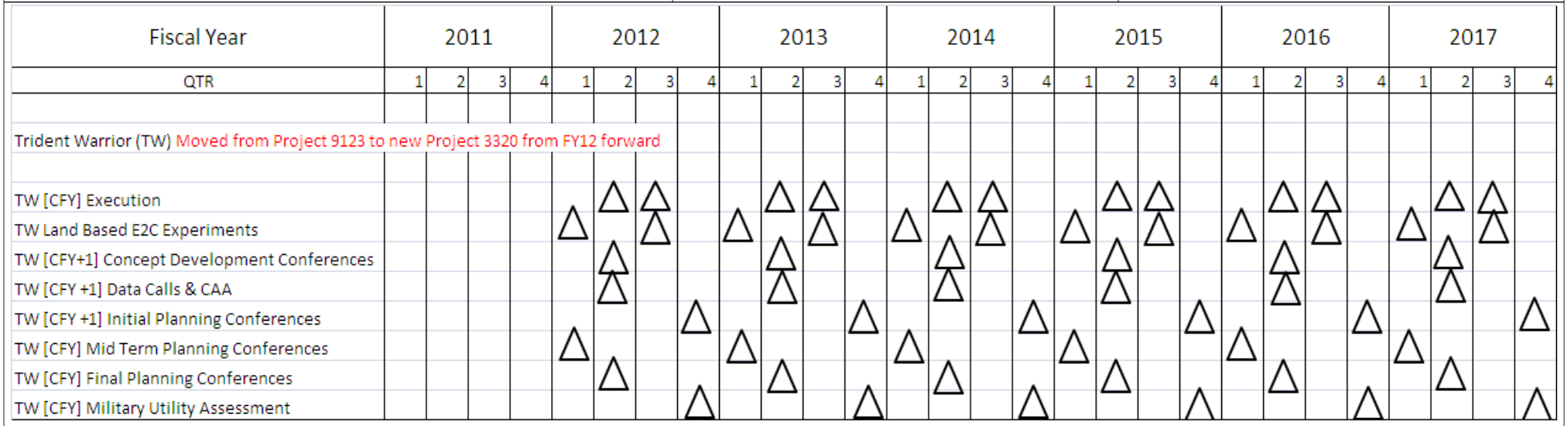


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 3320: *TRIDENT Warrior*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3320				
Trident Warrior (TW) Execution 2012	2	2012	3	2012
Trident Warrior (TW) Execution 2013	2	2013	3	2013
Trident Warrior (TW) Execution 2014	2	2014	3	2014
Trident Warrior (TW) Execution 2015	2	2015	3	2015
Trident Warrior (TW) Execution 2016	2	2016	3	2016
Trident Warrior (TW) Execution 2017	2	2017	3	2017
TW Lab Based E2C Experiments 2012 Q1	1	2012	1	2012
TW Lab Based E2C Experiments 2012 Q3	3	2012	3	2012
TW Lab Based E2C Experiments 2013 Q1	1	2013	1	2013
TW Lab Based E2C Experiments 2013 Q3	3	2013	3	2013
TW Lab Based E2C Experiments 2014 Q1	1	2014	1	2014
TW Lab Based E2C Experiments 2014 Q3	3	2014	3	2014
TW Lab Based E2C Experiments 2015 Q1	1	2015	1	2015
TW Lab Based E2C Experiments 2015 Q3	3	2015	3	2015
TW Lab Based E2C Experiments 2016 Q1	1	2016	1	2016
TW Lab Based E2C Experiments 2016 Q3	3	2016	3	2016
TW Lab Based E2C Experiments 2017 Q1	1	2017	1	2017
TW Lab Based E2C Experiments 2017 Q3	3	2017	3	2017
TW Concept Development Conferences 2012	2	2012	2	2012
TW Concept Development Conferences 2013	2	2013	2	2013
TW Concept Development Conferences 2014	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TW Concept Development Conferences 2015	2	2015	2	2015
TW Concept Development Conferences 2016	2	2016	2	2016
TW Concept Development Conferences 2017	2	2017	2	2017
TW Data Calls & CAA 2012	2	2012	2	2012
TW Data Calls & CAA 2013	2	2013	2	2013
TW Data Calls & CAA 2014	2	2014	2	2014
TW Data Calls & CAA 2015	2	2015	2	2015
TW Data Calls & CAA 2016	2	2016	2	2016
TW Data Calls & CAA 2017	2	2017	2	2017
TW Initial Planning Conferences 2012	4	2012	4	2012
TW Initial Planning Conferences 2013	4	2013	4	2013
TW Initial Planning Conferences 2014	4	2014	4	2014
TW Initial Planning Conferences 2015	4	2015	4	2015
TW Initial Planning Conferences 2016	4	2016	4	2016
TW Initial Planning Conferences 2017	4	2017	4	2017
TW Mid-Term Planning Conferences 2012	1	2012	1	2012
TW Mid-Term Planning Conferences 2013	1	2013	1	2013
TW Mid-Term Planning Conferences 2014	1	2014	1	2014
TW Mid-Term Planning Conferences 2015	1	2015	1	2015
TW Mid-Term Planning Conferences 2016	1	2016	1	2016
TW Mid-Term Planning Conferences 2017	1	2017	1	2017
TW Final Planning Conferences 2012	2	2012	2	2012
TW Final Planning Conferences 2013	2	2013	2	2013
TW Final Planning Conferences 2014	2	2014	2	2014
TW Final Planning Conferences 2015	2	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3320: *TRIDENT Warrior*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
TW Final Planning Conferences 2016	2	2016	2	2016
TW Final Planning Conferences 2017	2	2017	2	2017
TW Military Utility Assessment 2012	4	2012	4	2012
TW Military Utility Assessment 2013	4	2013	4	2013
TW Military Utility Assessment 2014	4	2014	4	2014
TW Military Utility Assessment 2015	4	2015	4	2015
TW Military Utility Assessment 2016	4	2016	4	2016
TW Military Utility Assessment 2017	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3323: *Maritime Tactical Command & Control (MTC2)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3323: *Maritime Tactical Command & Control (MTC2)*	-	0.003	7.441	-	7.441	7.305	10.908	21.651	22.016	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Beginning in fiscal year 2013, the development of maritime tactical command and control capabilities will be realigned from Global Command and Control System Maritime (GCCS-M) Maritime Applications (Project Unit x0709) to the MTC2 program (Project Unit x3323).

A. Mission Description and Budget Item Justification

MTC2 is a software program which will provide tactical Command and Control (C2) capabilities and Maritime unique Operational Level of War capabilities not supported by the joint C2 effort. MTC2 fields to all echelons of command within the Navy. The goal is to provide a suite of maritime applications notionally as part of an "Application Store" concept for personnel and equipment that enables the Navy command structure enhanced situational awareness, planning, execution, monitoring, and assessment of its mission requirements. MTC2 will field maritime applications designed to provide automated and structured support for tactical and operational planning, decision-making, and execution.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Navy Working Capital Fund Rate Adjustment	-	0.003	-	-	-
Articles:		0			
FY 2012 Plans: Navy Working Capital Fund Rate Adjustment - this issue adjusts WCF rates.					
Title: Maritime Tactical Command and Control (MTC2)	-	-	7.441	-	7.441
Articles:			0		0
FY 2013 Base Plans: Begin initial development of Maritime Tactical Command and Control (MTC2) capabilities. Analyze, integrate and test software transitioning from Science & Technology (S&T) efforts into the MTC2 Program of Record. Perform systems engineering analysis, system design efforts, and acquisition documentation in support of a Build Decision (Release 1).					
Accomplishments/Planned Programs Subtotals	-	0.003	7.441	-	7.441

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3323: *Maritime Tactical Command & Control (MTC2)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEN/0604231N/0709: *GCCS-M*	25.219	17.576	5.330	0.000	5.330	1.852	1.868	1.889	1.922	Continuing	Continuing

D. Acquisition Strategy

MTC2 is planning to execute a rapid software development acquisition strategy that is responsive to the fleet needs. Software development will be comprised of multiple releases of increasing levels of net-centric services capability. MTC2 will be software only, and require the Navy Common Computing Enterprise (CCE) provided by other network centric programs to serve as the underlying information technology infrastructure of network and hardware for MTC2 software. MTC2's primary contracting method for software development utilizes Indefinite Delivery, Indefinite Quantity (IDIQ) task orders on the Command and Control Multiple Award Contract (C2 MAC) and other task orders.

E. Performance Metrics

Successfully complete initial engineering and design analysis, and acquisition documentation to achieve five Build Decisions.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3323: *Maritime Tactical Command & Control (MTC2)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	SSC:San Diego, CA	-	-		2.791	Nov 2012	-		2.791	Continuing	Continuing	Continuing
Training Development	Various	Unknown:Unknown	-	-		0.070	Nov 2012	-		0.070	Continuing	Continuing	Continuing
Software Development	WR	SSC:San Diego, CA	-	-		3.825	Nov 2012	-		3.825	Continuing	Continuing	Continuing
		Subtotal	-	-		6.686		-		6.686			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Navy Working Capital Fund Rate Adjustment	WR	WCF:TBD	-	0.003	Sep 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Support	WR	SSC:San Diego, CA	-	-		0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPFF	SeaPort:San Diego, CA	-	-		0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Program Management Support	C/CPFF	SeaPort:San Diego, CA	-	-		0.355	Nov 2012	-		0.355	Continuing	Continuing	Continuing
		Subtotal	-	0.003		0.755		-		0.755			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.003		7.441		-		7.441			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3323: *Maritime Tactical Command & Control (MTC2)*

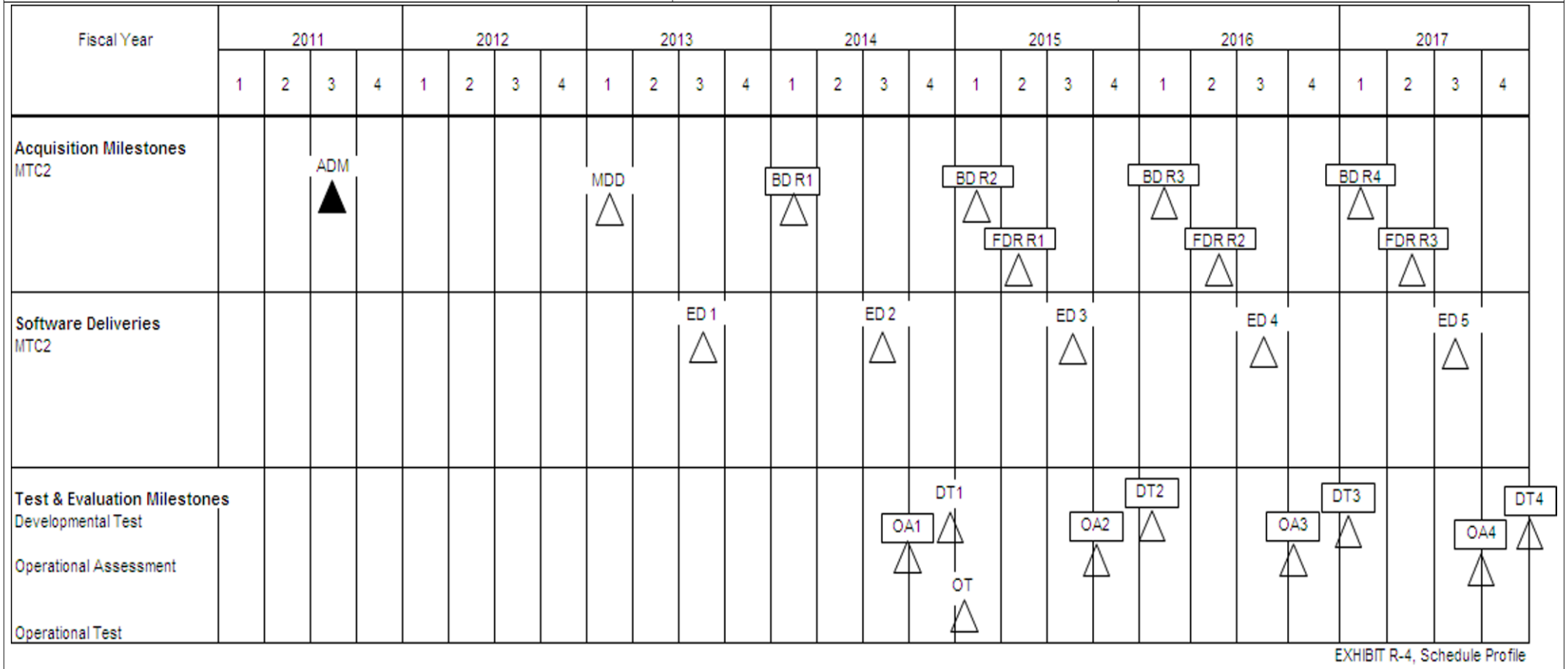


EXHIBIT R-4, Schedule Profile

Legend:

ADM - Acquisition Decision Memorandum	BD - Build Decision
DT - Developmental Test	FD - Fielding Decision
ED - Engineering Drop	OA - Operational Assessment
MDD - Material Development Decision	OT - Operational Test

Notes:

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 3323: *Maritime Tactical Command & Control (MTC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3323				
Acquisition Decision Memorandum	3	2011	3	2011
Material Development Decision	1	2013	1	2013
Engineering Drop 1	3	2013	3	2013
Build Decision / Release 1	1	2014	1	2014
Engineering Drop 2	3	2014	3	2014
Operational Assessment 1	3	2014	3	2014
Developmental Test 1	4	2014	4	2014
Build Decision / Release 2	1	2015	1	2015
Operational Test	1	2015	1	2015
Fielding Decision Review / Release 1	2	2015	2	2015
Engineering Drop 3	3	2015	3	2015
Operational Assessment 2	4	2015	4	2015
Developmental Test 2	1	2016	1	2016
Build Decision / Release 3	1	2016	1	2016
Fielding Decision Review / Release 2	2	2016	2	2016
Engineering Drop 4	3	2016	3	2016
Operational Assessment 3	4	2016	4	2016
Developmental Test 3	1	2017	1	2017
Build Decision / Release 4	1	2017	1	2017
Fielding Decision Review / Release 3	2	2017	2	2017
Operational Assessment 4	3	2017	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3323: *Maritime Tactical Command & Control (MTC2)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Engineering Drop 5	3	2017	3	2017
Developmental Test 4	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3324: *Navy Air Operations Command and Control (NAOC2)*	-	2.283	4.983	-	4.983	4.281	2.174	1.136	1.156	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Beginning in fiscal year 2012, the Navy Command and Control Air Planning Capability effort will be realigned from Theater Battle Management Core System (TBMCS), project unit 0709, to the Navy Air Operations Command and Control (NAOC2) program under project unit 3324.

A. Mission Description and Budget Item Justification

Navy Air Operations Command and Control (NAOC2) integrates and tests Air Force program of record systems that provide an integrated and scalable planning system for standardized, secure, and automated decision support for Air Force, Joint, and Allied commanders worldwide. These programs provide automated air operations planning, execution management and intelligence capabilities at the Force level to include fleet commanders, numbered fleet commanders, commander carrier strike group, Commander Expeditionary Strike Group, Commander Landing Force, and Joint Task Force Commanders. NAOC2 includes Theater Battle Management Core System (TBMCS), Command and Control Air and Space Operations Suite (C2AOS), plus Command, Control and Information Services (C2IS). C2AOS and C2IS are being developed as Service Oriented Architecture (SOA) services to allow for scalability and integration with Common Computing Environments (CCE). Continuation of these efforts will significantly enhance the Joint Force Air Component Commander and Combined Air Operations Center personnel to plan daily air operations including strike, airlift, offensive and defensive air, tanker missions in support of combat operations, addressing the requirement of war fighter of distributed planning and execution processes and significantly improving Joint interoperability. TBMCS continues a hardware transition to CCEs such as Consolidated Afloat Networks and Enterprise Services (CANES). Currently, TBMCS is the key system that is used to conduct real world air planning in the Joint and Navy environment. C2AOS and C2IS will replace TBMCS in a SOA environment while bringing more flexibility to the war fighter. In FY2012, the program will continue efforts previously funded by Global Command and Control System Maritime (GCCS-M) to migrate Air Force delivered TBMCS software to the Navy unique CANES environment. Additionally in FY2012, the program will conduct integration and testing in support of Air Force development of C2AOS and C2IS.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: TBMCS CANES Migration	-	1.424	1.359	-	1.359
Articles:		0	0		0
FY 2012 Plans: Conduct migration of Air Force design, development, and delivery of Theater Battle Management Core System (TBMCS) software to the Navy unique Consolidated Afloat Networks and Enterprise Services (CANES) Common					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Computing Environment. Conduct integrated TBMCS/CANES Developmental Tests and prepare for Operational Test. ***FY 2013 Base Plans:*** Complete migration of Air Force designed, developed, and delivered Theater Battle Management Core System (TBMCS) software to the Navy unique Consolidated Afloat Networks and Enterprise Services (CANES) Common Computing Environment. Conduct integrated TBMCS/CANES Developmental Tests, Operational Assessment and Operational Test.					
Title: Command and Control Air and Space Operations Suite (C2AOS) / Command, Control and Information Services (C2IS) Integration and Testing ***Articles:*** ***FY 2012 Plans:*** Conduct integration and testing in support of Air Force development of C2AOS and C2IS to ensure full functionality on Navy unique systems to support increased Joint interoperability and enhanced capability including theater level planning plus distributed planning and execution processes. ***FY 2013 Base Plans:*** Continue integration and testing in support of pre Milestone C Air Force development of C2AOS and C2IS to ensure full functionality on Navy unique systems to include Navy implementation of service oriented architecture to support increased Joint interoperability and enhanced capability including theater level planning plus distributed planning and execution processes.	-	0.859 0	3.624 0	-	3.624 0
Accomplishments/Planned Programs Subtotals	-	2.283	4.983	-	4.983

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 0204660N/2618 : *Navy Command and Control System*	0.334	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.334
• RDTE 0604231N / 0709: *GCCS-M Maritime Applications*	1.729	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.729

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*

D. Acquisition Strategy

TBMCS is designed, developed, and delivered by the Air Force and will be integrated for a Navy Common Computing Environment (CCE) such as CANES. As a Joint interest program, this approach satisfies the current validated requirements, supports the accelerated retirement of legacy hardware, and reduces overall risk to the program.

Command and Control Air and Space Operations Suite (C2AOS) and Command, Control and Information Services (C2IS) are designed, developed, and delivered by the Air Force and will be integrated for a Navy CCE and service oriented architecture environment such as CANES. This approach satisfies the current validated requirements and reduces overall risk to the program.

E. Performance Metrics

TBMCS, C2AOS, and C2IS are designed, developed, and delivered by the Air Force. This leverage greatly reduces the integration and testing costs associated with each software release. The solutions will reside on CCE/CANES architecture. These software-only solutions eliminate hardware procurement, installation, and sustainment costs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	SSC Pacific:San Diego, CA	-	1.123	Nov 2011	2.880	Nov 2012	-		2.880	0.000	4.003	
Licenses	WR	SSC Pacific:San Diego, CA	-	0.059	Nov 2011	0.063	Nov 2012	-		0.063	0.000	0.122	
Government Furnished Equipment (GFE)	WR	SSC Pacific:San Diego, CA	-	0.657	Nov 2011	0.259	Nov 2012	-		0.259	0.000	0.916	
Training DevelopmentText	WR	SSC Pacific:San Diego, CA	-	-		0.419	Nov 2012	-		0.419	0.000	0.419	
		Subtotal	-	1.839		3.621		-		3.621	0.000	5.460	

Remarks

GFE supports integration efforts, not for fielding.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	TBD	Unknown:Unknown	-	0.059	Nov 2011	0.060	Nov 2012	-		0.060	0.000	0.119	
Integrated Logistics Support	WR	SSC LANT:Charleston, SC	-	-		0.358	Nov 2012	-		0.358	0.000	0.358	
Configuration Management	TBD	Unknown:San Diego, CA	-	-		0.126	Nov 2012	-		0.126	0.000	0.126	
Technical Data	WR	SSC LANT:Charleston, SC	-	-		0.299	Nov 2012	-		0.299	0.000	0.299	
		Subtotal	-	0.059		0.843		-		0.843	0.000	0.902	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	COMOPTEVFOR:Norfolk, VA	-	0.138	Nov 2011	0.140	Nov 2012	-		0.140	0.000	0.278	
		Subtotal	-	0.138		0.140		-		0.140	0.000	0.278	

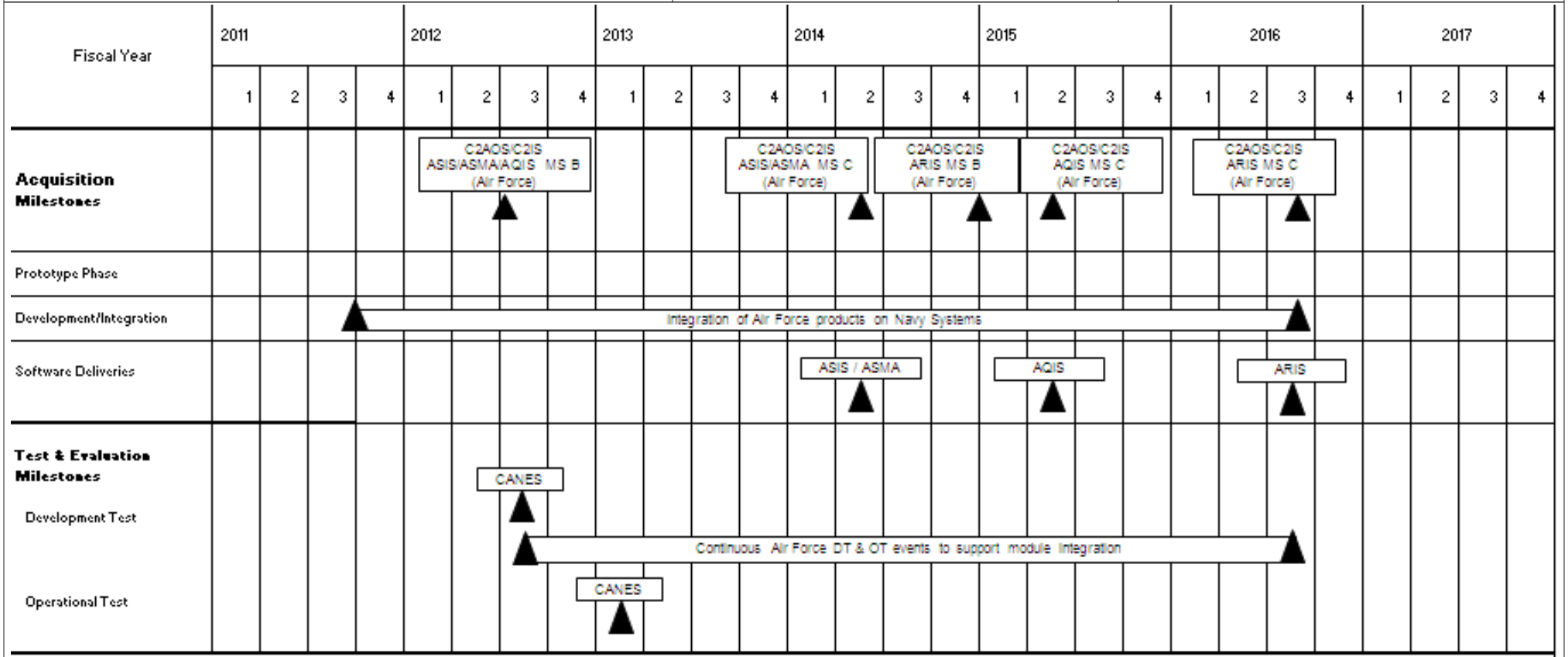
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	TBD	Unknown:San Diego, CA	-	0.247	Nov 2011	0.253	Nov 2012	-		0.253	0.000	0.500	
Program Management Support	TBD	Unknown:San Diego, CA	-	-		0.126	Nov 2012	-		0.126	0.000	0.126	
		Subtotal	-	0.247		0.379		-		0.379	0.000	0.626	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	2.283		4.983		-		4.983	0.000	7.266	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 3324: *Navy Air Operations Command and Control (NAOC2)*



Note: Navy schedule is for integration and fielding only. Command and Control Air and Space Operations Suite (C2AOS) modules include Air Resource Information Services (ARIS), Air Request Information Services (AQIS), Airspace Information Services (ASIS), and Air Mission Information Services (AMIS). Command, Control and Information Services (C2IS) modules include Airspace Management Application (ASMA) and Air Mission Management Application (AMMA). Both C2AOS and C2IS are Air Force ACAT III PORs. Theater Battle Management Core Systems (TBMCS) migration will support Consolidated Afloat Networks and Enterprise Services (CANES) testing events. Air Force milestones were taken from Air Force PB12 R-1 Line Item #142, PE 0207410F, Project 675218.

Exhibit R-4, Schedule Profile

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 3324: *Navy Air Operations Command and Control (NAOC2)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3324				
Air Force C2AOS/C2IS ASIS/ASMA/AQIS Milestone B	3	2012	3	2012
Air Force C2AOS/C2IS ASIS/ASMA Milestone C	2	2014	2	2014
Air Force C2AOS/C2IS ARIS Milestone B	4	2014	4	2014
Air Force C2AOS/C2IS AQIS Milestone C	2	2015	2	2015
Air Force C2AOS/C2IS ARIS Milestone C	3	2016	3	2016
Software Delivery (C2AOS/C2IS)	2	2014	3	2016
Developmental Test (TBMCS/CANES)	3	2012	3	2012
Operational Test (TBMCS/CANES)	1	2013	1	2013
Developmental/Operational Test (C2AOS/C2IS)	3	2012	3	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9123: *FORCEnet*	5.552	5.386	4.544	-	4.544	4.871	4.830	5.004	5.088	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Trident Warrior was transferred from Project 9123 into Project 3320 beginning in FY12.

A. Mission Description and Budget Item Justification

FORCEnet is the Navy and Marine Corps initiative to deliver Information Dominance and achieve Department of Navy (DoN)/Department of Defense (DoD) Transformation, Joint/Allied/Coalition Interoperability, implementing Maritime Domain Awareness (MDA), and Net-Centric Operations/Warfare (NCO/W). Chief of Naval Operations Information Dominance effort escalates prioritization and organizational responsibility resulting in increased scope of systems, platforms and mission areas. FORCEnet is the driver of Sea Power 21, Naval Power 21, the Naval Operating Concept for Joint Operations, and the DoN's Naval Transformation Roadmap.

The FORCEnet project line funds the following efforts:

(1) DoN Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Transformation/Strategic Planning within DoN/Joint/DoD Framework: Assesses existing and emerging capabilities, develops and evaluates Navy-wide policies, plans, requirements, and compliance; develops integration and investment strategies; and accelerates innovation, testing, assessment and fielding of material and non-material solutions for enhanced operational capability, Joint/Allied/Coalition interoperability and application/enforcement of enterprise requirements/architectures/standards toward greater NCO/W capability. Supports Navy implementation of MDA capability, Maritime Operations Centers (MOC), and enterprise network efforts.

(2) Systems Requirements Analysis/Systems Engineering (formerly Osprey Hawksbill): Supports requirements analysis and systems engineering of systems under development by DoN/DoD. Funding supports the technical and systems engineering expertise required for C4ISR systems technical requirements generation, requirements tracking, architecture development, and detailed analyses on various warfare systems under development to determine if the required Command, Control, Communications, and Computers (C4) infrastructure, resources, and other capabilities are aligned and synchronized. The funding also supports the systems engineering for the synthesis of current Network-Centric, C4ISR Programs of Record with existing/emerging capabilities.

(3)Information Dominance Roadmaps and Analysis: Funding supports Portfolio Health Assessments on Navy mission areas and identifies gaps in Information Dominance capabilities provided to the missions. Funds support development of Information Dominance Roadmaps by providing analytical and architectural support to each roadmap owner.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: FORCEnet	5.552	5.386	4.544	-	4.544

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Articles:	0	0	0		0

FY 2011 Accomplishments:

Department of the Navy (DoN) Command, Control, Communications, and Computers Surveillance, and Reconnaissance (C4ISR) Transformation/Strategic Planning within DoN/Joint/Department of Defense (DoD) Framework: Within the DoD, Joint Staff, and Combatant Commander management of Joint Capability Portfolios, assessed existing and emerging capabilities in selected operating environments, developed integration plans, executed system engineering reviews and investment strategies, accelerated innovation, technology insertion, and incorporation of material and non-material solutions for enhanced Joint operational capabilities in Net-Centric Operations/Warfare.

-Supported Navy implementation of Maritime Domain Awareness (MDA), Standing Joint Force Headquarters, Maritime Operations Centers (MOCs) and coalition/allied operations.

Accelerating Joint Warfighting Capability (Trident Warrior): Funds At-Sea experiment venue focused on improving C4ISR operational capabilities across all naval and Joint platforms across a range of Technology Readiness Levels (TRLs), representing both Next Step Science and Technology Innovations and higher TRL Program of Record-hosted technologies.

-Finalized analysis of Trident Warrior 10 experiment and delivered a Military Utility Assessment to Naval Network Warfare Command, Commander Fleet Forces Command and the Sea Trial Expeditionary Strike Group (ESG).

-Conducted and executed Trident Warrior 11 in Commander Second Fleet/Commander Sixth Fleet Area of Responsibility using Carrier Strike Group (CSG)/ESG units with continued coalition presence.

-Directed, coordinated, assisted and supervised technology provider compliance with specific goal identification, risk identification, and experiment planning to include data collection requirements. Directed and ensured required installation and security certification, accreditation, and approvals for all technologies. Conducted Risk Reduction Limited Objective Experiment in a lab environment to ensure systems will not have a negative impact on operational unit readiness and provided value-added data to support analysis and subsequent acquisition decisions.

-Engineered and installed experimental C4ISR systems, including a groom of existing onboard ship operational C4ISR systems to ensure that they were operating as designed and supported the acquisition of Net Ready Key Performance Parameters.

-Provided subject matter experts to maintain core ship services during the experiment period and troubleshoot system failures and interoperability issues. In addition, provided independent experts in experimentation best

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
practices to coordinate experiment and test plans; lead the Data Collection and Analysis Plan effort, and provided unbiased assessment to Fleet and Acquisition key decision makers. -Provided results to government sponsors to support the program's Planning, Programming, Budgeting, and Execution System and engineering decisions. Areas of investigation were in the following categories: Range of Operational Warfare Command and Control, operational level implementation of MDA, MOCs, Coalition, Global Information Grid and Network Centric Enterprise Services technologies and associated Tactics, Techniques, and Procedures and Concept of Operations. -Planned and executed Trident Warrior 11 operational events to accelerate transition of FORCEnet capability to the Fleet. Provided leave-behind capability for one deployment cycle of successful technologies for extended operational assessment. -Began planning for Trident Warrior 12: Solicited participation of government sponsored and industry sponsored technologies responsive to identified naval capability gaps. Selected technologies for participation in numbers supportable within resources, approximately 90 initiatives. Began developing FY12-13 FORCEnet Sea Trial Plan. Systems Requirements Analysis/Systems Engineering (formerly Osprey Hawksbill): Conducted requirements analysis and systems engineering of systems under development by Department of the Navy (DoN)/Department of Defense (DoD). -Provided technical and systems engineering expertise required for Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) systems technical requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. -Provided systems engineering for the synthesis of current net-centric C4ISR systems with existing and emerging C4ISR systems. ***FY 2012 Plans:*** DoN C4ISR Transformation/Strategic Planning within DoN/Joint/DoD Framework: Within the DoD, Joint Staff, and Combatant Commander management of Joint Capability Portfolios, continue to assess existing and emerging capabilities in selected operating environments, develop integration plans, execute system engineering reviews and investment strategies, accelerate innovation, technology insertion, and incorporation of material and non-material solutions for enhanced Joint operational capabilities in Net-Centric Operations/Warfare. -Continue to support Navy implementation of Maritime Domain Awareness, Standing Joint Force Headquarters, Maritime Operations Centers and coalition/allied operations.					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Systems Requirements Analysis/Systems Engineering (formerly Osprey Hawksbill): Continue to conduct requirements analysis and systems engineering of systems under development by DoN/DoD. -Continue to provide technical and systems engineering expertise required for C4ISR systems technical requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. -Continue to support systems engineering for the synthesis of current Net-Centric C4ISR systems with existing and emerging C4ISR systems. Larger number of systems, platforms and mission areas will increase the scope of effort. Information Dominance Roadmaps and Analysis: Research Navy mission areas to identify interdependencies between programs for budget tradeoffs and mission impacts of those tradeoffs. -Identify Navy mission area gaps in Information Dominance capabilities to prioritize Science and Technology efforts for future budget decisions. -Evaluate Navy mission areas for linkages to roadmap action items and provide analytical and architectural support in the development of Information Dominance Roadmaps. - Ensure Information Dominance roadmaps objectives provide stated capabilities to the warfighters.					
FY 2013 Base Plans: DoN Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) Transformation/Strategic Planning within Department of Navy(DoN)/Joint/Department of Defense(DoD) Framework: Within the DoD, Joint Staff, and Combatant Commander management of Joint Capability Portfolios, continue to assess existing and emerging capabilities in selected operating environments, develop integration plans, execute system engineering reviews and investment strategies, accelerate innovation, technology insertion, and incorporation of material and non-material solutions for enhanced Joint operational capabilities in Net-Centric Operations/Warfare. -Continue to support Navy implementation of Maritime Domain Awareness, Standing Joint Force Headquarters, Maritime Operations Centers and coalition/allied operations. Systems Requirements Analysis/Systems Engineering (formerly Osprey Hawksbill): Continue to conduct requirements analysis and systems engineering of systems under development by DoN/DoD.					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
-Continue to provide technical and systems engineering expertise required for C4ISR systems technical requirements generation and tracking, architecture development, systems analysis to evaluate alignment and synchronization of infrastructure, resources and other existing/developing systems. -Continue to support systems engineering for the synthesis of current Net-Centric C4ISR systems with existing and emerging C4ISR systems. Larger number of systems, platforms and mission areas will increase the scope of effort. Information Dominance Roadmaps and Analysis: Continue to research the Navy mission areas for interdependencies between programs for budget tradeoffs and mission impacts of those tradeoffs. -Continue to identify Navy mission area gaps in Information Dominance capabilities to prioritize Science and Technology efforts for future budget decisions. -Continue to evaluate Navy mission areas for linkages to roadmap action items and provide analytical and architectural support in the development of Information Dominance Roadmaps. -Continue to ensure Information Dominance Roadmaps objectives provide stated capabilities to the warfighters.					
Accomplishments/Planned Programs Subtotals	5.552	5.386	4.544	-	4.544

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

FORCEnet is a non-acquisition effort that informs and matures Navy decisions, which in turn impact acquisition programs.

E. Performance Metrics

FORCEnet Performance Metrics: Goal: CNO strategic planning and supporting acquisition of classified efforts. Metric: Echelon 1 response to emergent strategic needs and classified warfighting capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development DLB/RCD	Various	Various:Various	1.196	-		-		-		-	0.000	1.196	
Systems Engineering-DLB/RCD	Various	Various:Various	0.600	-		-		-		-	0.000	0.600	
Ship Integration	Various	Various:Various	0.935	-		-		-		-	0.000	0.935	
Systems Engineering	Various	Various:Various	1.600	-		-		-		-	0.000	1.600	
		Subtotal	4.331	-		-		-		-	0.000	4.331	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support DLB/RCD	Various	Various:Various	0.250	-		-		-		-	0.000	0.250	
Configuration Management DLB/RCD	Various	Various:Various	0.115	-		-		-		-	0.000	0.115	
Development Support DLB/RCD	Various	Various:Various	0.250	-		-		-		-	0.000	0.250	
Software Development DLB/RCD	Various	Various:Various	1.971	-		-		-		-	0.000	1.971	
Development Support	Various	Various:Various	2.700	-		-		-		-	0.000	2.700	
Software Support	Various	Various:Various	2.900	-		-		-		-	0.000	2.900	
Sys Req Analysis/Sys Eng	Various	Various:Various	15.094	-		-		-		-	0.000	15.094	
S/W Develop,Integ,Demo, Field - MDA Prototypes	Various	Various:Various	108.910	-		-		-		-	0.000	108.910	
Sys Req Analysis/Sys Eng	WR	SSC PAC:San Diego, CA	0.356	0.936	Jan 2012	0.544	Jan 2013	-		0.544	Continuing	Continuing	Continuing
Sys Req Analysis/Sys Eng	WR	SSC LANT:Charleston, SC	0.356	0.950	Jan 2012	0.656	Jan 2013	-		0.656	Continuing	Continuing	Continuing
DoN Transformation (Strategic Planning)	WR	NSWC Dahlgren:Dahlgren, MD	-	0.359	Jan 2012	0.274	Jan 2013	-		0.274	0.000	0.633	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Dominance Roadmaps and Analysis	C/CPFF	METRON:Reston, VA	-	0.541	Jan 2012	0.541	Jan 2013	-		0.541	Continuing	Continuing	Continuing
Information Dominance Roadmaps and Analysis	C/CPFF	SAIC:San Diego, CA	-	1.499	Jan 2012	1.499	Jan 2013	-		1.499	Continuing	Continuing	Continuing
Information Dominance Roadmaps and Analysis	WR	SSC LANT:Charleston, NC	-	0.460	Jan 2012	0.460	Jan 2013	-		0.460	Continuing	Continuing	Continuing
		Subtotal	132.902	4.745		3.974		-		3.974			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various:Various	1.300	-		-		-		-	0.000	1.300	
Accelerating Joint Warfighting Capability (TW)	Various	Various:Various	30.736	-		-		-		-	0.000	30.736	
Accelerating Joint Warfighting Capability (TW)	WR	Fleet Forces Command:San Diego, CA	0.095	-		-		-		-	0.000	0.095	
Accelerating Joint Warfighting Capability (TW)	WR	Naval Postgraduate School:Monterey, CA	0.978	-		-		-		-	0.000	0.978	
Accelerating Joint Warfighting Capability (TW)	WR	SSC Atlantic:Charleston, SC	0.445	-		-		-		-	0.000	0.445	
Accelerating Joint Warfighting Capability (TW)	WR	SSC Pacific:San Diego, CA	1.069	-		-		-		-	0.000	1.069	
Accelerating Joint Warfighting Capability (TW)	C/CPFF	AUSGAR Technologies Inc.:San Diego, CA	1.489	-		-		-		-	0.000	1.489	
Imp FORCEnet Req (Fn Comp)	Various	Various:Various	17.144	-		-		-		-	0.000	17.144	
Developmental Test & Evaluation DLB/RCD	Various	Various:Various	0.500	-		-		-		-	0.000	0.500	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DoN Transformation (Strategic Planning)	Various	Various:Various	20.521	-		-		-		-	0.000	20.521	
DoN Transformation (Strategic Planning)	WR	NUWC:Newport, RI	0.240	0.200	Jan 2012	0.200	Jan 2013	-		0.200	Continuing	Continuing	Continuing
DoN Transformation (Strategic Planning)	WR	NPGS:Monterey, CA	0.290	0.441	Jan 2012	0.370	Jan 2013	-		0.370	Continuing	Continuing	Continuing
DoN Transformation (Strategic Planning)	C/CPFF	NGIT:Herndon, VA	0.349	-		-		-		-	Continuing	Continuing	Continuing
DoN Transformation (Strategic Planning)	C/CPFF	Unknown:Unknown	-	-		-		-		-	0.000	0.000	
Need Item Text	C/BA	Not Specified:Not Specified	-	-		-		-		-	0.000	0.000	
		Subtotal	75.156	0.641		0.570		-		0.570			

Remarks

Accelerating Joint Warfighting Capability (Trident Warrior) (TW), was transferred from Project 9123 into new Project 3320 from FY12 forward.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support	Various	Various:Various	2.124	-		-		-		-	0.000	2.124	
Government Engineering Support	Various	Various:Various	3.899	-		-		-		-	0.000	3.899	
Program Management Support DLB/RCD	Various	Various:Various	0.250	-		-		-		-	0.000	0.250	
Travel DLB/RCD	Various	Various:Various	0.145	-		-		-		-	0.000	0.145	
Program Management Support	Various	Various:Various	0.800	-		-		-		-	0.000	0.800	
Travel	Various	Various:Various	0.299	-		-		-		-	0.000	0.299	
Acquisition Workforce	Various	Various:Various	0.165	-		-		-		-	0.000	0.165	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604231N: *Tactical Command System*	PROJECT 9123: *FORCEnet*

Management Services ($ in Millions)

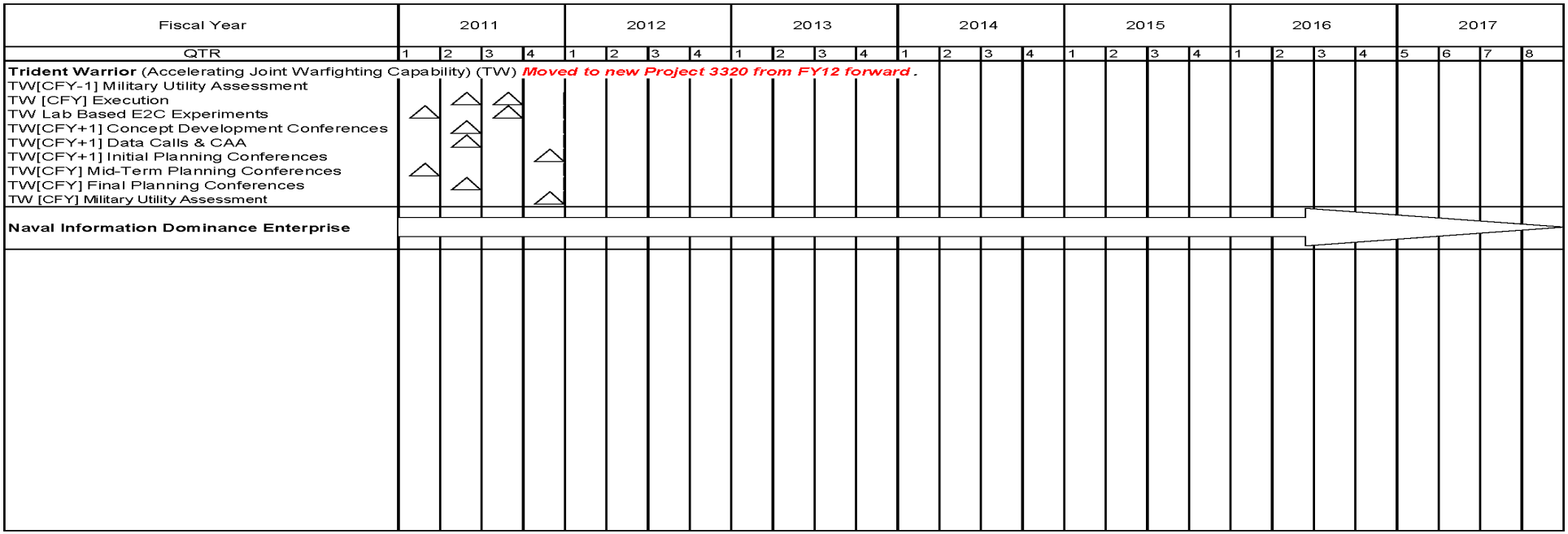
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	7.682	-		-		-		-	0.000	7.682	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	220.071	5.386		4.544		-		4.544			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 9123: *FORCEnet*

UNCLASSIFIED



R-1 Line Item No. 88
1 of 1

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604231N: *Tactical Command System*	**PROJECT** 9123: *FORCEnet*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 9123				
Trident Warrior (TW) Execution	2	2011	3	2011
TW Lab Based E2C Experiments	1	2011	3	2011
TW Concept Development Conferences	2	2011	2	2011
TW Data Calls & CAA	2	2011	2	2011
TW Initial Planning Conferences	4	2011	4	2011
TW Mid-Term Planning Conferences	1	2011	1	2011
TW Final Planning Conferences	2	2011	2	2011
TW Military Utility Assessment	4	2011	4	2011
Naval Information Dominance Enterprise	1	2011	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	168.157	130.994	119.065	-	119.065	124.988	129.542	112.882	119.483	28.700	933.811
3051: *E-2D Adv Hawkeye*	168.157	110.994	119.065	-	119.065	124.988	129.542	112.882	119.483	28.700	913.811
9999: *Congressional Adds*	-	20.000	-	-	-	-	-	-	-	0.000	20.000

A. Mission Description and Budget Item Justification

The E-2D Advanced Hawkeye (AHE) program develops, demonstrates, tests, and procures the replacement of the AN/APS-145 radar system and other aircraft system components including Cooperative Engagement Capability Pre-Planned Product Improvement and Dual Transmit Satellite Communications that modernize the E-2 weapon system to maintain open ocean mission capability while providing the United States Navy with an effective littoral surveillance, battle management, and Theater Air and Missile Defense (TAMD) capability. Key radar technologies are Space-Time Adaptive Processing, Electronically Scanning Array, solid state transmitter, high dynamic range digital receivers and Identification Friend or Foe (IFF)/radar aperture integration. The resultant detection system will provide a substantially improved overland performance by correcting current sensor shortfalls and enhancing all current required mission areas, while simultaneously contributing to the emerging TAMD mission requirements. Mode 5/S is an upgrade to the existing IFF System providing the warfighter positive, secure and reliable identification of friendly aircraft, surface and sub-surface platforms. Mode 5/S replaces the National Security Administration de-certified Mode 4 IFF capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability (IOC) as defined by the Joint Requirements Oversight Council.

The E-2D program is currently in developmental test through FY12 utilizing four System Development and Demonstration test aircraft based at NAS Patuxent River, Maryland and one Operational Test aircraft assigned to the E-2/C-2 Fleet Replacement Squadron (VAW-120) at Norfolk, Virginia. Milestone C approval received in June 2009 granting the program the authority to enter the Production and Deployment phase and procure Low Rate Initial Production (LRIP) Lots 1 and 2 (total of five aircraft), which are on contract to deliver thru FY13. The E-2D program proceeded to a Defense Acquisition Board with USD(AT&L) in March 2011, at which time the program received authorization to let contracts for LRIP Lots 3 and 4 as well as Advance Acquisition Contract for Full Rate Production (FRP) Lot 1. Initial Operational Test and Evaluation (IOT&E) is planned in FY12, and the Full Rate Production Decision Review is planned in 1QFY13 with subsequent FRP 1 contract award. IOC is planned for 1QFY15.

An In-Flight Refueling (IFR) capability will allow the E-2D AHE to receive fuel from various organic and non-organic tanker aircraft. It provides Expanded Battle Space Surveillance and Targeting through significantly enhanced persistence and increased flexibility (range & endurance). IFR will better enable the E-2D AHE to fully support current Carrier Strike Group /Joint 24/7 Theater Operations by providing more versatile stationing and/or forward basing options. Previous domestic E-2 concept demonstration effort successfully established the feasibility of tanking behind the F/A-18E/F and KC-130 aircraft under E-2 Squadrons, PE 0204152N.

Link-16 Crypto Modernization and frequency remap are required to satisfy the National Security Agency and Federal Aviation Administration mandates. E-2D AHE uses Link-16 to exchange and provide tactical information with other tactical units. The Link-16 Crypto Modernization and frequency remap effort requires the integration of a modified Multifunctional Information Distribution System - Low Volume Terminal (1) terminal and software modification to the E-2D AHE mission computer operational flight program.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604234N: *Advanced Hawkeye*

The Ultra High Frequency (UHF) Guard Radio allows the aircrew to monitor the emergency UHF Guard frequency without having to dedicate a specific radio, freeing that radio up for use in the tactical mission. Because of the UHF Tunable Filter Amplifiers, the ARC-210 radios cannot provide continuous UHF guard monitoring, although the internal guard receiver is operational. A separate Ultra High Frequency (UHF) guard receiver is provided for monitoring the UHF guard (243 MHz) frequency. It is powered by the Guard switch located on the Communication/Control Display Unit Power Panel.

FY2013 starts a Counter Electronic Attack (CEA) capability which will allow the E-2D radar system to maintain performance in an advanced hostile intentional electromagnetic interference environment. The E-2D CEA program will ensure E-2D effectiveness is maintained in an Electronic Attack environment supporting the Naval Integrated Fire Control - Counter Air (NIFC-CA) capability and overall Navy and Joint Integrated Air and Missile Defense strategy.

FY2014 starts an E-2D Secret Internet Protocol Router (SIPR) chat program. The SIPR-chat capability will support integration of current collaboration tools including tactical "chat" (text) communications, real-time tasking, and Air Tasking Order distribution. Recent real world operations have demonstrated a migration of Command and Control communications from voice to Internet protocol based networks.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	171.132	110.994	78.551	-	78.551
Current President's Budget	168.157	130.994	119.065	-	119.065
Total Adjustments	-2.975	20.000	40.514	-	40.514
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	2.500	-			
• SBIR/STTR Transfer	-4.556	-			
• Program Adjustments	-	-	40.376	-	40.376
• Rate/Misc Adjustments	-	-	0.138	-	0.138
• Congressional General Reductions Adjustments	-0.919	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Adv Radar Innovation Fund - Air (Cong)*	-	20.000
Congressional Add Subtotals for Project: 9999	-	20.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604234N: *Advanced Hawkeye*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Congressional Add Totals for all Projects	-	20.000

Change Summary Explanation

Technical: Added FY2013 New Start implemented as a result of Alt POM Budget Issue 66724 E-2D Counter Electronic Attack.

Schedule: Updated Follow On Test & Evaluation, delivery schedule and number of E-2D Advanced Hawkeye aircraft deliveries. Also, updated In-Flight Refueling schedule to reflect updated Engineering & Manufacturing Development, Reviews and Test & Evaluation. Added E-2D Counter Electronic Attack Schedule. Updated the Operational Test Readiness Review (OTRR) and Operational Evaluation (OE).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3051: *E-2D Adv Hawkeye*	168.157	110.994	119.065	-	119.065	124.988	129.542	112.882	119.483	28.700	913.811
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The E-2D Advanced Hawkeye (AHE) program develops, demonstrates, tests, and procures the replacement of the AN/APS-145 radar system and other aircraft system components including Cooperative Engagement Capability Pre-Planned Product Improvement and Dual Transmit Satellite Communications that modernize the E-2 weapon system to maintain open ocean mission capability while providing the United States Navy with an effective littoral surveillance, battle management, and Theater Air and Missile Defense (TAMD) capability. Key radar technologies are Space-Time Adaptive Processing, Electronically Scanning Array, solid state transmitter, high dynamic range digital receivers and Identification Friend or Foe (IFF)/radar aperture integration. The resultant detection system will provide a substantially improved overland performance by correcting current sensor shortfalls and enhancing all current required mission areas, while simultaneously contributing to the emerging TAMD mission requirements. Mode 5/S is an upgrade to the existing IFF System providing the warfighter positive, secure and reliable identification of friendly aircraft, surface and sub-surface platforms. Mode 5/S replaces the National Security Administration de-certified Mode 4 IFF capability, which is no longer effective or suitable for modern military operations. Mode 5/S will support the Joint Initial Operational Capability (IOC) as defined by the Joint Requirements Oversight Council.

The E-2D program is currently in developmental test through FY12 utilizing four System Development and Demonstration test aircraft based at NAS Patuxent River, Maryland and one Operational Test aircraft assigned to the E-2/C-2 Fleet Replacement Squadron (VAW-120) at Norfolk, Virginia. Milestone C approval received in June 2009 granting the program the authority to enter the Production and Deployment phase and procure Low Rate Initial Production (LRIP) Lots 1 and 2 (total of five aircraft), which are on contract to deliver thru FY13. The E-2D program proceeded to a Defense Acquisition Board with USD(AT&L) in March 2011, at which time the program received authorization to let contracts for LRIP Lots 3 and 4 as well as Advance Acquisition Contract for Full Rate Production (FRP) Lot 1. Initial Operational Test and Evaluation (IOT&E) is planned in FY12, and the Full Rate Production Decision Review is planned in 1QFY13 with subsequent FRP 1 contract award. IOC is planned for 1QFY15.

An In-Flight Refueling (IFR) capability will allow the E-2D AHE to receive fuel from various organic and non-organic tanker aircraft. It provides Expanded Battle Space Surveillance and Targeting through significantly enhanced persistence and increased flexibility (range & endurance). IFR will better enable the E-2D AHE to fully support current Carrier Strike Group /Joint 24/7 Theater Operations by providing more versatile stationing and/or forward basing options. Previous domestic E-2 concept demonstration effort successfully established the feasibility of tanking behind the F/A-18E/F and KC-130 aircraft under E-2 Squadrons, PE 0204152N.

Link-16 Crypto Modernization and frequency remap are required to satisfy the National Security Agency and Federal Aviation Administration mandates. E-2D AHE uses Link-16 to exchange and provide tactical information with other tactical units. The Link-16 Crypto Modernization and frequency remap effort requires the integration of a modified Multifunctional Information Distribution System - Low Volume Terminal (1) terminal and software modification to the E-2D AHE mission computer operational flight program.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

The Ultra High Frequency (UHF) Guard Radio allows the aircrew to monitor the emergency UHF Guard frequency without having to dedicate a specific radio, freeing that radio up for use in the tactical mission. Because of the UHF Tunable Filter Amplifiers, the ARC-210 radios can not provide continuous UHF guard monitoring, although the internal guard receiver is operational. A separate Ultra High Frequency (UHF) guard receiver is provided for monitoring the UHF guard (243 MHz) frequency. It is powered by the Guard switch located on the Communication/Control Display Unit Power Panel.

FY2013 starts a Counter Electronic Attack (CEA) capability which will allow the E-2D radar system to maintain performance in an advanced hostile intentional electromagnetic interference environment. The E-2D CEA program will ensure E-2D effectiveness is maintained in an Electronic Attack environment supporting the Naval Integrated Fire Control - Counter Air (NIFC-CA) capability and overall Navy and Joint Integrated Air and Missile Defense strategy.

FY2014 starts an E-2D Secret Internet Protocol Router (SIPR) chat program. The SIPR-chat capability will support integration of current collaboration tools including tactical "chat" (text) communications, real-time tasking, and Air Tasking Order distribution. Recent real world operations have demonstrated a migration of Command and Control communications from voice to Internet protocol based networks.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: System Development and Demonstration	73.540	7.636	4.345
Articles:	0	0	0
Description: System Development and Demonstration (SDD) contract with Northrop Grumman Corporation for SDD and Pilot Production efforts for the E-2D Advanced Hawkeye (AHE) Program.			
FY 2011 Accomplishments: Conducted System Functional Qualification Testing, Operational Evaluation (OPEVAL) readiness testing and Production Validation, Weapon System functional and physical configuration audits of Pilot Production aircraft.			
FY 2012 Plans: Conduct OPEVAL.			
FY 2013 Plans: Funding provides continued support of Post OPEVAL SDD efforts for the E-2D AHE Program.			
Title: Naval Air Warfare Center Aircraft Division Engineering and Test Support	41.605	61.281	27.846
Articles:	0	0	0
Description: Fund Government Engineering, Contractor Engineering, and Classified Engineering Support. Perform Government oversight. Execute test program risk reduction efforts.			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Funded the continuation of developmental testing including radar performance testing, remaining full system integration testing, and Naval Integrated Fire Control - Couter Air (NIFC-CA) AHE efforts. Continue Weapon System Specification Verification for resolution of deficiencies prior to Operational Evaluation. ***FY 2012 Plans:*** Funding is for OPEVAL, NIFC-CA AHE, In-Flight Refueling and Follow-On Test & Evaluation efforts. ***FY 2013 Plans:*** Funding provides continued support of Follow-On Test & Evaluation, In-Flight Refueling and Naval Integrated Fire Control - Counter Air efforts.			
Title: NC-130H/E-2D Classified Programs ***Articles:*** ***Description:*** Provides support for the E-2D Advanced Hawkeye (AHE) Classified Development efforts. ***FY 2011 Accomplishments:*** Funded the continuation of E-2D AHE Classified Development efforts. ***FY 2012 Plans:*** Funding is for the continuation of E-2D AHE Classified Development efforts. ***FY 2013 Plans:*** Funding is for the continuation of E-2D AHE Classified Development efforts.	11.341 0	0.802 0	5.700 0
Title: Trainers ***Articles:*** ***Description:*** Funds the design, development and delivery of the trainers in support of the E-2D AHE program. ***FY 2011 Accomplishments:*** Funded the development of the Weapon System Trainer (WST) and the Simulated Maintenance Trainer, also funded the delivery of the Operational Flight Trainer (OFT). ***FY 2012 Plans:*** Funding is for the development of the WST and the Simulated Maintenance Trainer, also funds the delivery of the OFT. ***FY 2013 Plans:***	29.993 0	14.152 0	6.030 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Funding is for Cooperative Engagement Capability Training Device Capability to train Theater Air Missile Defense and Dual E-2D Operations Tactical Training efforts.			
Title: Mode 5/S	11.678	20.077	31.112
Articles:	0	0	0
Description: Mode 5/S is the replacement/upgrade to the existing Identification Friend or Foe system. ***FY 2011 Accomplishments:*** Funded system development, integration and testing to support the incorporation of Identification Friend or Foe (IFF) Mode 5/S technology into the E-2D Advanced Hawkeye (AHE) IFF Interrogator mission equipment. Integration testing included laboratory and ground tests. ***FY 2012 Plans:*** Funding is for system development, integration and testing to support the incorporation of IFF Mode 5/S technology into the E-2D AHE IFF Interrogator mission equipment. Integration testing will include laboratory, ground tests. ***FY 2013 Plans:*** Funding is for continued system development, integration and testing to support the incorporation of IFF Mode 5/S technology into the E-2D AHE IFF Interrogator mission equipment. Integration testing will include laboratory, ground and flight tests.			
Title: Guard Radio	-	1.898	3.598
Articles:		0	0
Description: The Ultra High Frequency (UHF) Guard Radio allows the aircrew to monitor the emergency UHF Guard frequency without having to dedicate a specific radio, freeing that radio up for use in the tactical mission. Due to the UHF Tunable Filter Amplifiers, the ARC-210 radios can not provide continuous UHF guard monitoring, although the internal guard receiver is operational. A separate UHF guard receiver is provided for monitoring the UHF guard (243 MHz) frequency. It is powered by the Guard switch located on the Communication/Control Display Unit Power Panel. ***FY 2012 Plans:*** Funding is for engineering efforts and system integration. ***FY 2013 Plans:*** Funds provided for continued engineering and systems integration suppport.			
Title: In-Flight Refueling	-	5.148	33.034
Articles:		0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Funds the system development and testing to support the incorporation of In-Flight Refueling capability into the E-2D AHE aircraft. Emphasis during system development is on system redesign, air vehicle design, human systems integration and design, including interior/lighting modifications and seat replacement. Flight testing is required to evaluate field of view, thermal and aerodynamic loads, kinematic performance, and handling qualities. ***FY 2012 Plans:*** Funding is for the system development and risk reduction efforts. ***FY 2013 Plans:*** Funding provided for Engineering & Manufacturing Development (E&MD) of In-Flight Refueling.			
Title: E-2D Counter Electronic Attack ***Articles:*** ***Description:*** Funds the mission system development and testing of the capability to counter Direct Radar Frequency Measurement (DRFM) radar threats. The E&MD effort will focus on integration of capability in the radar and mission computer and display systems, system integration, and laboratory and flight test validation. ***FY 2013 Plans:*** Funds provided for initiation of E&MD for E-2D Counter Electronic Attack capability.	-	-	7.400 0
Accomplishments/Planned Programs Subtotals	168.157	110.994	119.065

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0195 : *E-2D AHE*	1,104.995	1,044.834	984.677	0.000	984.677	1,151.265	1,396.652	1,346.115	1,519.352	5,834.916	19,326.794
• APN/0605: *Initial Spares - E-2*	42.977	30.012	55.383	0.000	55.383	25.298	21.934	26.473	28.745	118.422	594.116
• APN/0544: *E-2 Series (Includes OSIPs 008-14 Dual Transmit SATCOM, 009-14 Mode 5/S, and 011-14 E-2D Avionics)*	0.000	0.000	0.000	0.000	0.000	8.955	12.401	13.199	15.172	50.092	99.819

D. Acquisition Strategy

Acquisition Strategy was signed by Milestone Decision Authority, Under Secretary of Defense for Acquisition, Technology and Logistics on 29 Dec 2008. Milestone C approval to proceed into Production and Deployment was given 11 June 2009 by the Defense Acquisition Board (DAB).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

E. Performance Metrics

Successfully received a DAB decision for approval to procure Low Rate Inital Production Lots III and IV as well as Advance Acquisition Contract for the procurement of long lead items to support Full Rate Production Lot I. Conduct an Operational Test Readiness Review for entrance into Operational Evaluation.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPAF	Northrop Grumman Corporation (NGC):Bethpage, NY	2,873.687	16.306	Feb 2012	29.380	Feb 2013	-		29.380	217.189	3,136.562	3,136.561
Primary Hardware - In-Flight Refueling	TBD	NGC:Bethpage, NY	-	5.148	May 2012	8.148	May 2013	-		8.148	38.456	51.752	51.752
Training Development	C/CPIF	Rockwell Collins:Cedar Rapids, IA	105.067	13.183	May 2012	4.460	May 2013	-		4.460	0.000	122.710	122.710
Training Development	C/CPIF	Lockheed Martin:Liverpool, NY	6.734	0.238	May 2012	0.930	May 2013	-		0.930	0.000	7.902	7.902
Training Development	Reqn	JHU:Laurel, MD	-	-		0.450	May 2013	-		0.450	0.000	0.450	
Systems Engineering	PO	Navy Syst Mgt Activity:Arlington, VA	162.273	0.800	Mar 2012	0.500	Mar 2013	-		0.500	0.000	163.573	
GFE	Various	Various:Various	31.509	-		-		-		-	1.199	32.708	
Award Fees	SS/CPAF	NGC:Bethpage, NY	142.874	-		-		-		-	0.000	142.874	142.874
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	168.042	-		-		-		-	0.000	168.042	
		Subtotal	3,490.186	35.675		43.868		-		43.868	256.844	3,826.573	

Remarks

Totals may not add due to rounding.
Award Fee:
Period 1 FY04 - 90%
Period 2 FY04 - 91%
Period 3 FY05 - 80%
Period 4 FY06 - 94%
Period 5 FY06 - 100%
Period 6 FY07 - 95%
Period 7 FY08 - 94%
Period 8 FY09 - 93%
Period 9 FY09 - 95%
Period 10 FY10 - 100%
Period 11 FY11 - 95%

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Various:Various	9.400	-		-		-		-	1.228	10.628	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	SS/CPIF	NGC:Bethpage, NY	24.223	14.171	Apr 2012	15.726	Apr 2013	-		15.726	47.807	101.927	101.927
Integrated Logistics Support	Various	Various:Various	7.825	1.104	Nov 2011	2.291	Nov 2012	-		2.291	4.301	15.521	
Integrated Logistics Support	TBD	NGC:Bethpage, NY	-	0.030	Mar 2012	0.720	Mar 2013	-		0.720	5.746	6.496	6.496
Government Engineering Sup	WR	Naval Air Warfare Center Aircraft Division (NAWCAD:Pax River, MD	82.202	3.613	Nov 2011	8.139	Nov 2012	-		8.139	40.503	134.457	
Government Engineering Sup	WR	Naval Air Warfare Center Training Systems Division:Orlando, FL	9.404	0.731	Nov 2011	0.190	Nov 2012	-		0.190	0.000	10.325	
Government Engineering Sup	Various	Various:Various	11.262	0.503	Nov 2011	1.825	Nov 2012	-		1.825	15.361	28.951	
Contractor Engineering Supt ETS	C/CPFF	Wyle Labs:Huntsville, AL	21.353	2.442	Dec 2011	0.667	Dec 2012	-		0.667	1.740	26.202	26.202
Contractor Engineering Supt ETS	C/CPFF	Deloitte:Lexington Park, MD	3.356	0.427	Dec 2011	-		-		-	0.000	3.783	3.783
Technical Data	Various	Various:Various	0.133	0.200	Mar 2012	0.823	Mar 2013	-		0.823	6.394	7.550	
Configuration Management	TBD	Various:Various	-	0.125	Dec 2011	0.227	Dec 2012	-		0.227	3.426	3.778	
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	29.908	-		-		-		-	0.000	29.908	
Software Development	Various	NSMA:Arlington, VA	-	-		7.019	Nov 2012	-		7.019	61.807	68.826	
		Subtotal	199.066	23.346		37.627		-		37.627	188.313	448.352	

Remarks

Totals may not add due to rounding.
Development Support, Integrated Logistics Support, Government Engineering Support, Contractor Engineering Support, Technical Data and Configuration Management - various contractors and award dates throughout the fiscal year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (T&E)	WR	NAWCAD:Pax River, MD	68.918	9.097	Nov 2011	19.980	Nov 2012	-		19.980	36.733	134.728	
Developmental T & E	Various	Various:Various	25.965	1.411	Dec 2011	6.298	Dec 2012	-		6.298	0.000	33.674	
Developmental T & E 1	TBD	Various:Various	-	7.658	Mar 2012	6.320	Mar 2013	-		6.320	22.119	36.097	
Developmental T&E ETS	C/CPFF	Wyle Labs:Huntsville, AL	9.373	2.972	Dec 2011	2.040	Dec 2012	-		2.040	0.000	14.385	14.385
Developmental T&E ETS	Various	Various:Various	4.476	2.097	Dec 2011	-		-		-	0.000	6.573	
Developmental T&E ETS	C/FFP	L-3 Communications:Newport News, VA	7.023	1.809	Dec 2011	1.125	Dec 2012	-		1.125	1.100	11.057	11.057
Operational T & E	WR	NAWCAD:Pax River, MD	0.146	23.862	Nov 2011	0.865	Nov 2012	-		0.865	3.855	28.728	
Operational T & E	Various	Various:Various	4.273	0.759	Dec 2011	-		-		-	0.000	5.032	
Test Assets	SS/CPAF	NGC:Bethpage, NY	3.900	0.199	Mar 2012	0.151	Mar 2013	-		0.151	0.268	4.518	4.518
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	9.155	-		-		-		-	0.000	9.155	
Developmental T & E	C/CPFF	Airborne Tactical Advantage Co, LLC:Pax River, MD	-	-		-		-		-	2.473	2.473	2.472
		Subtotal	133.229	49.864		36.779		-		36.779	66.548	286.420	

Remarks

Totals may not add due to rounding.
Developmental Test & Evaluation (T&E), Developmental T&E, Engineering & Techncial Services and Operational T&E - various contractors and award dates throughout the fiscal year.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support Management &	Various	Various:Various	2.691	0.903	Dec 2011	0.192	Dec 2012	-		0.192	0.940	4.726	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Professional Support Services (MSS)													
Contractor Engineering Support MSS	C/CPFF	Wyle Labs:Huntsville, AL	10.938	0.345	Dec 2011	-		-		-	0.000	11.283	11.283
Government Engineering Support	WR	NAWCAD:Pax River, MD	10.562	0.610	Nov 2011	0.402	Nov 2012	-		0.402	2.669	14.243	
Program Management Support	Various	Various:Various	1.920	0.095	Nov 2011	0.075	Nov 2012	-		0.075	0.000	2.090	
Travel	Various	Various:Various	2.144	0.156	Oct 2011	0.122	Oct 2012	-		0.122	1.344	3.766	
Prior Year Costs No Longer Funded in FYDP	Various	Various:Various	40.632	-		-		-		-	0.000	40.632	
		Subtotal	68.887	2.109		0.791		-		0.791	4.953	76.740	

Remarks

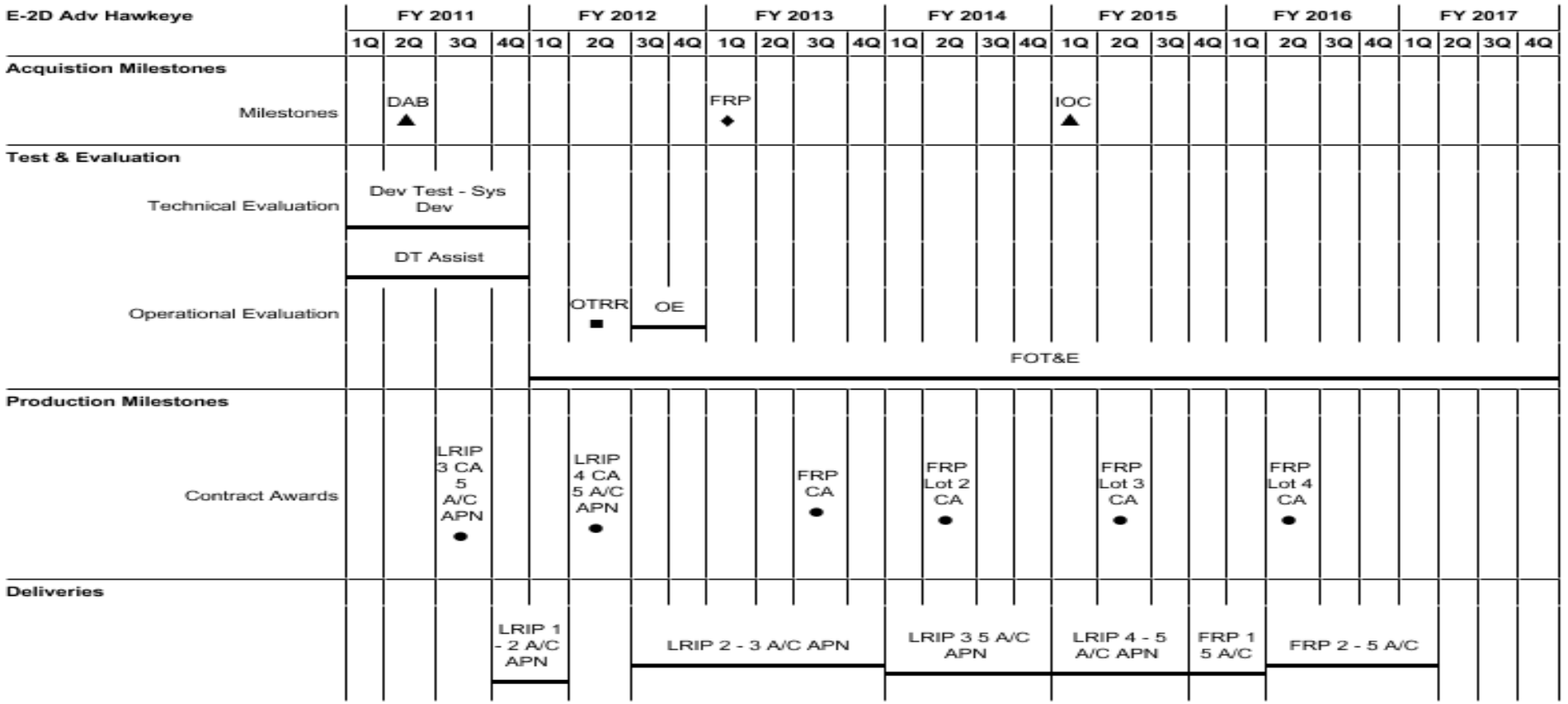
Totals may not add due to rounding.
Contractor Engineering Support, Government Enginnering Support, Program Support and Travel - various contractors and/or award dates throughout the fiscal year.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3,891.368	110.994		119.065		-		119.065	516.658	4,638.085	

Remarks

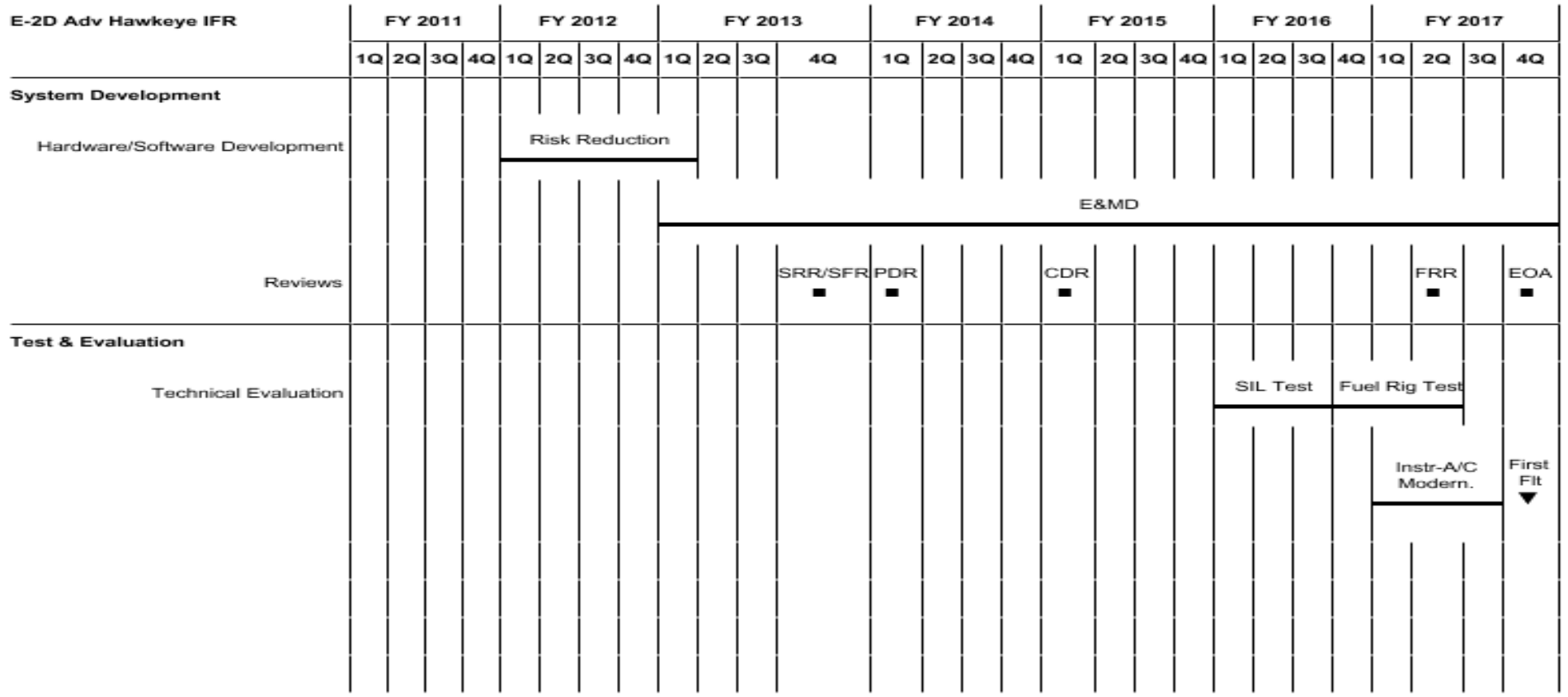
Totals may not add due to rounding.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*



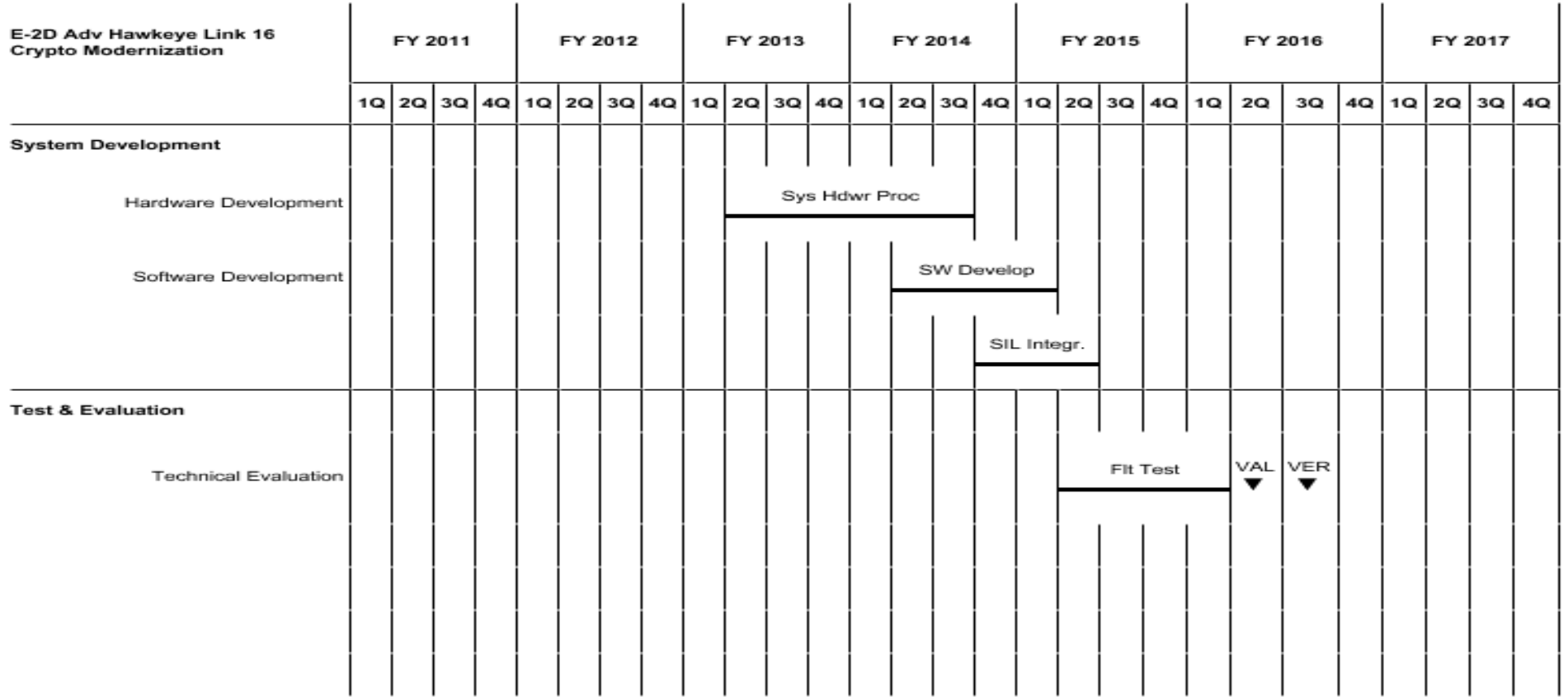
2013PB - 0604234N - 3051

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*



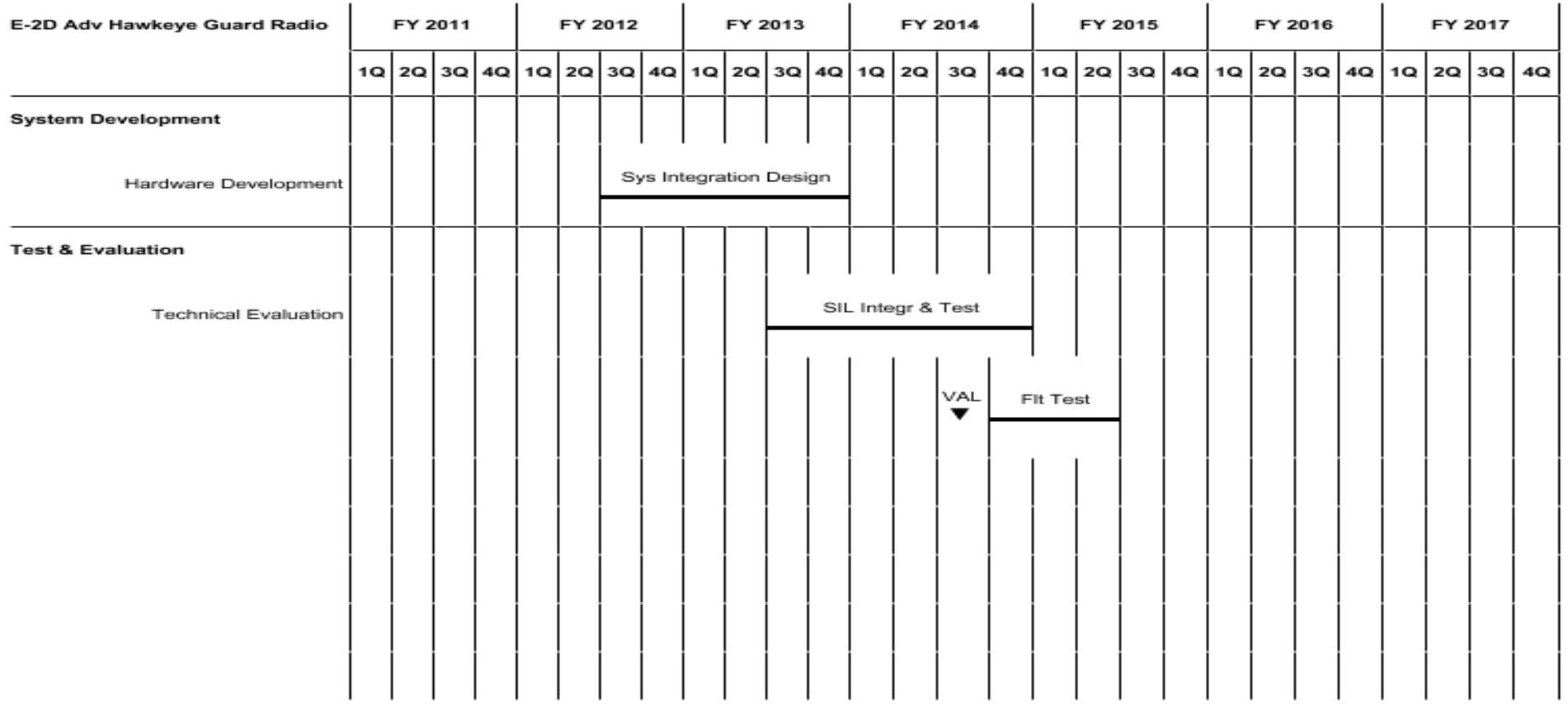
2013PB - 0604234N - 3051

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*



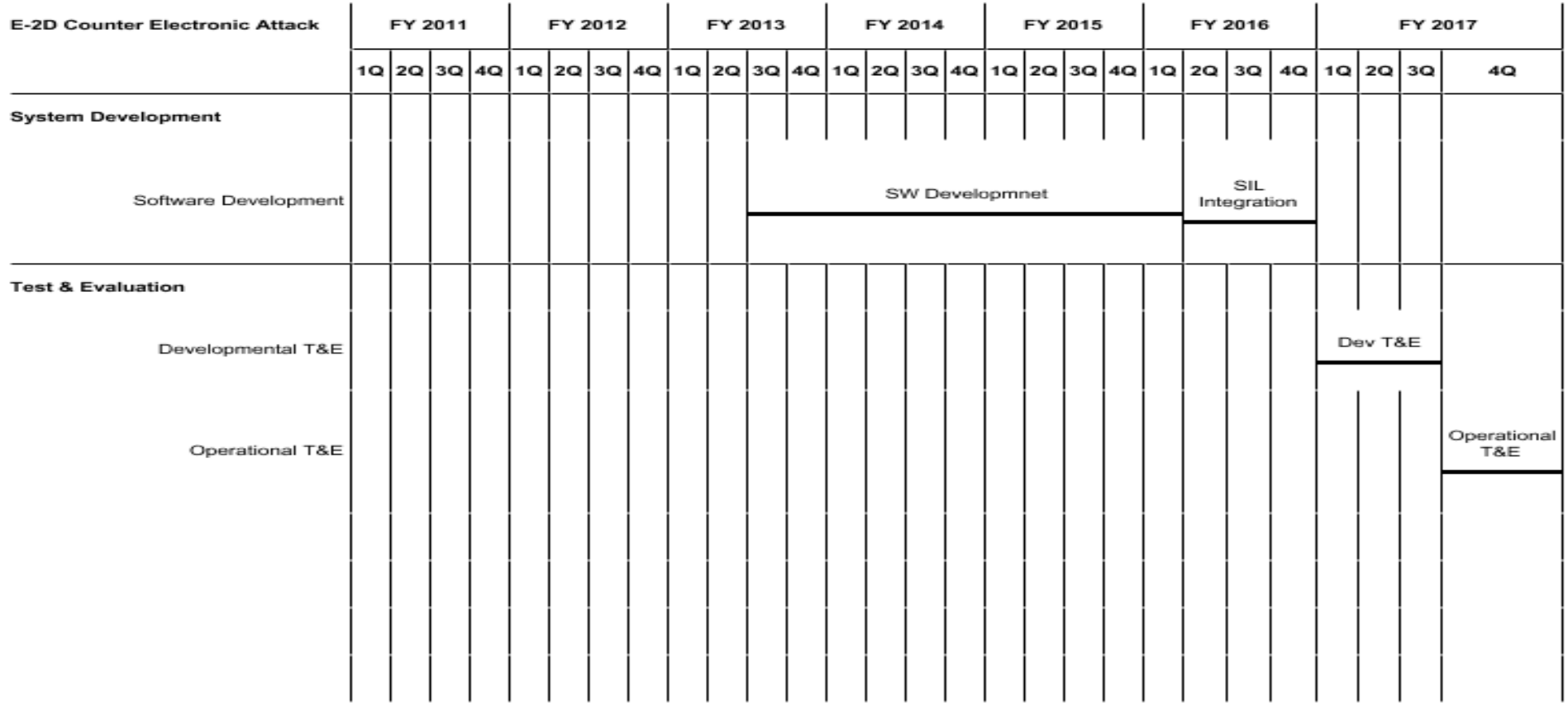
2013PB - 0604234N - 3051

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*



2013PB - 0604234N - 3051

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*



2013PB - 0604234N - 3051

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
E-2D Adv Hawkeye				
Acquistion Milestones: Milestones: Acquistion Milestones - Defense Acquisition Board	2	2011	2	2011
Acquistion Milestones: Milestones: Acquistion Milestones - Full Rate Production (FRP)	1	2013	1	2013
Acquistion Milestones: Milestones: Acquistion Milestones - Initial Operational Capabilities	1	2015	1	2015
Test & Evaluation: Technical Evaluation: Test & Evaluation Milestones - Development Test - System Development & Demonstration #1 & 2	1	2011	4	2011
Test & Evaluation: Technical Evaluation: Test & Evaluation Milestones - Developmental Test (DT)/DT Assist - Pilot Production	1	2011	4	2011
Test & Evaluation: Operational Evaluation: Test & Evaluation Milestones - Operational Test - Readiness Review	2	2012	2	2012
Test & Evaluation: Operational Evaluation: Test & Evaluation Milestones - Operational Evaluation	3	2012	4	2012
Test & Evaluation: Operational Evaluation: Follow On Test & Evaluation	1	2012	4	2017
Production Milestones: Contract Awards: Production Milestones - LRIP III CA (5 A/C APN)	3	2011	3	2011
Production Milestones: Contract Awards: Production Milestones - LRIP IV CA (5 A/C APN)	2	2012	2	2012
Production Milestones: Contract Awards: Production Milestones - FRP Lot I CA	3	2013	3	2013
Production Milestones: Contract Awards: Production Milestones - FRP Lot II CA	2	2014	2	2014
Production Milestones: Contract Awards: Production Milestones - FRP Lot III CA	2	2015	2	2015
Production Milestones: Contract Awards: Production Milestones - FRP Lot IV CA	2	2016	2	2016
Deliveries: Production Deliveries - LRIP I (2 A/C APN)	4	2011	1	2012
Deliveries: Production Deliveries - LRIP II (3 A/C APN)	3	2012	4	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Production Deliveries - LRIP III (5 A/C APN)	1	2014	4	2014
Deliveries: Production Deliveries - LRIP IV (5 A/C APN)	1	2015	3	2015
Deliveries: Production Deliveries - FRP I (5 A/C)	4	2015	1	2016
Deliveries: Production Deliveries - FRP II (5 A/C)	2	2016	1	2017
E-2D Adv Hawkeye IFR				
System Development: Hardware/Software Development: In-Flight Refueling - Valve Trade Study - Risk Reduction	1	2012	1	2013
System Development: Hardware/Software Development: In-Flight Refueling - Engineering & Manufacturing Development	1	2013	4	2017
System Development: Reviews: In-Flight Refueling - System Requirements Review2/ System Functional Review	4	2013	4	2013
System Development: Reviews: In-Flight Refueling - Preliminary Design Review	1	2014	1	2014
System Development: Reviews: In-Flight Refueling - Critical Design Review	1	2015	1	2015
System Development: Reviews: In-Flight Refueling - Functional Readiness Review	2	2017	2	2017
System Development: Reviews: In-Flight Refueling - Early Operational Assessment	4	2017	4	2017
Test & Evaluation: Technical Evaluation: In-Flight Refueling - SIL Test	1	2016	3	2016
Test & Evaluation: Technical Evaluation: In-Flight Refueling - Fuel Rig Test	4	2016	2	2017
Test & Evaluation: Technical Evaluation: In-Flight Refueling - Instrumentation/Aircraft Mod	1	2017	3	2017
Test & Evaluation: Technical Evaluation: In-Flight Refueling - First Flight	4	2017	4	2017
E-2D Adv Hawkeye Link 16 Crypto Modernization				
System Development: Hardware Development: Link-16 Crypto Modernization - Multifunctional Information Distribution System Hardware Procurement	2	2013	3	2014
System Development: Software Development: Link-16 Crypto Modernization - Software Development	2	2014	1	2015
System Development: Software Development: Link-16 Crypto Modernization - System Integration Laboratory (SIL) Integration	4	2014	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 3051: *E-2D Adv Hawkeye*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: Technical Evaluation: Link-16 Crypto Modernization - Flight Test	2	2015	1	2016
Test & Evaluation: Technical Evaluation: Link-16 Crypto Modernization - Validation (VAL)	2	2016	2	2016
Test & Evaluation: Technical Evaluation: Link-16 Crypto Modernization - Verification (VER)	3	2016	3	2016
E-2D Adv Hawkeye Guard Radio				
System Development: Hardware Development: Guard Radio - System Integration Design	3	2012	4	2013
Test & Evaluation: Technical Evaluation: Guard Radio - SIL Integration & Test	3	2013	4	2014
Test & Evaluation: Technical Evaluation: Guard Radio - VAL	3	2014	3	2014
Test & Evaluation: Technical Evaluation: Guard Radio - Flight Test	4	2014	2	2015
E-2D Counter Electronic Attack				
System Development: Software Development: Counter Electronic Attack - SW Development	3	2013	1	2016
System Development: Software Development: Counter Electronic Attack - SIL Integration	2	2016	4	2016
Test & Evaluation: Developmental T&E: Counter Electronic Attack - DT&E Tech Evaluation	1	2017	3	2017
Test & Evaluation: Operational T&E: Counter Electronic Attack - OT&E	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604234N: *Advanced Hawkeye*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	20.000	-	-	-	-	-	-	-	0.000	20.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Adv Radar Innovation Fund - Air (Cong)	-	20.000
FY 2012 Plans: N/A		
Congressional Adds Subtotals	-	20.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not required for Congressional Adds

E. Performance Metrics

Not required for Congressional Adds

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	58.638	67.569	31.105	-	31.105	47.226	46.850	47.560	48.397	Continuing	Continuing
2279: *4BW/4BN Upgrade*	58.638	67.569	31.105	-	31.105	47.226	46.850	47.560	48.397	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of the AH-1W attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance, survivability enhancements, and fire support coordination capabilities under day/night and adverse weather conditions. The mission of the UH-1N utility helicopter is to provide command and control and combat assault support under day/night and adverse weather conditions and special operations support; supporting arms coordination and aeromedical evacuation. Major modifications for both aircraft include 37 AH-1Ws converted to AH-1Zs, build 152 new AH-1Zs, remanufacture ten (10) H-1N helicopters and build 150 new UH-1Y models. Upgrades include: a new 4-bladed, composite rotor system with semi-automatic bladefold, new performance matched transmissions, T700 Engine Digital Electronic Control Units, new 4-bladed tail rotors and drive systems, more effective stabilizers, upgraded landing gear, tail pylon structural modifications, and common, fully integrated cockpits and avionics systems. These upgrades will add 10,000 flight hours to AH-1Z/UH-1Y airframes. The fully integrated cockpits will reduce operator workload and improve situational awareness, thus increasing safety and reducing the rate of aircraft attrition. They will provide considerable growth potential for future weapon systems and avionics, which will significantly increase mission effectiveness and survivability. The cockpits will also include integration of onboard mission planning, communications, digital fire control, self-navigation, night navigation/targeting, Joint Air-to-Ground Missile and Air-Launched Intercept Missile weapon systems management in nearly identical crew stations, which significantly reduces training requirements. These upgrades maximize commonality between the two aircraft and provide needed improvements in crew and passenger survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	60.498	72.569	28.060	-	28.060
Current President's Budget	58.638	67.569	31.105	-	31.105
Total Adjustments	-1.860	-5.000	3.045	-	3.045
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.005	-			
• SBIR/STTR Transfer	-1.547	-			
• Program Adjustments	-	-	3.041	-	3.041
• Rate/Misc Adjustments	-	-	0.004	-	0.004
• Congressional General Reductions Adjustments	-0.308	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Changes to Software Development schedule for System Configuration Set 6.0 and SCS 7.0 completion from 3Q11 to 3Q12, and 3Q13 to 2Q14, respectively, due to limited test aircraft availability. Rerouting of aircraft parts was required to support OEF operations in Afghanistan. Associated Software Deliveries were adjusted accordingly.

Change to Lot 8 contract award from 2Q11 to 4Q11 to reflect actual contract award.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2279: *4BW/4BN Upgrade*	58.638	67.569	31.105	-	31.105	47.226	46.850	47.560	48.397	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The mission of the AH-1W attack helicopter is to provide rotary wing close air support, anti-armor, armed escort, armed/visual reconnaissance, survivability enhancements, and fire support coordination capabilities under day/night and adverse weather conditions. The mission of the UH-1N utility helicopter is to provide command and control and combat assault support under day/night and adverse weather conditions and special operations support; supporting arms coordination and aeromedical evacuation. Major modifications for both aircraft include 34 AH-1Ws converted to AH-1Zs, build 155 new AH-1Zs, remanufacture ten (10) H-1N helicopters and build 150 new UH-1Y models. Upgrades include: a new 4-bladed, composite rotor system with semi-automatic bladefold, new performance matched transmissions, T700 Engine Digital Electronic Control Units, new 4-bladed tail rotors and drive systems, more effective stabilizers, upgraded landing gear, tail pylon structural modifications, and common, fully integrated cockpits and avionics systems. These upgrades will add 10,000 flight hours to AH-1Z/UH-1Y airframes. The fully integrated cockpits will reduce operator workload and improve situational awareness, thus increasing safety and reducing the rate of aircraft attrition. They will provide considerable growth potential for future weapon systems and avionics, which will significantly increase mission effectiveness and survivability. The cockpits will also include integration of onboard mission planning, communications, digital fire control, self-navigation, night navigation/targeting, Joint Air-to-Ground Missile and Air-Launched Intercept Missile weapon systems management in nearly identical crew stations, which significantly reduces training requirements. These upgrades maximize commonality between the two aircraft and provide needed improvements in crew and passenger survivability, payload, power available, endurance, range, airspeed, maneuverability and supportability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Cuff and Yoke Redesign	22.900	33.640	18.111	-	18.111
Articles:	0	0	0		0
FY 2011 Accomplishments: Cuff and Yoke Redesign/Step 2 Completion contract awarded for Cuff and Yoke studies, analysis, and development.					
FY 2012 Plans: Cuff and Yoke Redesign/Step 3 final development for the redesign of Cuff and Yoke. Initiate detailed design activities including manufacturing process maturation and intial tooling development. Developmental laboratory testing will continue to increase in complexity as part of the detailed design effort, and low-risk sub-component qualification efforts will begin.					
FY 2013 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Cuff and Yoke Redesign/Step 3 fatigue testing of component parts, instrumentation, and preparation for flight test.					
Title: System Configuration Set Development	24.662	16.877	8.260	-	8.260
Articles:	0	0	0		0
FY 2011 Accomplishments: System Configuration Set (SCS) 6.0- validation and verification, preparation for flight test. SCS 7.0- hardware & software (S/W) development including Digital Map, development of initial weapons capabilities, and corrections to Advanced Precision Kill Weapons System (APKWS). These efforts include system requirements definition and S/W requirements definition. Correction of hardware and S/W deficiencies as identified through test and/or due to obsolescence issues. ***FY 2012 Plans:*** SCS 6.0- complete testing on Build 2. SCS 7.0- continue hardware and S/W development efforts. Development of initial weapons capabilities and corrections. SCS 8.0- Joint Air-to-Ground Missile requirements definition and design. Correction of hardware and S/W deficiencies as identified through test and/or due to obsolescence issues. ***FY 2013 Base Plans:*** SCS 7.0- development efforts including incorporation of Joint Variable Message Format. SCS 8.0- continue requirements definition and begin design/development process. Correction of hardware and S/W deficiencies as identified through test and/or due to obsolescence issues.					
Title: Weapons and Sensors Testing and Integration	2.765	8.837	1.504	-	1.504
Articles:	0	0	0		0
FY 2011 Accomplishments: APKWS testing on the UH-1Y. ***FY 2012 Plans:*** Development, integration, and testing effort for APKWS on the AH-1Z. Target Sight System (TSS) turret test and evaluation activities for hardware and infrared improvement efforts. ***FY 2013 Base Plans:***					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Completion of Target Sight System (TSS) turret test and evaluation activities for hardware and infrared improvement efforts. Aircraft stores development, integration, and testing effort including APKWS, the M299A1 launcher, and Air-Launched Intercept Missile on the AH-1Z.					
Title: Air Vehicle and Avionics Development	8.311	8.215	3.230	-	3.230
Articles:	0	0	0		0
FY 2011 Accomplishments: Preliminary design and planning for component fatigue testing and Tail Rotor Blade (TRB) Redesign. Planning and analysis for mission computer components obsolescence mitigation and redesign. ***FY 2012 Plans:*** Continue TRB Redesign. Main Rotor Gear Box (MRGB) "run dry" improvement. Initiate component fatigue testing of hardware components shown to have the highest return on investment for sustainment total ownership cost and cost per flight hour management. ***FY 2013 Base Plans:*** Continue TRB redesign efforts. Continue MRGB "run dry" and component improvement; focus on new sump, coating and filter components. Conduct avionics development & testing on Digital Map/Video Data Link, air vehicle development box, cargo door redesign, Crash Survivable Flight Incident Recorder, design of aircrew restraint system, and Full Motion Video to enhance digitization. Mission computer components obsolescence and regression testing.					
Accomplishments/Planned Programs Subtotals	58.638	67.569	31.105	-	31.105

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/017800: *UH-1Y/AH-1Z APN1*	881.235	734.186	790.591	29.800	820.391	844.514	842.406	827.696	974.562	1,757.650	10,995.089

D. Acquisition Strategy

The USMC H-1 Upgrades is an ACAT 1C program which encompasses Engineering and Manufacturing Development of new end-items prior to a production approval decision. The prime contract is a sole source to Bell Helicopter Textron, Inc.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

E. Performance Metrics

Cuff and Yoke Redesign addresses fatigue life projections pursuant to Life Cycle Cost avoidance. Overall redesign effort strives to achieve a minimum 1500 hour fatigue life for cuff and yoke components and restores static strength to restore high-altitude performance to the UH-1Y.

MRGB loss of lubrication prototype development and testing is an effort to meet the survivability requirement of 30-minutes of operation following a total loss of lubrication. The redesign, development, testing, qualification, and deployment of the MRGB improvements will allow the UH-1Y and AH-1Z to reduce their vulnerable area and greatly improve upon the current 17-minute limitation. This effort will also increase the survival rate of the aircrew and aircraft through improved resistance to ballistic threats.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPFF	BHTI:Amarillo, TX	15.187	37.683	Jan 2012	-		-		-	0.000	52.870	52.870
Primary Hardware Development2	SS/CPFF	BHTI:Amarillo, TX	12.600	-		18.277	Jan 2013	-		18.277	56.285	87.162	87.162
Systems Engineering	WR	NAWCAD:Pax River, MD	77.674	2.144	Nov 2011	0.828	Nov 2012	-		0.828	28,558.000	28,638.646	
Prior year Cost no longer funded in the FYDP	Various	Various:Various	1,140.880	-		-		-		-	0.000	1,140.880	
		Subtotal	1,246.341	39.827		19.105		-		19.105	28,614.285	29,919.558	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	SS/CPFF	BHTI:Amarillo, TX	18.427	14.741	Dec 2011	-		-		-	0.000	33.168	33.168
Software Development	SS/CPFF	BHTI:Amarillo, TX	-	-		7.518	Dec 2012	-		7.518	36.826	44.344	44.344
Software Development	WR	NAWCWD:China Lake, CA	19.065	6.342	Dec 2011	0.742	Dec 2012	-		0.742	23.965	50.114	
Prior year costs no longer funded in FYDP	Various	Various:Various	34.459	-		-		-		-	0.000	34.459	
		Subtotal	71.951	21.083		8.260		-		8.260	60.791	162.085	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test and Evaluation	WR	NAWCAD:Pax River, MD	52.550	1.000	Nov 2011	0.701	Nov 2012	-		0.701	24.200	78.451	
Operational Test and Evaluation1	WR	COMOPTEVFOR:Norfolk, VA	27.898	1.750	Nov 2011	2.103	Nov 2012	-		2.103	16.800	48.551	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior Year Cost no longer funded in FYDP	Various	Various:Various	17.312	-		-		-		-	0.000	17.312	
		Subtotal	97.760	2.750		2.804		-		2.804	41.000	144.314	

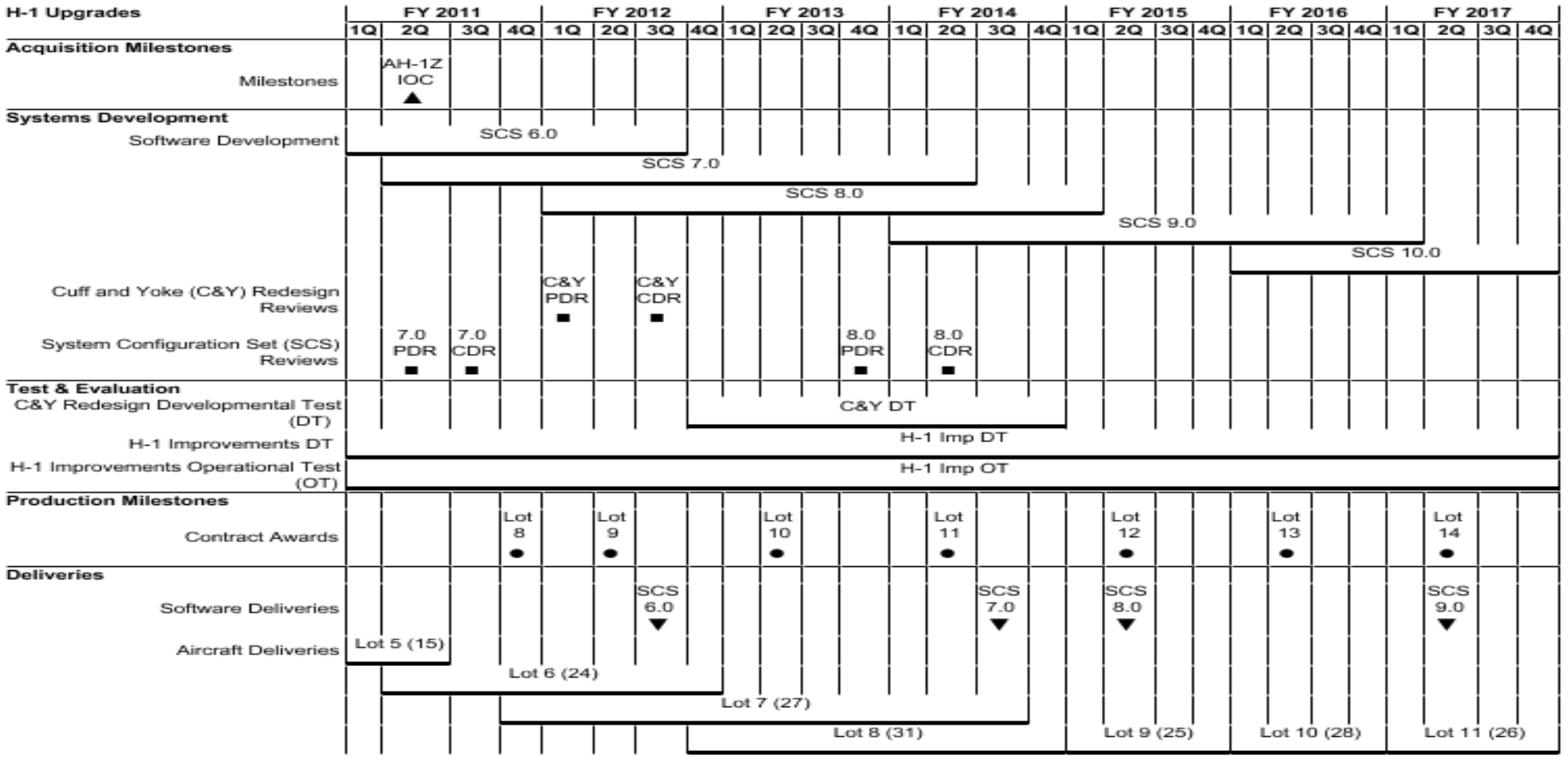
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Supt	C/FFP	Various:Various	8.782	0.416	Oct 2011	0.329	Oct 2012	-		0.329	1.058	10.585	10.585
Program Management Supt	C/CPFF	Various:Various	11.515	3.000	Dec 2011	0.232	Dec 2012	-		0.232	0.512	15.259	15.259
Travel	WR	Various:Various	4.635	0.493	Oct 2011	0.375	Oct 2012	-		0.375	2.576	8.079	
Prior year costs no longer funded in FYDP	Various	Various:Various	0.077	-		-		-		-	0.000	0.077	
		Subtotal	25.009	3.909		0.936		-		0.936	4.146	34.000	

	Total Prior Years Cost	FY 2012 Cost	FY 2012	FY 2013 Base Cost	FY 2013 Base	FY 2013 OCO Cost	FY 2013 OCO	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,441.061	67.569		31.105		-		31.105	28,720.222	30,259.957	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*



2013PB - 0604245N - 2279

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
H-1 Upgrades				
Acquisition Milestones: Milestones: IOC - AH-1Z	2	2011	2	2011
Systems Development: Software Development: SCS 6.0 Software Development	1	2011	3	2012
Systems Development: Software Development: SCS 7.0 Software Development	2	2011	2	2014
Systems Development: Software Development: SCS 8.0 Software Development	1	2012	1	2015
Systems Development: Software Development: SCS 9.0 Software Development	1	2014	1	2017
Systems Development: Software Development: SCS 10.0 Software Development	1	2016	4	2017
Systems Development: Cuff and Yoke (C&Y) Redesign Reviews: Preliminary Design Review (PDR)	1	2012	1	2012
Systems Development: Cuff and Yoke (C&Y) Redesign Reviews: Critical Design Review (CDR)	3	2012	3	2012
Systems Development: System Configuration Set (SCS) Reviews: SCS 7.0 PDR	2	2011	2	2011
Systems Development: System Configuration Set (SCS) Reviews: SCS 7.0 CDR	3	2011	3	2011
Systems Development: System Configuration Set (SCS) Reviews: SCS 8.0 PDR	4	2013	4	2013
Systems Development: System Configuration Set (SCS) Reviews: SCS 8.0 CDR	2	2014	2	2014
Test & Evaluation: C&Y Redesign Developmental Test (DT): Cuff and Yoke Redesign DT	4	2012	4	2014
Test & Evaluation: H-1 Improvements DT: H-1 Improvements DT	1	2011	4	2017
Test & Evaluation: H-1 Improvements Operational Test (OT): H-1 Improvements Operational Test (OT)	1	2011	4	2017
Production Milestones: Contract Awards: Lot 8	4	2011	4	2011
Production Milestones: Contract Awards: Lot 9	2	2012	2	2012
Production Milestones: Contract Awards: Lot 10	2	2013	2	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604245N: *H-1 Upgrades*	PROJECT 2279: *4BW/4BN Upgrade*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Contract Awards: Lot 11	2	2014	2	2014
Production Milestones: Contract Awards: Lot 12	2	2015	2	2015
Production Milestones: Contract Awards: Lot 13	2	2016	2	2016
Production Milestones: Contract Awards: Lot 14	2	2017	2	2017
Deliveries: Software Deliveries: SCS 6.0 Software Deliveries	3	2012	3	2012
Deliveries: Software Deliveries: SCS 7.0 Software Deliveries	3	2014	3	2014
Deliveries: Software Deliveries: SCS 8.0 Software Deliveries	2	2015	2	2015
Deliveries: Software Deliveries: SCS 9.0 Software Deliveries	2	2017	2	2017
Deliveries: Aircraft Deliveries: Lot 5 FRP Y/LRIP Z	1	2011	2	2011
Deliveries: Aircraft Deliveries: Lot 6 FRP Y/LRIP Z	2	2011	4	2012
Deliveries: Aircraft Deliveries: Lot 7 FRP Y/LRIP Z	4	2011	3	2014
Deliveries: Aircraft Deliveries: Lot 8 FRP Y + Z	4	2012	4	2014
Deliveries: Aircraft Deliveries: Lot 9 FRP Y + Z	1	2015	4	2015
Deliveries: Aircraft Deliveries: Lot 10 FRP Y + Z	1	2016	4	2016
Deliveries: Aircraft Deliveries: Lot 11 FRP Y + Z	1	2017	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	63.041	48.838	34.299	-	34.299	30.416	27.227	21.619	18.552	Continuing	Continuing
0480: *ASW Sensors & Proc*	30.803	23.850	19.453	-	19.453	19.815	17.704	13.990	14.237	Continuing	Continuing
3224: *High Altitude ASW*	32.238	24.988	14.846	-	14.846	10.601	9.523	7.629	4.315	Continuing	Continuing

A. Mission Description and Budget Item Justification

Includes RDT&E funds for engineering development and operational test and evaluation of acoustic search sensors/systems and complementary equipment for Anti Submarine Warfare (ASW) aircraft.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	64.834	56.509	22.577	-	22.577
Current President's Budget	63.041	48.838	34.299	-	34.299
Total Adjustments	-1.793	-7.671	11.722	-	11.722
• Congressional General Reductions	-	-0.060			
• Congressional Directed Reductions	-	-7.611			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.417	-			
• Program Adjustments	-	-	11.661	-	11.661
• Rate/Misc Adjustments	-	-	0.061	-	0.061
• Congressional General Reductions Adjustments	-0.376	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule:

H0480. Multi-Static Active Coherent (MAC) (Schedule 1). Due to platform baseline software and subsequent test delay moved MS C from 1Q/12 to 2Q/12.

H0480. Multi-Static Active Coherent (MAC) (Schedule 2). No major changes have occurred to the schedule since PB12.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*

H3224. High Altitude Anti-Submarine Warfare (HAASW). The Effectiveness and Suitability study results led us to a preliminary HAASW schedule as represented in the Milestone (MS) A decision and delayed MS A, MS B and MS C. The Dropsonde hardware is now replaced with algorithm software. To depict a more accurate schedule, Initial Operational Test & Evalutation is aligned with the P-8 Increment 2. Test articles now reflect alignment with sonobuoy modification.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0480: *ASW Sensors & Proc*	30.803	23.850	19.453	-	19.453	19.815	17.704	13.990	14.237	Continuing	Continuing
Quantity of RDT&E Articles	0	500	0	0	0	0	100	0	0		

A. Mission Description and Budget Item Justification

The Anti-Submarine Warfare (ASW) Sensors and Processing project provides the tools and methods necessary to maintain naval superiority by preventing threat submarines from disrupting the U.S. Navy's ability to control the sea lines of communication and completing their hostile missions. This project encompasses the Engineering & Manufacturing Development phase and the follow on increments of sensor systems to improve the mission effectiveness of airborne ASW platforms in cueing, searching, localizing, tracking, and attacking subsurface targets. Smaller and quieter threat submarines drive the requirement for continued advancement in ASW sensor capabilities for both blue water and littoral environments. The littoral regions of the world create an additional ASW challenge to overcome the increase in background clutter caused by the shallow water depth, high volume of shipping, and commercial radio frequency interference. Project 0480 provides funding to the Extended Echo Ranging family of multi-static active ASW systems for the engineering development of solutions that detect, classify, and track threat submarines. Multi-static Active Coherent (MAC) and Advanced Processing Builds (APB) are efforts funded during the period identified. The MAC program, which started in FY08, encompasses the development of an active coherent (electronic) source sonobuoy, modifications to the existing Air Deployable Active Receiver sonobuoy, development, integration, and test of aircraft avionics software and MAC system. It also provides upgrades to the Multi-static mission planning tool, the Tactical Operational Readiness Trainer and the Tactical Ground Replay System. MAC provides a large area search capability in all water environments and will eliminate current impulsive source safety, training, and Rules of Engagement restrictions. Project 0480 also provides funding for the APB program which provides software enhancements for signal processing improvements, clutter reduction, automation, improved displays and controls, as well as improved communication links for reduced operator workload resulting in increased target detection and classification capabilities and interoperability. APB also includes an Air ASW Engineering Measurement Program that collects ASW system data and identifies areas where beneficial improvements can be made and provides common software and hardware solutions across all Air ASW platforms. The 600 sonobuoy test articles in FY12/15 will support software and hardware integration flight tests and Technical Evaluation/ Operational Evaluation for the MAC program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Complete APB System Qualification Test /Fleet Release	0.970	1.377	2.888
Articles:	0	0	0
FY 2011 Accomplishments: Completed Advanced Processing Build (APB) (2) software development and integration on P-3C. Commenced Technical Evaluation of software in October 2010. Initiated software development/Integration for APB(3).			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete APB(2) Tech Eval and get approval for software release in September 2012. Continue software development/ Integration for APB(3). ***FY 2013 Plans:*** Release APB(2) software to Fleet. Continue software development/Integration for APB(3).			
Title: Multi-static Active Coherent (MAC)	29.833	22.473	16.565
Articles:	0	500	0
FY 2011 Accomplishments: Continued development/maturing of MAC Airborne Operational Program (AOP) and Tactical Mission Software (TMS) software builds. Completed delivery of Engineering Development Models (EDM) of the SSQ-125 coherent source sonobuoy. Commenced Integrated Test and Evaluation of MAC System. ***FY 2012 Plans:*** Conduct Milestone C and Low Rate Initial Production decision briefs with Milestone Decision Authority (MDA). Conduct Operational Test (OT) flights in 3rd quarter FY-2012. ***FY 2013 Plans:*** Release MAC software to Fleet in 1st quarter. Conduct decision brief for Full Rate Production (FRP) on SSQ-125 in 1st quarter. Initiate Engineering Change Proposal (ECP) to the SSQ-125 to increase source level. Integrate next version of software to support commencement of Follow-on Test and Evaluation(FOT&E) in 4th quarter FY-2013.			
Accomplishments/Planned Programs Subtotals	30.803	23.850	19.453

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4048: *Sonobuoys - All Types*	0.000	11.850	9.971	0.000	9.971	40.978	39.254	37.375	33.920	Continuing	Continuing

D. Acquisition Strategy

The development and integration of MAC using coherent source technology into the P-3C and P-8A Aircraft. Sole source contracts have been awarded for Sensor Development (ERAPSCO) and for Displays and Control and Integration on P-3C aircraft (Lockheed Martin, Manassas) and P-8A aircraft.

E. Performance Metrics

Continued development/test of a Multi Static Active Coherent (MAC) coherent source and related software that will satisfy the large area search requirement in the harsh, shallow water littorals as stated in the Acquisition Program Baseline agreement.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Development	Various	VARIOUS:VARIOUS	18.505	1.400	Oct 2011	2.288	Dec 2012	-		2.288	Continuing	Continuing	Continuing
Primary Hdw Development	SS/CPIF	ERAPSCO:FT. WAYNE IN	3.350	3.350	Oct 2011	3.658	Dec 2012	-		3.658	Continuing	Continuing	Continuing
		Subtotal	21.855	4.750		5.946		-		5.946			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	WR	NAWCAD:PATUXENT RIVER, MD	19.204	1.000	Oct 2011	1.000	Nov 2012	-		1.000	Continuing	Continuing	Continuing
Software Development	SS/CPIF	LOCKHEED MARTIN:MANASSAS VA	3.000	3.000	Oct 2011	1.000	Nov 2012	-		1.000	Continuing	Continuing	Continuing
Software Development	Various	VARIOUS:VARIOUS	7.802	0.529	Oct 2011	0.457	Nov 2012	-		0.457	Continuing	Continuing	Continuing
Studies & Analysis	WR	NAWCAD:PATUXENT RIVER, MD	12.340	1.000	Oct 2011	0.562	Nov 2012	-		0.562	Continuing	Continuing	Continuing
Technical Data	WR	NAWCAD:PATUXENT RIVER, MD	15.359	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	57.705	5.529		3.019		-		3.019			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	WR	NAWCAD:PATUXENT RIVER, MD	17.700	2.000	Nov 2011	1.000	Nov 2012	-		1.000	Continuing	Continuing	Continuing
		Subtotal	17.700	2.000		1.000		-		1.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*

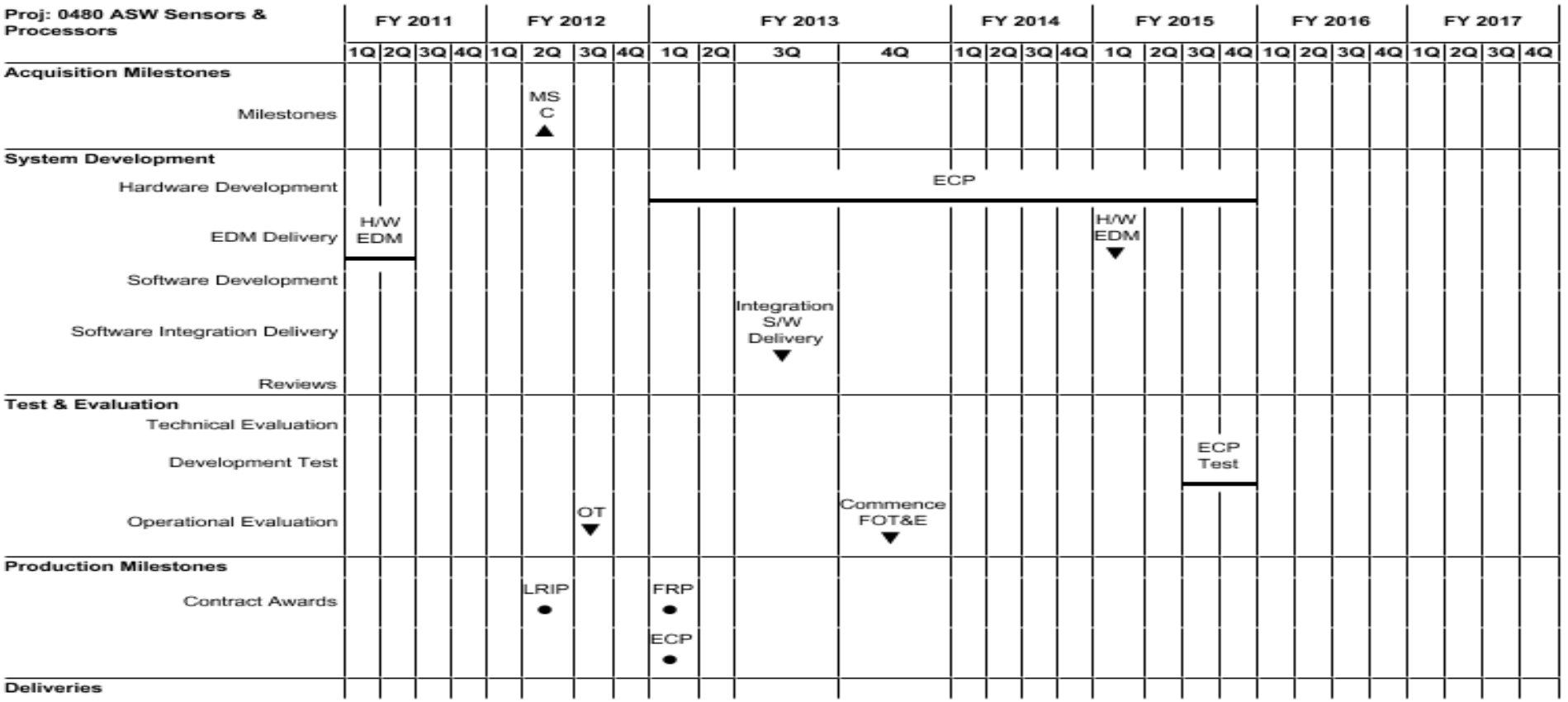
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Eng Spt (APB)	Various	VARIOUS:VARIOUS	33.903	3.724	Nov 2011	3.620	Nov 2012	-		3.620	Continuing	Continuing	Continuing
Government Eng Spt	WR	NAWCAD:PATUXENT RIVER, MD	88.198	4.524	Oct 2011	4.221	Nov 2012	-		4.221	Continuing	Continuing	Continuing
Eng & Tech Spt Srvc (NON-FFRDC)	Various	VARIOUS:VARIOUS	46.853	3.000	Nov 2011	1.397	Nov 2012	-		1.397	Continuing	Continuing	Continuing
Mgt & Prof SptT Srvc (FFRDC)	Various	VARIOUS:VARIOUS	9.747	0.323	Nov 2011	0.250	Nov 2012	-		0.250	Continuing	Continuing	Continuing
Prior Years Mgmt Svcs	Various	VARIOUS:VARIOUS	0.868	-		-		-		-	0.000	0.868	
		Subtotal	179.569	11.571		9.488		-		9.488			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	276.829	23.850		19.453		-		19.453			

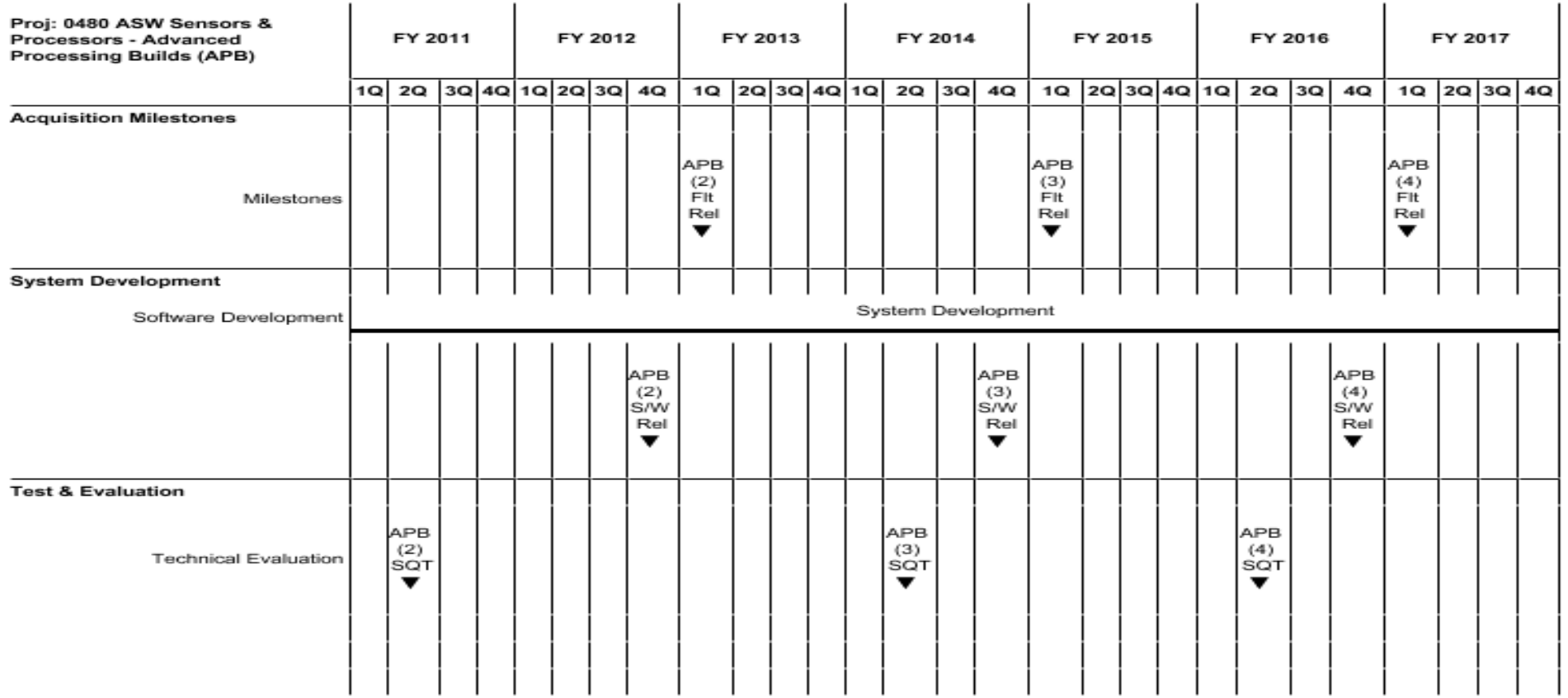
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*



2013PB - 0604261N - 0480

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*



2013PB - 0604261N - 0480

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604261N: *Acoustic Search Sensors*	**PROJECT** 0480: *ASW Sensors & Proc*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj: 0480 ASW Sensors & Processors				
Acquisition Milestones: Milestones: Milestone C	2	2012	2	2012
System Development: Hardware Development: Engineering Change Proposal	1	2013	4	2015
System Development: EDM Delivery: Eng Dev Model (H/W EDM) 1	1	2011	2	2011
System Development: EDM Delivery: Eng Dev Model (H/W EDM) 2	1	2015	1	2015
System Development: Software Integration Delivery: Integration Software Delivery	3	2013	3	2013
Test & Evaluation: Development Test: Engineering Change Proposal Test	3	2015	4	2015
Test & Evaluation: Operational Evaluation: OT	3	2012	3	2012
Test & Evaluation: Operational Evaluation: Commence FOT&E	4	2013	4	2013
Production Milestones: Contract Awards: Low Rate Initial Production (LRIP)	2	2012	2	2012
Production Milestones: Contract Awards: Full Rate Production (FRP)	1	2013	1	2013
Production Milestones: Contract Awards: Engineering Change Proposal	1	2013	1	2013
Proj: 0480 ASW Sensors & Processors - Advanced Processing Builds (APB)				
Acquisition Milestones: Milestones: APB (2) Fleet Release	1	2013	1	2013
Acquisition Milestones: Milestones: APB (3) Fleet Release	1	2015	1	2015
Acquisition Milestones: Milestones: APB (4) Fleet Release	1	2017	1	2017
System Development: Software Development: System Development	1	2011	4	2017
System Development: Software Development: APB (2) Software Release	4	2012	4	2012
System Development: Software Development: APB (3) Software Release	4	2014	4	2014
System Development: Software Development: APB (4) Software Release	4	2016	4	2016
Test & Evaluation: Technical Evaluation: APB (2) SQT	2	2011	2	2011
Test & Evaluation: Technical Evaluation: APB (3) SQT	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 0480: *ASW Sensors & Proc*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Test & Evaluation: Technical Evaluation: APB (4) SQT	2	2016	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3224: *High Altitude ASW*	32.238	24.988	14.846	-	14.846	10.601	9.523	7.629	4.315	Continuing	Continuing
Quantity of RDT&E Articles	0	0	34	0	34	49	48	49	0		

A. Mission Description and Budget Item Justification

The High Altitude Anti-Submarine Warfare (HAASW) program objective is to ensure Anti-Submarine Warfare (ASW) aircraft operational flexibility and effectiveness thoughout the kill chain at higher than traditional ASW altitudes. FY11-FY17 R&D monies fund the Technology Development (TD), Test & Evaluation and Initial Operational Capability for HAASW integration into the P-8A aircraft. TD includes hardware modifications to existing ASW sonobuoys and software development for the aircraft. GPS integration will provide precise sonobuoy location regardless of aircraft altitude/location to enhance wide area ASW search, localization, track and targeting. The digital telemetry will improve sonobuoy communication performance in high Radio Frequency Interference environments, increase Air Deployable Active Receiver channel availability, and provide NATO compatibility. P-8A software will be developed to process GPS and digital telemetry signals and to integrate algorithms that will adjust sonobuoy release/drop points for more accurate sonobuoy placement. The FY13-16 test article quantities reflect 180 sonobuoys.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Provide precision delivery of sonobuoys	32.238	24.988	14.846
Articles:	0	0	34
FY 2011 Accomplishments: The Analysis of Alternatives (AoA) confirmed the cost/operational effectiveness of GPS and digital telemetry integration in sonobuoys. Milestone A / Acquisition Strategy were approved. The sonobuoy technology development contract was awarded to ERAPSCO (Aug11). The Boeing Capabilities Analysis and Planning (CAP) study to integrate HAASW into P-8A Increment 2 was also awarded.			
FY 2012 Plans: Sonobuoy Preliminary Design Review (PDR) is planned for Apr 12. A P-8A Inc 2 Risk Reduction contract will be awarded initiating a P-8A Inc2 (HAASW) CAP study.			
FY 2013 Plans: Milestone B and CDR are planned. Boeing Increment 2 Integration contract will be awarded.			
Accomplishments/Planned Programs Subtotals	32.238	24.988	14.846

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4048 (1): *Sonobuoys - All Types (SSQ-101)*	16.795	14.027	12.751	0.000	12.751	23.641	36.123	40.152	42.436	Continuing	Continuing
• OPN/4048 (2): *Sonobuoys - All Types (SSQ-62)*	15.625	16.069	10.769	0.000	10.769	17.299	17.361	17.929	20.490	Continuing	Continuing
• OPN/4048 (3): *Sonobuoys - All Types (SSQ-53)*	37.474	37.312	58.033	0.000	58.033	66.744	66.334	62.879	63.908	Continuing	Continuing

D. Acquisition Strategy

High Altitude Anti-Submarine Warfare Acquisition Strategy Review was held 14 Nov 2011. Contracting approaches for sonobuoy development and for software development were approved. Sonobuoy TD will be awarded via sole source CPIF contract to ERAPSCO. Software development will be awarded via sole source to Boeing.

E. Performance Metrics

Schedule and cost variances of the planned contracts will be used to track contract performance. Integrated baseline review is scheduled 6 months after ERAPSCO contract award.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hdw Development	Various	VARIOUS:VARIOUS	5.009	0.376	Nov 2011	0.478	Nov 2012	-		0.478	Continuing	Continuing	Continuing
Primary Hdw Development	SS/CPIF	ERAPSCO:FT. WAYNE IN	16.986	11.389	Nov 2011	-		-		-	0.000	28.375	28.375
		Subtotal	21.995	11.765		0.478		-		0.478			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Documentation	Various	VARIOUS:VARIOUS	0.450	0.500	Nov 2011	0.300	Dec 2012	-		0.300	Continuing	Continuing	Continuing
Studies & Analysis	Various	VARIOUS:VARIOUS	0.392	-		-		-		-	Continuing	Continuing	Continuing
A/C Software Integration	Various	VARIOUS:VARIOUS	3.119	-		-		-		-	Continuing	Continuing	Continuing
Tech Data	WR	NAWCAD:PATUXENT RIVER, MD	0.100	-		-		-		-	Continuing	Continuing	Continuing
A/C Software Integration	C/CPFF	BOEING:SEATTLE WA	9.000	4.000	Nov 2011	5.590	Dec 2012	-		5.590	Continuing	Continuing	Continuing
		Subtotal	13.061	4.500		5.890		-		5.890			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	Various	VARIOUS:VARIOUS	0.450	0.500	Nov 2011	2.200	Nov 2012	-		2.200	Continuing	Continuing	Continuing
		Subtotal	0.450	0.500		2.200		-		2.200			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Eng Spt	Various	VARIOUS:VARIOUS	1.000	0.946	Oct 2011	0.746	Nov 2012	-		0.746	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*

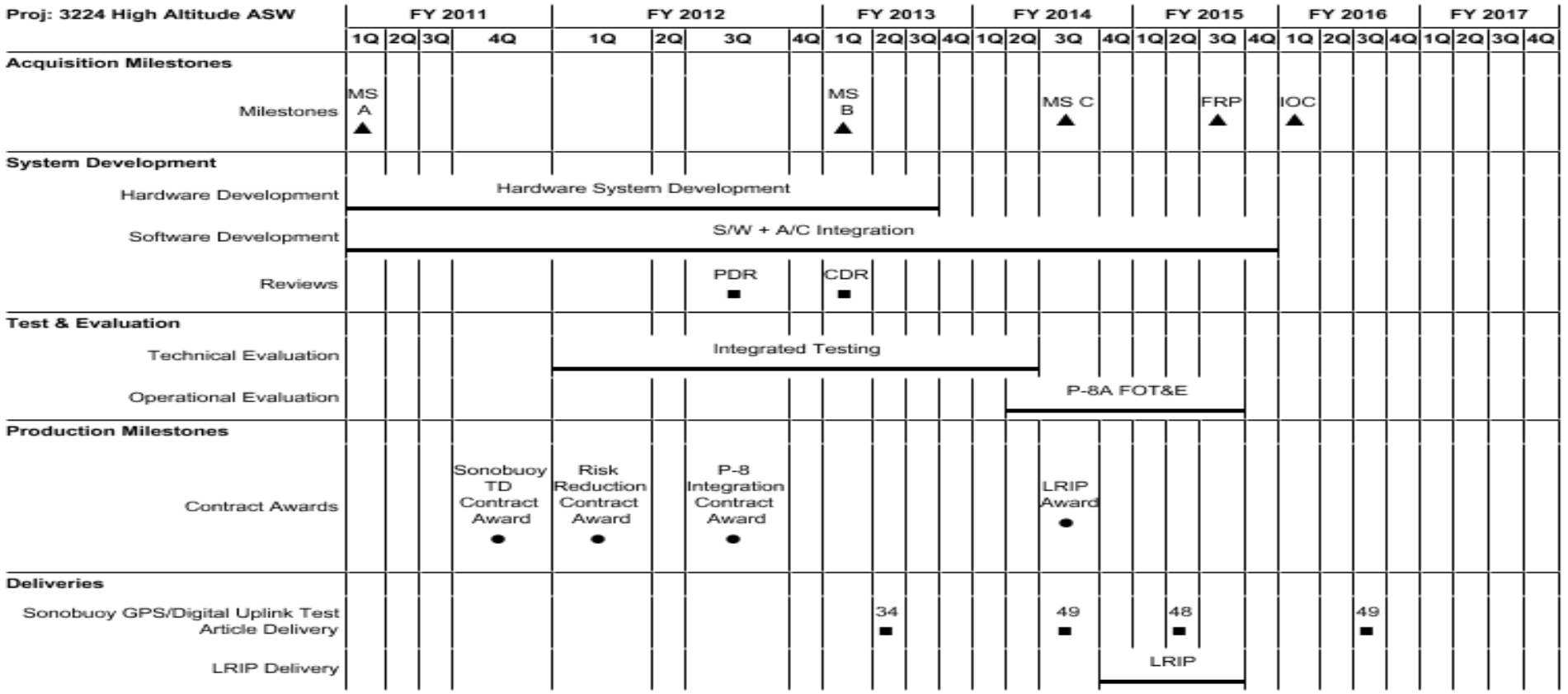
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ENG & TECH SVCS (NON-FFRDC)	Various	VARIOUS:VARIOUS	1.244	2.294	Oct 2011	0.983	Nov 2012	-		0.983	Continuing	Continuing	Continuing
Government Eng Spt	WR	NAWCAD:PATUXENT RIVER, MD	8.209	4.939	Oct 2011	4.511	Nov 2012	-		4.511	Continuing	Continuing	Continuing
Travel	C/T&M	VARIOUS:VARIOUS	0.470	0.044	Oct 2011	0.038	Nov 2012	-		0.038	Continuing	Continuing	Continuing
		Subtotal	10.923	8.223		6.278		-		6.278			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	46.429	24.988		14.846		-		14.846			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*



2013PB - 0604261N - 3224

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj: 3224 High Altitude ASW				
Acquisition Milestones: Milestones: Milestone A	1	2011	1	2011
Acquisition Milestones: Milestones: Milestone B	1	2013	1	2013
Acquisition Milestones: Milestones: Milestone C	3	2014	3	2014
Acquisition Milestones: Milestones: Full Rate Production	3	2015	3	2015
Acquisition Milestones: Milestones: Initial Operational Capabilities	1	2016	1	2016
System Development: Hardware Development: Hardware System Development	1	2011	3	2013
System Development: Software Development: Aircraft Software Development/ Integration	1	2011	4	2015
System Development: Reviews: PDR	3	2012	3	2012
System Development: Reviews: CDR	1	2013	1	2013
Test & Evaluation: Technical Evaluation: Integrated Testing	1	2012	2	2014
Test & Evaluation: Operational Evaluation: P-8A FOT&E	2	2014	3	2015
Production Milestones: Contract Awards: Risk Reduction Contract Award	1	2012	1	2012
Production Milestones: Contract Awards: Sonobuoy TD Contract Award	4	2011	4	2011
Production Milestones: Contract Awards: P-8 Integration Contract Award	3	2012	3	2012
Production Milestones: Contract Awards: LRIP Award	3	2014	3	2014
Deliveries: Sonobuoy GPS/Digital Uplink Test Article Delivery: Sonobuoy GPS/Digital Uplink Test Article Delivery 1	2	2013	2	2013
Deliveries: Sonobuoy GPS/Digital Uplink Test Article Delivery: Sonobuoy GPS/Digital Uplink Test Article Delivery 2	3	2014	3	2014
Deliveries: Sonobuoy GPS/Digital Uplink Test Article Delivery: Sonobuoy GPS/Digital Uplink Test Article Delivery 3	2	2015	2	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604261N: *Acoustic Search Sensors*	PROJECT 3224: *High Altitude ASW*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Sonobuoy GPS/Digital Uplink Test Article Delivery: Sonobuoy GPS/Digital Uplink Test Article Delivery 4	3	2016	3	2016
Deliveries: LRIP Delivery: LRIP	4	2014	3	2015

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	42.686	84.477	54.412	-	54.412	40.279	54.856	51.134	52.224	111.055	491.123
1425: *V-22*	42.686	84.477	54.412	-	54.412	40.279	54.856	51.134	52.224	111.055	491.123

A. Mission Description and Budget Item Justification

The V-22 Osprey is an Acquisition Category ID Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the HV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade, Mid-Wing Process Unit, ARC 210 Generation 5 Radio, Mission Computer Obsolescence Initiative, Ramp Mounted Weapon System, AAR-47 Hostile Fire Indicator, and Blue Force Tracker/Netted Weather. FY12-13 funds initiates instrumentation of a test aircraft.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	46.070	84.477	64.982	-	64.982
Current President's Budget	42.686	84.477	54.412	-	54.412
Total Adjustments	-3.384	-	-10.570	-	-10.570
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.102	-			
• SBIR/STTR Transfer	-1.411	-			
• Program Adjustments	-	-	-10.810	-	-10.810
• Rate/Misc Adjustments	-	-	0.240	-	0.240
• Congressional General Reductions Adjustments	-0.226	-	-	-	-
• Congressional Directed Reductions Adjustments	-1.645	-	-	-	-

Change Summary Explanation

Technical: Not applicable

Schedule: Not applicable

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1425: *V-22*	42.686	84.477	54.412	-	54.412	40.279	54.856	51.134	52.224	111.055	491.123
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The V-22 Osprey is an Acquisition Category ID Joint Program led by the Department of the Navy for the purpose of developing, testing, evaluating, procuring and fielding a tilt rotor, vertical takeoff and landing aircraft for Joint Service application. The V-22 program is designed to provide an aircraft to meet the amphibious/vertical assault needs of the Marine Corps, the utility/rescue needs of the Navy, and the special operations needs of the Air Force and the United States Special Operations Command (USSOCOM). The V-22 is replacing the CH-46E and CH53A/D in the Marine Corps with the MV-22; will supplement the H-60 in the Navy with the HV-22; and replace the MH-53J and MH-53M as well as augment the C-130 in the Air Force and USSOCOM with the CV-22. The V-22 is capable of flying over 2100 nautical miles with a single refueling, giving the services the advantage of a Vertical/Short Take-off and Landing aircraft that can rapidly self-deploy to any location in the world. This program is funded under Engineering Manufacturing and Development for correction of deficiencies and includes Block A and Block B upgrades which encompassed engineering and manufacturing development of new end-items prior to the production incorporation decision. Block C suitability and effectiveness development upgrades continue through FY12. Funding in FY11 addressed Capability Development Document interoperability requirements through a spiral upgrade acquisition strategy. These funds were the first spiral providing Key Enabling Department of Defense mandated open systems architecture upgrades for the mission computer hardware and software while simultaneously addressing required interoperability common avionics upgrades and current avionics obsolescence issues. Development efforts include Block C Upgrade, Mission System Upgrade and Obsolescence Initiative, Ramp Mounted Weapon System, Blue Force Tracker/Netted Weather, Mid-Wing Process Unit and ARC 210 Generation 5 Radio. FY12-13 funds initiates instrumentation of a test aircraft.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Continued development of V-22	27.585	66.939	36.341
Articles:	0	0	0
FY 2011 Accomplishments: Performed development efforts for interoperability including Mission System Upgrade to Advanced Mission Computer with a common Integrated Core Avoinics Processor and the ARC-210 Generation 5 Radio. Integrated joint/common avionics, including Joint and Allied Threat Awareness System/APR-39. These development efforts address V-22 Net-Ready Key Performance Parameters and CDD interoperability requirements while simultaneously addressing current avionics obsolescence issues.			
FY 2012 Plans: Continue development efforts as described above in FY11. Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development/ sustainment efforts. Continue development in support of MV-22 Block upgrades. Continue engineering, logistics, flight test, flight			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
test support and address correction of deficiencies. Continue contracted development efforts on test aircraft. Initiate funding for instrumentation of test aircraft. ***FY 2013 Plans:*** Continue development efforts as described above in FY12. Continue MV-22 development efforts by Bell-Boeing. Rolls-Royce will continue to provide engine support and development of MV-22 flight testing. Continue MV-22 software development efforts. Continue development in support of MV-22 Block upgrades. Continue engineering, logistics, flight test, flight test support and address correction of deficiencies. Continue contracted development efforts on test aircraft. Continue instrumentation of test aircraft.			
Title: Continued support of V-22 development, test and evaluation program	15.101	17.538	18.071
Articles:	0	0	0
FY 2011 Accomplishments: Performed in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continued development in support of MV-22 Block Upgrades. Provided field development efforts on test aircraft. Provided Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provided engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C (weather radar, improved environmental control system, cabin situational awareness device, forward firing chaff/ flare dispenser) and the overall V-22 development program. Initiated testing of improved inlet and scroll prototype to improve engine time on wing. In addition, provided R&D support and planning for the Defensive Weapon System development.			
FY 2012 Plans: Continue in-house field activity support of Integrated Test Team, Integrated Product Teams, engineering and logistics. Continue development in support of MV-22 Block Upgrades. Continue field development efforts on test aircraft. Provide Research & Development support in areas of Reliability and Maintainability data analysis, loads and dynamics, electromagnetic environmental effects, V-22 avionics, facilities management, structures, communications, etc. Provide engineering, logistics, flight test, flight test support, envelope expansion testing and correction of deficiencies as required in support of the Flight Test Program, Block C, Defensive Weapon System, and the overall V-22 development program. Initiate support of instrumentation of test aircraft. Conduct aero-performance rebaseline, Time on Wing and Mission Computer Obsolescence Initative Testing. Expanded shipboard launch and recovery envelopes with additional dynamic interface testing. Conduct KPP sustainment testing of proprotor improvements and nacelle sail design.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Provide continued support as described above in FY12. Continue support of instrumentation of test aircraft. Test B 5.01 software suite. Conduct Joint and Allied Threat Awareness System testing. Conduct Aircraft Mission Maneuvering Envelope Expansion and Velocity Not to Exceed Expansion testing.			
Accomplishments/Planned Programs Subtotals	42.686	84.477	54.412

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN 0164: *V-22*	2,190.918	2,265.885	1,457.322	0.000	1,457.322	1,494.431	1,583.609	1,516.343	1,494.883	6,240.142	35,340.232
• APN 0590: *V-22 Series*	69.530	81.264	95.856	0.000	95.856	160.880	152.400	138.247	160.192	338.900	1,731.763
• APN 0605: *V-22 Inital Spares*	0.000	8.362	15.985	0.000	15.985	20.762	17.641	5.002	0.000	Continuing	Continuing
• RDTE 0401318F : *CV-22 USAF*	17.648	13.223	28.027	0.000	28.027	25.438	21.223	14.656	14.484	Continuing	Continuing
• RDTE 1160421BB: *CV-22 SOCOM*	13.976	10.775	1.800	0.000	1.800	0.900	0.180	0.000	0.000	0.000	509.598

D. Acquisition Strategy

The MV-22 is a post Milestone III ACAT-ID program. As a result of mishaps during and subsequent to MV-22 Operational Evaluation (Apr and Dec 00), the program was restructured employing a phased approach to return to flight and tactical introduction. The Contractor and Government defined deficient areas within the program/ aircraft requiring correction prior to return to flight. A Block Upgrade approach was planned, with required efforts identified in Block "A", "B", and "C". Block "A" included those efforts necessary to return the V-22 to safe and operational fleet operations. Block "B" included those efforts necessary to improve the effectiveness and suitability of the aircraft. Block "C" includes mission enhancements like weather radar, cabin effectiveness suitability improvements, i.e., Environmental Control System, and Forward Firing ALE-47. Non-recurring development activities are to be initiated and completed for all efforts identified in Block "A", "B", and "C". The Contractor will develop specific Statements of Work and Preliminary Specification Change Notices required to integrate the Block Upgrade efforts into the baseline Program. A Systems Requirements Review, Initial Design Review, and Final Design Review was held for each of the Block efforts so the design maturity could be reviewed and the Government could redirect activities as appropriate. The CV-22 Engineering Manufacturing and Development program is also structured in Blocks to define an evolutionary approach to achieving full operational capability. Block "0" is the initial baseline CV-22 variant. Block "10" enhances mission capability with the addition of terrain following radar, additional fuel tanks, additional radios, and Block "20" includes capabilities such as radio frequency and infrared countermeasures improvements. Additional Blocks are in the planning stages to continue the growth process throughout the operational life of the weapon system.

E. Performance Metrics

Milestone Reviews.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Hardware Dev Airframe	SS/CPAF	Boeing Co.:Ridley Park, PA	3,830.843	65.043	Jan 2012	35.534	Jan 2013	-		35.534	170.175	4,101.595	4,101.595
MV-22 Hardware Dev Propulsion	SS/CPIF	Rolls-Royce Corp.:Indianapolis, IN	197.875	0.797	Jan 2012	0.807	Jan 2013	-		0.807	0.800	200.279	200.279
MV-22 Award Fee (BLK C)	SS/CPAF	Boeing Co.:Ridley Park, PA	212.550	1.100	Sep 2012	-	Sep 2013	-		-	0.000	213.650	213.650
Prior Year Prod Dev	Various	Various:Various	1,016.085	-		-		-		-	0.000	1,016.085	
		Subtotal	5,257.353	66.940		36.341		-		36.341	170.975	5,531.609	

Remarks

Contract type in FY13 for Instrumented A/C is FPIF

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Govt Engineering Sppt	WR	NAWCAD:Pax River, MD	1,099.706	1.611	Dec 2011	1.627	Nov 2012	-		1.627	28.818	1,131.762	
Prior Year Support	Various	Various:Various	189.718	-		-		-		-	0.000	189.718	
		Subtotal	1,289.424	1.611		1.627		-		1.627	28.818	1,321.480	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Dev Test & Evaluation	WR	NAWCAD:Pax River, MD	988.803	8.663	Dec 2011	8.722	Nov 2012	-		8.722	52.426	1,058.614	
MV-22 Operational Test & Evaluation	WR	OT&E Force:Norfolk, VA	41.914	4.449	Dec 2011	4.310	Dec 2012	-		4.310	23.054	73.727	
Prior Year T & E	Various	Various:Various	48.200	-		-		-		-	0.000	48.200	
		Subtotal	1,078.917	13.112		13.032		-		13.032	75.480	1,180.541	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

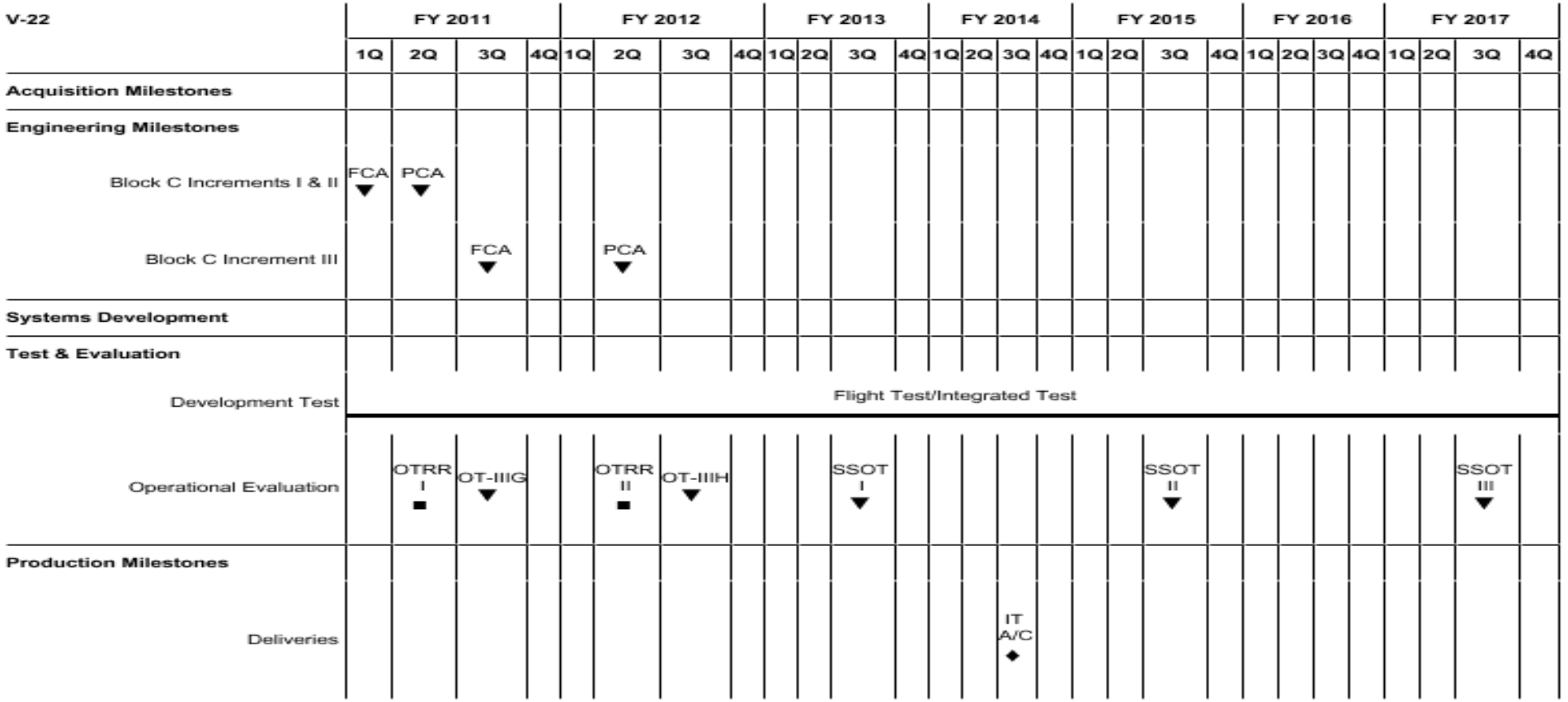
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MV-22 Engineering Tech Sppt	Various	Various:Various	1,045.448	0.776	Nov 2011	0.538	Nov 2012	-		0.538	7.937	1,054.699	
MV-22 Management Sppt Svc	Various	Various:Various	154.325	0.340	Nov 2011	0.553	Nov 2012	-		0.553	6.280	161.498	
MV-22 Program Mgmt Support	WR	NAWCAD:Pax River, MD	55.571	1.217	Nov 2011	1.855	Nov 2012	-		1.855	11.936	70.579	
MV-22 Travel	WR	NAWCAD:Pax River, MD	15.373	0.481	Jan 2012	0.466	Jan 2013	-		0.466	4.905	21.225	
Prior Year Mgmt	Various	Various:Various	41.087	-		-		-		-	0.000	41.087	
		Subtotal	1,311.804	2.814		3.412		-		3.412	31.058	1,349.088	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	8,937.498	84.477		54.412		-		54.412	306.331	9,382.718	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*



2013PB - 0604262N - 1425

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604262N: *V-22A*	PROJECT 1425: *V-22*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
V-22				
Engineering Milestones: Block C Increments I & II: Block C Increment (Inc) I&II Functional Configuration Audit (FCA)	1	2011	1	2011
Engineering Milestones: Block C Increments I & II: Block C Inc I&II Physical Configuration Audit (PCA)	2	2011	2	2011
Engineering Milestones: Block C Increment III: Block C Inc III FCA	3	2011	3	2011
Engineering Milestones: Block C Increment III: Block C Inc III PCA	2	2012	2	2012
Test & Evaluation: Development Test: Development Flight Test / Integrated Test (IT-IIID) & Continuous software sustainment developmental testing	1	2011	4	2017
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIG)	3	2011	3	2011
Test & Evaluation: Operational Evaluation: Operational Testing (OT-IIIH)	3	2012	3	2012
Test & Evaluation: Operational Evaluation: Software Sustainment Operational Testing (SSOT-I)	3	2013	3	2013
Test & Evaluation: Operational Evaluation: Software Sustainment Operational Testing (SSOT-II)	3	2015	3	2015
Test & Evaluation: Operational Evaluation: Software Sustainment Operational Testing (SSOT III)	3	2017	3	2017
Test & Evaluation: Operational Evaluation: Operational Test Readiness Review (OTRR) I	2	2011	2	2011
Test & Evaluation: Operational Evaluation: Operational Test Readiness Review (OTRR) II	2	2012	2	2012
Production Milestones: Deliveries: Instrumented Test Aircraft Delivery	3	2014	3	2014

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	5.914	3.249	2.717	-	2.717	6.759	12.119	12.166	12.479	Continuing	Continuing
0606: *Aircrew System Development*	5.914	3.249	2.717	-	2.717	6.759	12.119	12.166	12.479	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Aircrew Systems Development program provides Engineering and Manufacturing Development of Aviation Life Support Systems to protect aircrews from current and future threats including: directed energy weapons, chemical/biological/radiological agents/fallout, ballistic projectiles, temperature extremes, heat/fire, low concentration oxygen environments, high dynamic forces during emergency egress, and high "G" forces. The program also provides development for the following capabilities: night vision capability, head protection, communications, clothing, in flight restraint and stability emergency egress and descent, escape and evasion, survival and rescue, crash protection, and anthropometric sizing for small aircrew. Acquisition initiatives include: competition, the application of streamlining initiatives, use of non-developmental items, joint and tri-service developments, and the pursuit of NATO/allied cooperative ventures, which expedite introduction of new products into Navy and Marine Corps fixed and rotary wing aircraft, reduce costs, and promote commonality.

Enhanced Visual Acuity - Night Vision has been focused to provide enhanced visibility in degraded visual environments. Procurement is planned to begin in FY18.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	8.689	3.249	2.762	-	2.762
Current President's Budget	5.914	3.249	2.717	-	2.717
Total Adjustments	-2.775	-	-0.045	-	-0.045
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.118	-			
• Program Adjustments	-	-	-0.051	-	-0.051
• Rate/Misc Adjustments	-	-	0.006	-	0.006
• Congressional Recision Adjustments	-5.100	-	-	-	-
• Congressional General Reductions Adjustments	-0.057	-	-	-	-
• Congressional Add Adjustments	2.500	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*

Change Summary Explanation

Schedule:

1. Acquisition Milestones:
A. Aircrew Endurance (AE) - Milestone (MS) C changed from 3Q11 to 4Q11 due to additional Developmental Testing (DT).
B. Joint Helmet Mounted Cueing System (JHMCS) - Full Rate Production Decision (FRPD) changed from 4Q12 to 2Q12. Integrated Logistics Support (ILS) added to 3Q11. Low Rate Initial Production (LRIP) 3 added to 3Q12. Full Rate Production (FRP) 1 changed from 3Q12 to 2Q12 to align with current acquisition strategy.
C. Laser Eye Protection (LEP) - Milestone C changed from 3Q11 to 1Q13, and IOC changed from 4Q11 to 3Q13 to coincide with current acquisition strategy.
D. Flight Deck Cranial(FDC) Increment 1 MS C changed from 2Q11 to 3Q11 to coincide with current acquisition strategy.
FRPD Increment (INC) 1 changed from 2Q11 to 4Q11. MS C INC 2 added 4Q12. FRPD INC 2 added 1Q13. IOC INC 2 added 3Q13.

2. Test and Evaluation:
A. AE - DT changed from 1Q09-3Q11 to 1Q09-4Q11 due to redesign and requalification testing.
B. LEP - DT end date changed from 1Q12 to 1Q13 due to redesign and requalification testing.

3. Production Milestones:
A. AE - AE Vest LRIP quantity changed from 600 to 1,184 and end date changed from 2Q13 to 1Q13. FRP 1 quantity changed from 3,248 to 3,780, begin date changed from 1Q13 to 2Q13, and end date changed from 3Q13 to 4Q13. FRP 2 quantity changed from 1,926 to 1,790 and end date changed from 3Q14 to 1Q15. FRP 5 begin date changed from 4Q16 to 2Q17.
B. JHMCS - FRP 1 award date changed from 3Q12 to 2Q12. FRP 1 quantity changed from 69 to 71, begin date changed from 3Q12 to 1Q13, and end date changed from 2Q13 to 4Q13. LRIP 1 quantity changed from 20 to 19. LRIP 2 quantity changed from 29 to 49 and end date changed from 4Q11 to 1Q12.
C. LEP - FRP 1 renamed to LRIP, quantity changed from 180 to 32, and begin date changed from 1Q13 to 3Q13. FRP 2 renamed to FRP 1, and quantity changed from 185 to 305 and subsequent FRP's shifted down a number.

Technical: N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0606: *Aircrew System Development*	5.914	3.249	2.717	-	2.717	6.759	12.119	12.166	12.479	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

AIRCREW SYSTEMS: Aircrew Endurance (AE), Laser Eye Protection (LEP), Flight Deck Cranial (FDC), Joint Helmet Mounted Cueing System (JHMCS), Night Vision Cueing and Display (NVCD), Enhanced Visual Acuity (EVA) and Aircrew Systems (AS).

Under the above projects, AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration, Cooling and Clothing Systems. LEP includes Laser Eye Protection for noncorrective and corrective lens, Multi-Wavelength Spectacles, and Laser Eye Protection Improvement Program (LEPIP). FDC includes Improved Hearing Cranial and Protection. JHMCS NVCD includes JHMCS Night Attack. EVA includes enhanced visibility in degraded visual environment technology. AS includes State of the Art (SOA), Modular Aircrew Common Helmet.
AIRCRAFT SYSTEMS: Ejection Seat Endurance includes aircrew endurance modifications for F/A-18 aircraft. Aircraft systems include studies for Advanced Crash Protection (ACP), Oxygen Systems and Non-Ejection Seat Endurance and Electronic Knee Board (EKB).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Aircrew System Development	5.118	2.614	2.109
Articles:	0	0	0

Description: AE includes Survival Vests & Armor, Universal Camouflage, Waste Management, Hydration Cooling and Clothing Systems. LEP includes LEP Spectacles (both Self Protection and Multi-Wavelength), step-in visor and LEPIP. FDC includes Improved Hearing Protection. JHMCS NVCD includes JHMCS Night Attack. EVA includes enhanced visability in degraded visual environment technology. AS includes SOA, Modular Aircrew Common Helmet and EKB.

FY 2011 Accomplishments:
AE: Completed fleet assessment for survival vest , completed Milestone (MS) C and armor and conduct Full Rate Production Acquisition Decision Review.
LEP: Completed Developmental Testing to include cockpit compatibility, flight tests and system validation/verification for spectacles. Completed MS C and begin procurement for self protection spectacles.
FDC: Completed FDC Double Hearing Protection (DHP) verification and evaluation. Completed MS C and Low Rate Initial Production (LRIP) contract award for DHP.
JHMCS NVCD: Continue the completion stages of systems integration and work any required engineering changes discovered during Operational Testing. Accepted first LRIP assests.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Enhanced Visual Acuity (EVA): Continue Analysis of Alternatives on digital technology development and monitor Science and Technology to determine technology suitability for non-ejection seat Night Vision Goggles platforms. State of the Art (SOA): Continue a yearly evaluation and authorization of the survival and clothing items. ***FY 2012 Plans:*** AIRCREW SYSTEMS: Aircrew Endurance (AE), Laser Eye Protection (LEP), Flight Deck Cranial (FDC), Joint Helmet Mounted Cueing System (JHMCS), Night Vision Cueing and Display (NVCD), EVA and Aircrew Systems. AE: Deliver AE vest system. Initial Operational Capability (IOC) of the AE vest system. Procure additional quantities. LEP: Begin Development Testing on second increment Spectacles and IOC of first increment Spectacles. FDC: Complete FDC system vertification and evaluation. Complete the final phase of the shipboard integration. JHMCS NVCD: Address any required engineering changes discovered during Operational Testing. EVA: Complete Milestone A and enter Technology Development phase. SOA: Continue the evaluation and authorization of the survival and clothing items. ***FY 2013 Plans:*** AE: Development of new outer jacket system for inclement weather conditions LEP: IOC of Multi-wave Spectacles. JHMCS NVCD: Award of Full Rate Production contract. EVA: Continue Technology Development SOA: Continue a yearly evaluation and authorization of the survival and clothing items. Identification, testing and approval of Commercial Off-the-Shelf items that provide upgrade performance, fill capability gaps, improve aircrew performance, safety and enhance survivibility.			
Title: Aircraft Systems Development	0.796	0.635	0.608
Articles:	0	0	0
Description: Ejection Seat Endurance (ESE) includes aircrew endurance modifications for F/A-18 aircraft. Common Mobile Aircrew Restraint System (CMARS) includes a retractor system for rotary and fixed wing aircraft. AS include studies for Advance Crash Protection, Crashworthy Troop Seats, Oxygen Systems and Non Ejection Seat Endurance (NESE) for non-ejection seat aircraft. ***FY 2011 Accomplishments:*** CMARS: Issue stop-work and complete contract close-out. NESE/ESE: Complete Physical Configuration Review and IOC. Award of follow-on NESE/AV-8 ESE contract option. ***FY 2012 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Non Ejection Seat Endurance (NESE): Deliver all NESE cushions to fleet. Reach Material Support Date and Navy Support Date. ***FY 2013 Plans:*** Electronic Knee Board: Continue development.			
Accomplishments/Planned Programs Subtotals	5.914	3.249	2.717

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4244: *Aviation Life Support*	34.685	74.919	40.475	0.000	40.475	32.434	32.239	35.329	37.306	Continuing	Continuing
• APN/0575: *Aviation Life Support Mods*	2.967	1.069	2.473	0.000	2.473	6.275	6.705	5.908	6.009	Continuing	Continuing

D. Acquisition Strategy

Commercial Off-The-Shelf /Non-Developmental Items where possible, cost plus award fee contracts. Majority of programs non-ACAT programs.

E. Performance Metrics

Aircrew Endurance: Performance Metrics to include Milestone (MS) C, Full Rate Production (FRP) and Initial Operational Capability (IOC).
Laser Eye Protection (Spectacles): Performance Metrics to include Critical Design Review (CDR), MS C, and IOC.
Flight Deck Cranial: Performance Metrics to include CDR, MS C, FRP, and IOC.
Non-Ejection Seat Endurance: Performance Metrics to include MS C, FRP and IOC.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Eng Aircrew Endurance	C/CPFF	Red Inc:Lexington Park, MD	6.729	0.394	Feb 2012	0.368	Feb 2013	-		0.368	3.777	11.268	11.268
Systems Eng Laser Eye Protection (LEP)	WR	NAWCAD:Patuxent River, MD	4.953	0.372	Dec 2011	0.352	Dec 2012	-		0.352	3.554	9.231	
Systems Eng LEP	C/CPFF	Various:Various	2.780	-		-		-		-	0.000	2.780	2.780
Systems Eng Flight Deck Cranial (FDC)	WR	NAWCAD:Patuxent River, MD	3.214	0.365	Dec 2011	0.145	Dec 2012	-		0.145	0.000	3.724	
Systems Eng FDC	C/CPFF	Various:Various	4.953	-		-		-		-	0.000	4.953	4.953
Systems Eng Joint Helmet Mounted Cueing System Night Vision Cueing & Display	Various	Various:Various	7.729	0.054	Nov 2011	0.040	Nov 2012	-		0.040	0.427	8.250	
Systems Eng Aircrew Systems	WR	Various:Various	6.331	0.295	Dec 2011	0.289	Dec 2012	-		0.289	18.732	25.647	
Systems Eng Aircraft Sys	WR	Various:Various	39.779	0.635	Dec 2011	0.585	Dec 2012	-		0.585	1.828	42.827	
System Eng Wide Field of 'View	Various	Various:Various	1.850	-		-		-		-	19.800	21.650	
System Eng Enhanced Visual Acuity	WR	Various:Various	-	0.217	Nov 2011	0.196	Nov 2012	-		0.196	25.090	25.503	
		Subtotal	78.318	2.332		1.975		-		1.975	73.208	155.833	

Remarks

Wide Field of View has been renamed Enhanced Visual Acuity in FY12. Program has been redefined to include enhanced visability in degraded visual environments as well as expanding the field of view of night vision systems.

Costs for Common Mobile Restraint System efforts have been removed from the R-3 due to the program being canceled.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor ETS	C/CPFF	Red Inc:Lexington Park, MD	9.434	0.653	Dec 2011	0.542	Dec 2012	-		0.542	1.744	12.373	12.381
Contractor MSS	C/CPFF	Tekla:Woodbridge, VA	1.050	0.164	Feb 2012	0.130	Feb 2013	-		0.130	0.300	1.644	1.652

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

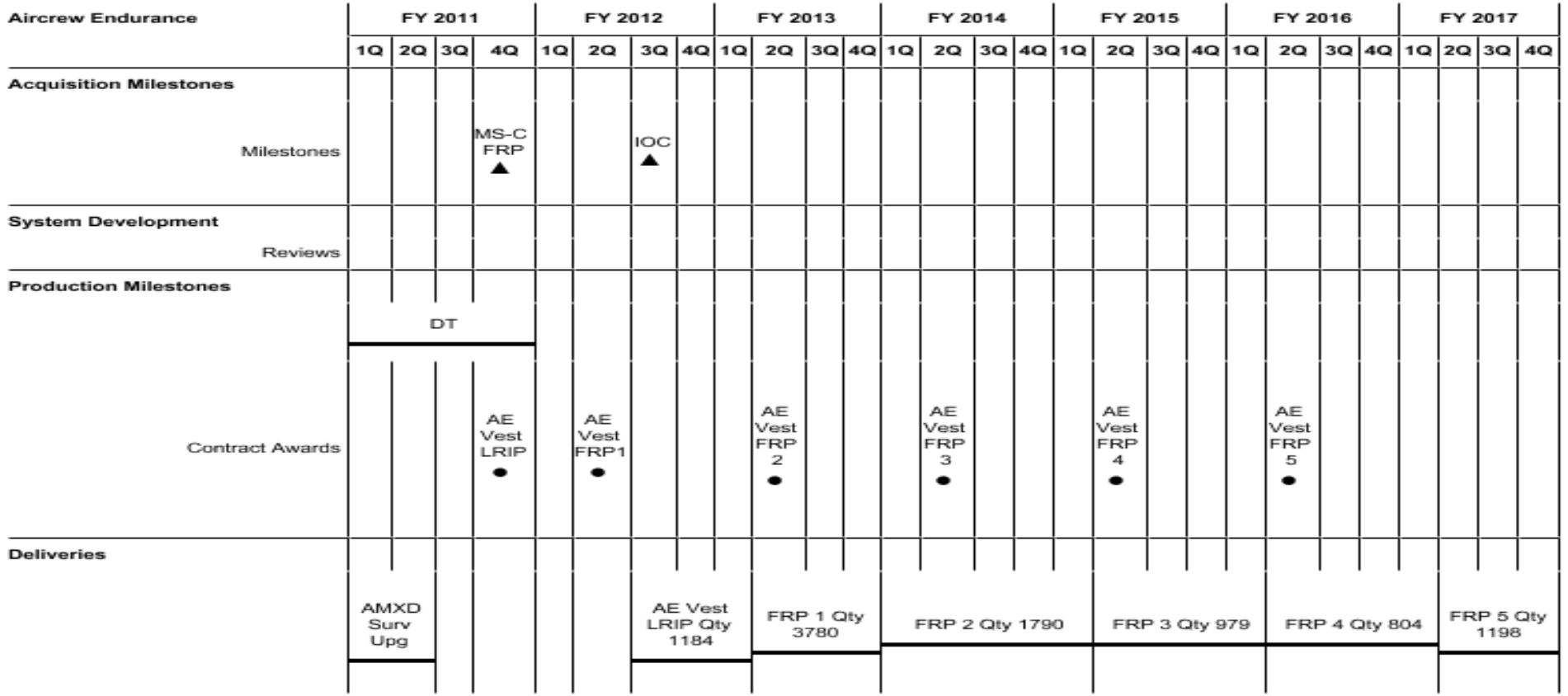
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	Various:Various	0.990	0.100	Dec 2011	0.070	Dec 2012	-		0.070	0.490	1.650	
		Subtotal	11.474	0.917		0.742		-		0.742	2.534	15.667	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	89.792	3.249		2.717		-		2.717	75.742	171.500	

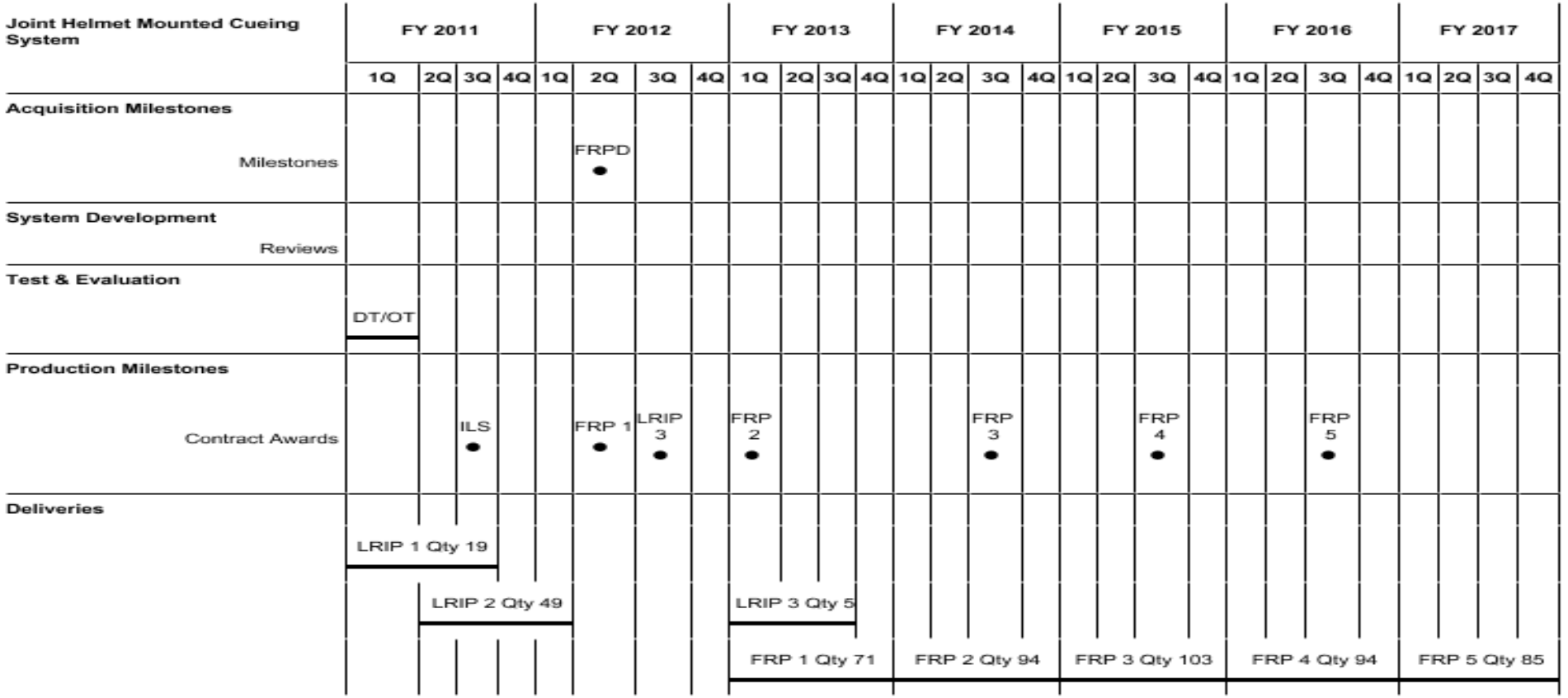
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*



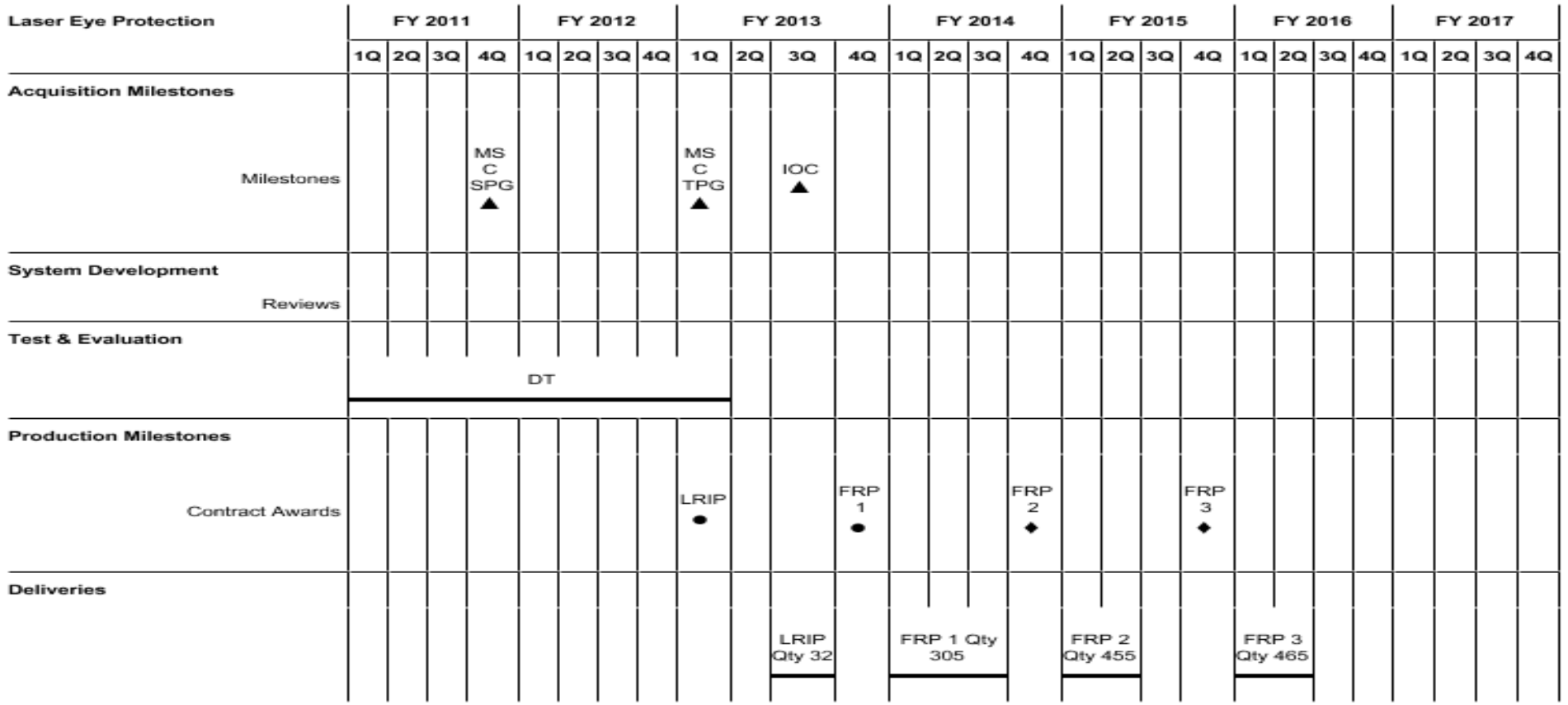
2013PB - 0604264N - 0606

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*



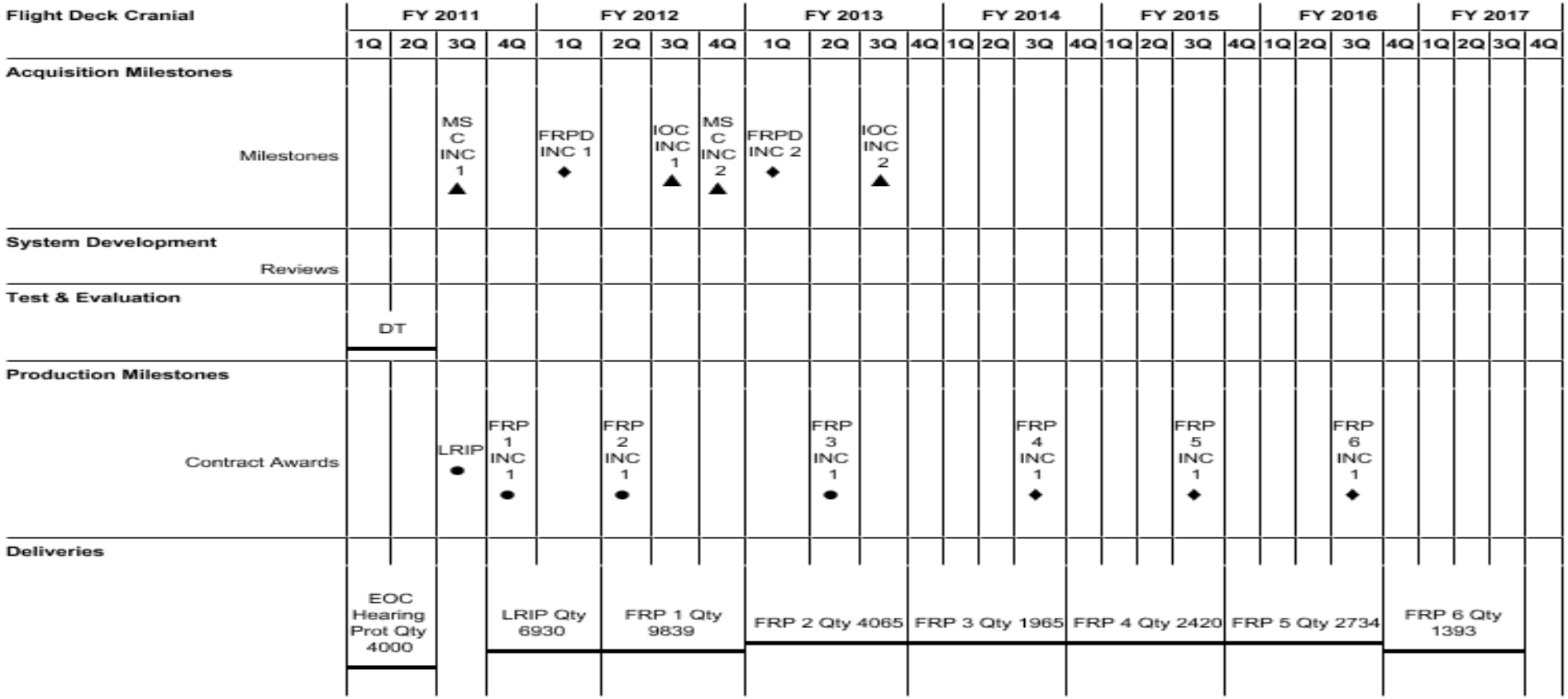
2013PB - 0604264N - 0606

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*



2013PB - 0604264N - 0606

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604264N: *Air Crew Systems Development*	**PROJECT** 0606: *Aircrew System Development*



2013PB - 0604264N - 0606

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604264N: *Air Crew Systems Development*	**PROJECT** 0606: *Aircrew System Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Aircrew Endurance				
Acquisition Milestones: Milestones: AE: MS C/FRP	4	2011	4	2011
Acquisition Milestones: Milestones: Initial Operational Capability (IOC)	3	2012	3	2012
Production Milestones: Aircrew Endurance (AE): DT	1	2011	4	2011
Production Milestones: Contract Awards: Aircrew Endurance Vest LRIP	4	2011	4	2011
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 1	2	2012	2	2012
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 2	2	2013	2	2013
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 3	2	2014	2	2014
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 4	2	2015	2	2015
Production Milestones: Contract Awards: Aircrew Endurance Vest FRP 5	2	2016	2	2016
Deliveries: Aircrew Endurance FRP 1 Qty 3780	2	2013	4	2013
Deliveries: AMXD Survivability Upgrade	1	2011	2	2011
Deliveries: Aircrew Endurance FRP 2 Qty 1790	1	2014	1	2015
Deliveries: Aircrew Endurance Vest LRIP Qty 1184	3	2012	1	2013
Deliveries: Aircrew Endurance FRP 3 Qty 979	2	2015	1	2016
Deliveries: Aircrew Endurance FRP 4 Qty 804	2	2016	1	2017
Deliveries: Aircrew Endurance FRP 5 Qty 1198	2	2017	4	2017
Joint Helmet Mounted Cueing System				
Acquisition Milestones: Milestones: JHMCS NVCD: FRP	2	2012	2	2012
Test & Evaluation: Joint Helmet Mounted Cueing System (JHMCS) Night Vision Cueing & Display (NVCD): DT/OT	1	2011	1	2011
Production Milestones: Contract Awards: JHMCS LRIP3	3	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Contract Awards: JHMCS ILS	3	2011	3	2011
Production Milestones: Contract Awards: JHMCS FRP 1	2	2012	2	2012
Production Milestones: Contract Awards: JHMCS FRP 2	1	2013	1	2013
Production Milestones: Contract Awards: JHMCS FRP 3	3	2014	3	2014
Production Milestones: Contract Awards: JHMCS FRP 4	3	2015	3	2015
Production Milestones: Contract Awards: JHMCS FRP 5	3	2016	3	2016
Deliveries: JHMCS LRIP 1 Qty 19	1	2011	3	2011
Deliveries: JHMCS LRIP 2 Qty 49	2	2011	1	2012
Deliveries: JHMCS LRIP 3 Qty 5	1	2013	3	2013
Deliveries: JHMCS FRP 1 Qty 71	1	2013	4	2013
Deliveries: JHMCS FRP 2 Qty 94	1	2014	4	2014
Deliveries: JHMCS FRP 3 Qty 103	1	2015	4	2015
Deliveries: JHMCS FRP 4 Qty 94	1	2016	4	2016
Deliveries: JHMCS FRP 5 Qty 85	1	2017	4	2017
Laser Eye Protection				
Acquisition Milestones: Milestones: LEP: MS C Self Protection Goggles	4	2011	4	2011
Acquisition Milestones: Milestones: LEP: MS C Threat Protection Goggles	1	2013	1	2013
Acquisition Milestones: Milestones: LEP: IOC	3	2013	3	2013
Test & Evaluation: LEP/SPECTACLE: DT	1	2011	1	2013
Production Milestones: Contract Awards: Laser Eye Protection LRIP	1	2013	1	2013
Production Milestones: Contract Awards: Laser Eye Protection FRP 1	4	2013	4	2013
Production Milestones: Contract Awards: Laser Eye Protection FRP 2	4	2014	4	2014
Production Milestones: Contract Awards: Laser Eye Protection FRP 3	4	2015	4	2015
Deliveries: Laser Eye Protection LRIP QTY 32	3	2013	3	2013
Deliveries: Laser Eye Protection FRP 1 QTY 305	1	2014	3	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604264N: *Air Crew Systems Development*	PROJECT 0606: *Aircrew System Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: Laser Eye Protection FRP 2 Qty 455	1	2015	2	2015
Deliveries: Laser Eye Protection FRP 3 Qty 465	1	2016	2	2016
Flight Deck Cranial				
Acquisition Milestones: Milestones: FDC: INC 1 MS C Increment 1	3	2011	3	2011
Acquisition Milestones: Milestones: FDC: INC 1 FRPD Increment 1	1	2012	1	2012
Acquisition Milestones: Milestones: FDC: INC 1 IOC Increment 1	3	2012	3	2012
Acquisition Milestones: Milestones: FDC: INC 2 MS C Increment 2	4	2012	4	2012
Acquisition Milestones: Milestones: FDC: INC 2 FRPD Increment 2	1	2013	1	2013
Acquisition Milestones: Milestones: FDC: INC 2 IOC Increment 2	3	2013	3	2013
Test & Evaluation: Flight Deck Cranial(FDC): DT	1	2011	2	2011
Production Milestones: Contract Awards: Flight Deck Cranial LRIP	3	2011	3	2011
Production Milestones: Contract Awards: Flight Deck Cranial FRP 1 INC 1	4	2011	4	2011
Production Milestones: Contract Awards: Flight Deck Cranial FRP 2 INC 1	2	2012	2	2012
Production Milestones: Contract Awards: Flight Deck Cranial FRP 3 INC 1	2	2013	2	2013
Production Milestones: Contract Awards: Flight Deck Cranial FRP 4 INC 1	3	2014	3	2014
Production Milestones: Contract Awards: Flight Deck Cranial FRP 5 INC 1	3	2015	3	2015
Production Milestones: Contract Awards: Flight Deck Cranila FPR 6 INC 1	3	2016	3	2016
Deliveries: EOC Hearing Protection Qty 4000	1	2011	2	2011
Deliveries: Flight Deck Cranial LRIP Qty 6930	4	2011	1	2012
Deliveries: Flight Deck Cranial FRP 1 Qty 9839	2	2012	4	2012
Deliveries: Flight Deck Cranial FRP 2 Qty 4065	1	2013	3	2013
Deliveries: Flight Deck Cranial FRP 3 Qty 1965	4	2013	3	2014
Deliveries: Flight Deck Cranial FRP 4 Qty 2420	4	2014	3	2015
Deliveries: Flight Deck Cranial FRP 5 Qty 2734	4	2015	3	2016
Deliveries: Flight Deck Cranial FRP 6 Qty 1393	4	2016	3	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	20.246	17.100	13.009	-	13.009	15.311	16.002	16.106	16.393	Continuing	Continuing
3063: *EA-18G Development*	20.246	17.100	13.009	-	13.009	15.311	16.002	16.106	16.393	Continuing	Continuing

A. Mission Description and Budget Item Justification

The EA-18G is replacing the EA-6B aircraft. The EA-18G's electronic attack upgrades the EA-6B Airborne Electronic Attack (AEA) capability to detect, identify, locate and suppress hostile emitters.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	22.042	17.100	13.136	-	13.136
Current President's Budget	20.246	17.100	13.009	-	13.009
Total Adjustments	-1.796	-	-0.127	-	-0.127
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.000	-			
• SBIR/STTR Transfer	-0.396	-			
• Program Adjustments	-	-	-0.159	-	-0.159
• Rate/Misc Adjustments	-	-	0.032	-	0.032
• Congressional General Reductions Adjustments	-0.131	-	-	-	-
• Congressional Directed Reductions Adjustments	-0.269	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Operational Testing for Integrated Broadcast Service scheduled to begin in 4th quarter 2011 is not required since effort has shifted to APN-5. Jamming Techniques Optimization is added as a multi-program project to analyze, develop, and improve current and future jamming techniques and tactics and is an ongoing effort. The schedule for the EA-18G unique H10 software build has been added to reflect required efficiency upgrades to AEA systems.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3063: *EA-18G Development*	20.246	17.100	13.009	-	13.009	15.311	16.002	16.106	16.393	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The EA-18G is a replacement to the EA-6B aircraft. The EA-18G electronic attack aircraft upgrades the EA-6B (ALQ-218, ALQ-99, USQ-113) Airborne Electronic Attack capability to detect, identify, locate and suppress hostile emitters; provide enhanced connectivity to National, Theater and Strike assets; and provide organic precision emitter targeting for employment of onboard suppression weapon, High-speed Anti-Radiation Missile family of weapons, to fulfill operational requirements. The performance of the aircraft is compatible with the primary strike/fighter aircraft projected to be in the inventory, allowing it to be fully integrated into specific strike packages. The EA-18G has the capability to operate autonomously or as a major node in a network-centric operation and is being designed to perform a range of Electronic Warfare/Electronic Attack functions either simultaneously or independently.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: EA-18G Design and Avionics Integration	5.848	6.033	7.405
Articles:	0	0	0
Description: The EA-18G has the capability to operate autonomously or as a major node in a network-centric operation and is being designed to perform a range of Electronic Warfare/Electronic Attack functions either simultaneously or independently. Funding will be utilized for design and integration of avionics systems into the EA-18G.			
FY 2011 Accomplishments: Continued Air Vehicle design and integration of avionics into the EA-18G.			
FY 2012 Plans: Continue Air Vehicle design and integration of avionics into the EA-18G.			
FY 2013 Plans: Continue Air Vehicle design and integration of avionics into the EA-18G.			
Title: EA-18G Software Development	8.618	7.009	4.577
Articles:	0	0	0
Description: Funding will be utilized to develop to software capabilities for the EA-18G.			
FY 2011 Accomplishments: Continued software development of the EA-18G.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue software development of the EA-18G. ***FY 2013 Plans:*** Continue software development of the EA-18G.			
Title: EA-18G Developmental & Operational Testing	5.780	4.058	1.027
Articles:	0	0	0
Description: Funding will be utilized to support required test phases of the EA-18G. ***FY 2011 Accomplishments:*** Continued operational test planning. ***FY 2012 Plans:*** Continue operational test planning. ***FY 2013 Plans:*** Continue operational test planning.			
Accomplishments/Planned Programs Subtotals	20.246	17.100	13.009

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/014300: *EA-18G*	955.262	994.596	1,027.443	0.000	1,027.443	21.970	8.111	0.000	0.000	0.000	8,651.090
• APN/05250: *F-18 Series (OSIP 011-10)*	8.402	8.707	6.693	0.000	6.693	6.912	22.779	16.555	16.746	204.000	292.045
• RDTEN/1662: *F/A-18 Improvement*	130.558	94.977	124.223	0.000	124.223	112.654	84.646	59.587	39.213	Continuing	Continuing

D. Acquisition Strategy

A sole source contract was awarded to Boeing (the platform manufacturer) for System Design and Development (SDD) under a Cost-Plus Incentive Fee/Award Fee (CPIF/AF) contract arrangement that provides incentives based on cost, schedule, and technical performance. Boeing has a subcontract with Northrop Grumman to incorporate Electronic Warfare/Electronic Attack systems into the Super Hornet. The contract has been structured to minimize the Navy's up-front investment and cancellation penalty, while reducing costs for the total program life cycle. In FY05, two F/A-18Fs began modification with RDT&E funds to incorporate the Electronic Warfare/Electronic Attack systems for further development, integration, and testing. In FY06, an Engineering Change Proposal (using procurement funds) was incorporated into the SDD contract to procure the EA-18G unique airframe changes and Airborne Electronic Attack kits, respectively, for the 4 System Design and Development (SDD) aircraft. Also during FY06, groundwork for the eight (8) Low Rate Initial Production (LRIP) aircraft was initiated and a Request For Proposal (RFP)

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*

was released prior to the Milestone C authorization and awarded in the fourth quarter FY07. During FY08, a RFP was generated and released prior to LRIP II Decision (DAB 30 April 08). Operational Evaluation started in September FY08 and was completed in May of FY09. FY09 was the last year for the SDD contract. The program achieved Full Rate Production (FRP) in November 2009. Contractual studies are underway for Operational Requirement Document core Block II activities and those efforts will be integrated into the overall EA-18G plan/roadmap as resources permit.

E. Performance Metrics

Completion of FRP Delivery scheduled for 3rd Quarter FY2013.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Furnished Equipment	WR	NSWC Det:Crane, IN	2.080	-		-		-		-	0.000	2.080	
Primary Hardware (H/W) Development (ALQ-99)	WR	NSWC Det:Crane, IN	25.014	-		-		-		-	0.000	25.014	
Primary H/W Dev (Aircraft)	SS/CPAF	Boeing:St. Louis, MO	954.118	1.242	Jan 2012	-		-		-	0.000	955.360	955.360
Primary H/W Dev (Aircraft)	Various	Various:Various	3.156	-		-		-		-	0.000	3.156	
System Design and Development Award Fee	SS/CPAF	Boeing:St. Louis, MO	88.497	-		-		-		-	0.000	88.497	88.497
Systems Engineering	WR	NAWCAD:Lakehurst, NJ	6.109	-		-		-		-	0.000	6.109	
Systems Engineering	WR	NAWCAD:Pax River, MD	30.396	0.748	Nov 2011	0.014	Nov 2012	-		0.014	0.500	31.658	
Systems Engineering	WR	NAWCWD:China Lake, CA	80.230	0.799	Nov 2011	2.658	Nov 2012	-		2.658	1.832	85.519	
Systems Engineering	WR	NAWCWD:Pt. Mugu, CA	48.720	0.484	Nov 2011	4.250	Nov 2012	-		4.250	19.458	72.912	
Systems Engineering	WR	NSCW Det:Crane, IN	14.012	0.230	Nov 2011	0.275	Nov 2012	-		0.275	0.690	15.207	
Systems Engineering (JATO)	WR	Naval Research Laboratory:Washington, DC	1.072	-		0.599	Feb 2013	-		0.599	4.957	6.628	
Systems Engineering (JATO)	WR	NAVSEASYSCOM:Washington, DC	2.414	-		2.244	Feb 2013	-		2.244	13.267	17.925	
		Subtotal	1,255.818	3.503		10.040		-		10.040	40.704	1,310.065	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	Various:Various	4.876	0.494	Nov 2011	-		-		-	2.600	7.970	
Software Development	SS/CPFF	Boeing:St. Louis, MO	230.419	7.397	Jan 2012	1.319	Jan 2013	-		1.319	22.961	262.096	262.096
		Subtotal	235.295	7.891		1.319		-		1.319	25.561	270.066	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation (DT&E)	MIPR	NASA Ames Research:CA	3.016	-		-		-		-	0.000	3.016	
DT&E	MIPR	Various:Various	2.382	-		-		-		-	0.000	2.382	
DT&E	WR	NAWCAD:Pax River, MD	111.707	1.820	Nov 2011	-		-		-	7.997	121.524	
DT&E	WR	NAWCWD:China Lake, CA	91.173	2.018	Nov 2011	-		-		-	13.869	107.060	
Operational Test & Evaluation	WR	COTF:Norfolk, VA	9.829	0.220	Nov 2011	-		-		-	1.132	11.181	
		Subtotal	218.107	4.058		-		-		-	22.998	245.163	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	12.212	0.321	Nov 2011	0.331	Nov 2012	-		0.331	1.248	14.112	
Government Engineering Support	WR	NAWCAD:Pax River, MD	31.366	0.731	Nov 2011	0.714	Nov 2012	-		0.714	4.491	37.302	
Government Engineering Support	WR	Various:Various	1.191	-		-		-		-	0.000	1.191	
Program Management Support	WR	NAWCAD:Pax River, MD	21.833	0.480	Nov 2011	0.515	Nov 2012	-		0.515	2.730	25.558	
Program Management Support	WR	CNAF:Whidbey Island, WA	0.150	-		-		-		-	0.000	0.150	
Travel	WR	Various:Various	2.439	0.116	Nov 2011	0.090	Nov 2012	-		0.090	0.666	3.311	
		Subtotal	69.191	1.648		1.650		-		1.650	9.135	81.624	

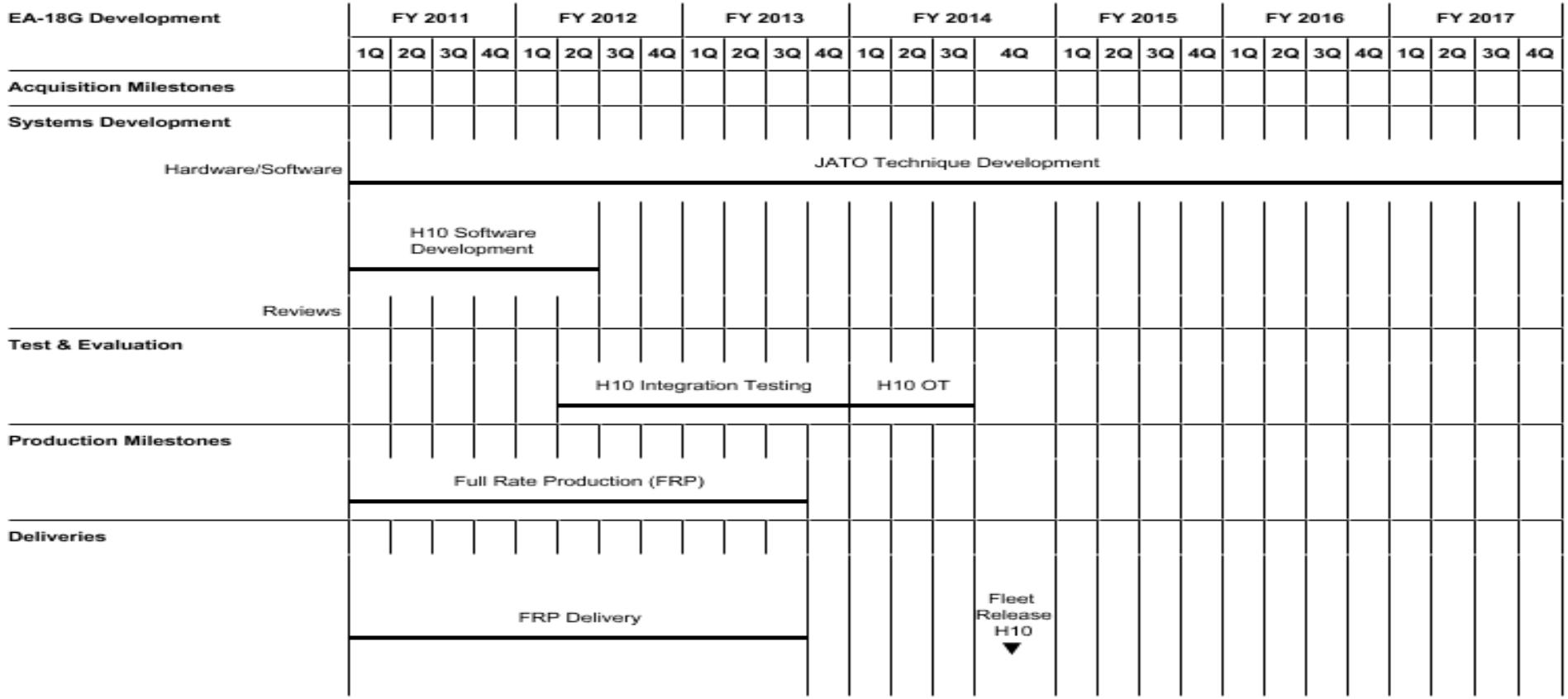
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,778.411	17.100		13.009		-		13.009	98.398	1,906.918	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*



2013PB - 0604269N - 3063

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604269N: *EA-18 Squadrons*	PROJECT 3063: *EA-18G Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
EA-18G Development				
Systems Development: Hardware/Software: JATO Technique Development	1	2011	4	2017
Systems Development: Hardware/Software: H10 Software Development	1	2011	2	2012
Test & Evaluation: H10 Integration Testing	2	2012	4	2013
Test & Evaluation: H10 OT	1	2014	3	2014
Production Milestones: Full Rate Production	1	2011	3	2013
Deliveries: FRP Delivery	1	2011	3	2013
Deliveries: Fleet Release H10	4	2014	4	2014

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	78.147	95.018	51.304	-	51.304	35.988	35.729	24.505	25.048	Continuing	Continuing
0556: *EW Counter Response*	24.075	20.222	19.728	-	19.728	19.931	20.280	20.252	20.632	Continuing	Continuing
1742: *EW Technical Development and T&E*	4.719	1.784	1.702	-	1.702	1.649	1.552	1.542	1.568	Continuing	Continuing
2175: *Tactical Air Electronic Warfare*	49.353	62.100	29.874	-	29.874	14.408	13.897	2.711	2.848	Continuing	Continuing
3327: *MAGTF EW Aviation Development*	-	10.912	-	-	-	-	-	-	-	0.000	10.912

A. Mission Description and Budget Item Justification

This program element includes development of Electronic Warfare (EW) systems for the United States Navy (USN), United States Marine Corps (USMC), and United States Army tactical aircraft, USMC helicopters, surface combatants, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of electronic warfare devices for emerging threats and emergency contingencies.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	80.819	89.418	52.963	-	52.963
Current President's Budget	78.147	95.018	51.304	-	51.304
Total Adjustments	-2.672	5.600	-1.659	-	-1.659
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.400	-			
• SBIR/STTR Transfer	-1.861	-			
• Program Adjustments	-	5.600	-1.688	-	-1.688
• Rate/Misc Adjustments	-	-	0.029	-	0.029
• Congressional General Reductions Adjustments	-0.411	-	-	-	-

Change Summary Explanation

Technical:

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*

Project Unit 0556 / EW COUNTER RESPONSE: Not Applicable
Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: Not Applicable
Project Unit 2175 / TACTICAL AIR ELECTRONIC WARFARE (EW): Not Applicable
Project Unit 3327 / Marine Air Ground Task Force (MAGTF) EW AVIATION DEVELOPMENT: FY13 and future funding moved to new PE 0604376M PU 3327.
Schedule:
Project Unit 0556 / EW COUNTER RESPONSE: Problems encountered during Improved Capability III Block 5 Developmental Testing delayed completion until 4th QTR 2012 delaying subsequent Block Developments.
Project Unit 1742 / EW TECHNICAL DEVELOPMENT & T&E: Not Applicable
Project E2175 / TACTICAL AIR EW: Integrated Defensive Electronic Countermeasure Block 2 (IB-2): Not Applicable. IDECM Block 3 (IB-3): The IB-3 Full Rate Production (FRP) 2 contract award has been changed to reflect the revised date of 3rd Qtr FY 2012.
IDECM Block 4 (IB-4): The IB-4 In-Process Review 3 has been changed to 2nd Qtr FY 2012. The IB-4 FRP 9 quantities have been changed from 19 to 7 due to FY 2012 APN-5 budget mark. ALQ-214 Software Improvement: The ALQ-214 Software Improvement contract award and the start of development have been changed to 2nd Qtr FY 2012.
Project Unit 3327 / MAGTF EW AVIATION DEVELOPMENT: Not Applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0556: *EW Counter Response*	24.075	20.222	19.728	-	19.728	19.931	20.280	20.252	20.632	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project develops upgrades to combat the increasingly complex and dense Electronic Warfare (EW) threat environment. Required improvements in Airborne Electronic Attack (AEA) will achieve application of state-of-the-art signal exploitation, processing, display techniques, improved tactics, and jamming capabilities against EW threats.

Efforts include continued development of Force Protection/Overseas Contingency Operations (classified discussion available upon request) Navigation and Information Operations applications and enhanced communications jamming. The efforts under this project provide for electronic countermeasure responses to advanced threat weapon systems and C3 networks that are expanding in density and technical complexity. This project funds the continued development and integration of all EW and Electronic Attack systems for the US Navy electronic attack aircraft including improvements within precision Direction of Arrival, geo-location, Specific Emitter Identification, Auto-Electronic Support Measures, and selective reactive jamming.

The EA-6B Improved Capability (ICAP) III test aircraft will continue to serve as a test platform during government test and evaluation of Multi Functional Information Distribution Systems/Link-16, Low Band Transmitter, and other EW improvements. A requirement exists to allow the EA-6B ICAP III to participate in various coordinated targeting scenarios such as Network Centric Warfare, Force Net, Improved Suppression of Enemy Air Defenses/Destruction of Enemy Air Defenses, and other strategic and theatre-based DOD networks and strategies. Likewise, the ICAP III system shall be matured to enable the fusion and correlation of both organic and non-organic threat information to improve present sensor and targeting information to the theatre commander via coordinated efforts between other airborne, ground and ship-based operations. A method of implementing this requirement is to include the EA-6B on the Link-16 EW Network. Incorporation of the Link-16 message set into the EA-6B and participation of the ICAP III within the Network Centric Warfare arena improves the Strike Group Commander's situational awareness. All efforts and system upgrades include the conversion of and transition from the Tactical EA-6B Mission Planning System to the Joint Mission Planning System, including development of EA-6B Unique Planning Modules.

Electronic Attack Jammer Techniques Optimization (JATO) and test support is required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and NGJ. JATO will continue to generate techniques, tactics, and procedures that will optimize the capabilities of existing weapon systems, and to assist in requirements definitions of emerging AEA systems.

The Airborne Electronic Attack Expendable provides an expanded war fighting capability, on an expendable host platform against EW threats including; Integrated Air Defenses, Command and Control Communications, and Datalinks through an open Electronic Attack Subsystem interface specification. This flexible system allows rapid technology insertion and threat set adaptability that will address AEA capability and sufficiency gaps.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270N: *Electronic Warfare (EW) Dev*	**PROJECT** 0556: *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: ICAP III UPDATE	6.472	5.281	4.459
Articles:	0	0	0
FY 2011 Accomplishments: Continued the integration and enhancement of Link-16 and ALQ-218 capabilities into the Improved Capability (ICAP) III aircraft as well as resolving any Operational Evaluation (OPEVAL)/Verification of Correction of Follow-on Operational Test & Evaluation (FOT&E) related deficiencies. Efforts focused on fielding the improvements achieved in ICAP III Block 5 as well as begin the initial planning and development of ICAP III Block 6. ***FY 2012 Plans:*** Continue development, integration, and enhancement of Link-16 and ALQ-218 Capabilities into ICAP III Aircraft as well as resolving OPEVAL and FOT&E related deficiencies via ICAP III Block releases. ***FY 2013 Plans:*** Continue development, integration, and enhancement of Link-16 and ALQ-218 Capabilities into ICAP III Aircraft as well as resolving OPEVAL and FOT&E related deficiencies via ICAP III Block releases.			
Title: MISSION PLANNING	3.989	3.220	2.350
Articles:	0	0	0
FY 2011 Accomplishments: Joint Mission Planning System (JMPS) and associated EA-6B Unique Planning Component's (UPC's) support ICAP III Block upgrades. Continued development of the JMPS components in direct support of the ICAP III system. Mission Planning Environment framework continues development required to counter Microsoft Operating System obsolescence. ***FY 2012 Plans:*** Continue development of all elements of the mission planning environment including UPC's, EA-6B Tactical Information & Report Management System and Electronic Warfare Development System. Mission Planning Environment will continue development of an upgrade operating framework and transition from a Windows XP platform to a Windows 7 platform. New framework required to counter Microsoft Operating System obsolescence. ***FY 2013 Plans:*** Continue development of all elements of the mission planning environment including UPC's, EA-6B Tactical Information & Report Management System and Electronic Warfare Development System. Mission Planning Environment will continue development of an upgrade operating framework and transition from a Windows XP platform to a Windows 7 platform. New framework required to counter Microsoft Operating System obsolescence.			
Title: LINK 16 MESSAGE SETS AND DATA LINKS	1.041	0.953	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	
FY 2011 Accomplishments: Continued development and testing of the Link-16 modification. These data link enhancements enable the EA-6B Improved Capability (ICAP) III continued participation within Force Net and facilitate the Electronic Attack (EA) contributions to the greater situational awareness allowed by Network Centric Warfare efforts. ***FY 2012 Plans:*** Continue development and testing of the Link-16 modification. These data link enhancements will enable the EA-6B ICAP III continued participation within Force Net and facilitate the EA contributions to the greater situational awareness allowed by Network Centric Warfare efforts. *Beginning in FY13, LINK 16 Message Sets and Data Links will be funded under Program Element 0604376M Project Unit 3327, MAGTF EW Aviation Development, as EA-6B Multifunctional Information Distribution Systems Block Upgrade.			
Title: JAMMER TECHNIQUES OPTIMIZATION (JATO)	9.965	10.433	11.033
Articles:	0	0	0
FY 2011 Accomplishments: Performed engineering development and test support required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B, EA-18G and Next Generation Jammer (NGJ). JATO continued to generate techniques, tactics, and procedures to optimize the capabilities of ALQ-99, ALQ-218, ALQ-227, ALQ-231, ALE-43 and Airborne Electronic Attack Expendable (AEAE) systems, and assisted in requirements definitions of emerging Airborne Electronic Attack (AEA) systems. JATO led efforts in support of Overseas Contingency Operation (OCO) and Force Protection issues. (Classified discussion available upon request.) ***FY 2012 Plans:*** Continue engineering development and test support required to address and counter new and evolving radar and communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and NGJ. JATO will continue to generate techniques, tactics, and procedures to optimize the capabilities of ALQ-99, ALQ-218, ALQ-227, ALQ-231, ALE-43 and AEAE systems, and to assist in requirements definitions of emerging AEA systems. JATO continues to lead efforts in support of OCO and Force Protection issues. (Classified discussion available upon request.) ***FY 2013 Plans:*** Provide engineering development and test support required to address new and evolving radar/communications threats in support of existing and emerging systems such as the EA-6B, EA-18G, and Next Generation Jammer. Jammer Techniques Optimization (JATO) will continue to generate techniques, tactics, and procedures to optimize the capabilities of ALQ-99,			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
USQ-113, ALQ-218, ALQ-227, ALQ-231, ALE-43, and Airborne Electronic Attack Expendable (AEAE) systems, and to assist in requirements definitions of emerging Airborne Electronic Attack (AEA) systems. JATO continues to lead efforts in support of Overseas Contingency Operation and Force Protection issues. (Classified discussion available upon request.)			
Title: Intrepid Tiger II (ALQ-231) ***Articles:*** ***FY 2011 Accomplishments:*** The ALQ-231 program conducted combined Developmental Testing/Operational Testing on Lot 1 deliveries. Conducted further risk reduction for a sustainable AEA solution. *Beginning in FY12, Intrepid Tiger II (ALQ-231) will be funded under PE 0604270N, PU 3327, Marine Air Ground Task Force Electronic Warfare Aviation Development. Beginning in FY13, Intrepid Tiger II (ALQ-231) will be funded under PE 0604376M, PU 3327, MAGTF EW for Aviation.	0.436 0	-	-
Title: AEAE ***Articles:*** ***FY 2011 Accomplishments:*** AEA payload/ITALD A-Kit and B-kit designs completed and payload captive carry flights demonstrated system level operation and effectiveness. Mission planning tools completed with Concept of Operations (CONOP) development supporting Techniques, Tactics and Procedures maturation. Engineering Change Proposals and logistics support including Maintenance and Operation publications ongoing. Engineering Development Model assets built to support ground and initial F-18 flight testing. Systems Engineering reviews conducted through the Flight Test Readiness Review. AEA Payload optimized for additional form factors and levels of integration. Risk Reduction for a long term, sustainable AEA solution conducted to include analysis, prototype and test for F/A-18 E/F carriage of the AEA payload in an AEAE and other form factors to include networked connectivity and additional operational capabilities. ***FY 2012 Plans:*** The AEAE project will continue risk reduction efforts including scope development, CONOP refinement, engineering analysis, and data gathering on the ADM-160 Miniature Air Launched Decoy for F/A-18 E/F carriage. Threat analysis and capability improvements for the Electronic Attack System payload and threat effectiveness review will address Area of Regard defined threat sets utilizing fleet operator inputs. Will conduct training, planning, supportability, and maintenance concept refinement. ***FY 2013 Plans:*** Develop Instrumented Measurement Vehicles for carrier suitability and airborne flight test and evaluation. Characterize vibration and shock forces associated with F/A-18EF carrier catapult take-offs and arrested landings. Develop accurate mathematical	2.172 0	0.335 0	1.886 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
models for wind tunnel simulation and test. Perform wind tunnel safe-separation and transition-to-flight tests for vehicle risk analysis and risk mitigation. Develop F/A-18EF Airborne Electronic Attack Expendable (AEAE) Unique Planning Component for integration into the F/A-18EF Joint Mission Planning System Mission Planning Environment and H12 Software Configuration Set. Develop and evaluate Electronic Warfare payloads for integration into AEAE platform. Integrate standard payload interface into the vehicle baseline and develop documentation in support of the Joint Capabilities Integration and Development System process to include a Capabilities Development Document.			
Accomplishments/Planned Programs Subtotals	24.075	20.222	19.728

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/05110: *EA-6 Series*	12.634	27.734	30.062	0.000	30.062	18.600	14.099	10.068	10.285	Continuing	Continuing
• APN/05130: *AEA Systems*	29.601	77.365	49.999	0.000	49.999	48.878	59.692	43.688	41.870	Continuing	Continuing

D. Acquisition Strategy

The Improved Capability (ICAP) III contract, an Engineering Manufacturing Development Cost Plus Incentive Fee/Award Fee basic contract with two Fixed Price Incentive production options, was awarded to a Northrop Grumman team in March 1998 following Milestone II after full and open competition. The contract was changed to a Cost Plus Award Fee contract in FY 1999. Low Rate Initial Production contract award was completed in FY 2003. A Milestone III Navy Program Decision Meeting was held on 23 September 2005. The Acquisition Decision Memorandum was signed by Assistant Secretary of the Navy for Research Development Acquisition on 21 November 2005. A Firm Fixed Price Full Rate Production (FRP) contract for Lot 2, 4 ALQ-218 systems, was awarded in March 2006. The FRP Lot 3 contract for 7 ALQ-218 systems was awarded 11 April 2008. The FRP Lot 4 contract for 9 ALQ-218 systems was awarded in August 2008.

E. Performance Metrics

1. Successful completion of ICAP III Block 4 development and testing.
2. Continued development of ICAP III Block 5 sufficient to conduct a successful development test.
3. Jammer Techniques Optimization development counters enemy radar systems and communcation systems to provide techniques to protect allied forces.
4. AEAE continues risk reduction and system development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HDW Develop - ICAP III	C/FFP	Various:Various	260.171	0.533	Dec 2011	0.500	Dec 2012	-		0.500	Continuing	Continuing	Continuing
Studies & Analysis (Non FFRDC)	C/FFP	Various:Various	1.043	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering NR	WR	Naval Research Lab:Maryland	4.333	0.446	Dec 2011	0.409	Dec 2012	-		0.409	Continuing	Continuing	Continuing
Systems Engineering NAWCAD	WR	NAWCAD:Patuxent River, MD	17.729	2.294	Nov 2011	2.443	Nov 2012	-		2.443	Continuing	Continuing	Continuing
Systems Eng/BLK Update	WR	NAWCWD:Point Mugu, CA	53.770	5.921	Nov 2011	6.126	Nov 2012	-		6.126	Continuing	Continuing	Continuing
Systems Engineering NSWC	WR	NSWC Det:Crane, IN	8.258	0.755	Dec 2011	0.718	Dec 2012	-		0.718	Continuing	Continuing	Continuing
Systems Engineering VAR	WR	Various:Various	12.775	1.112	Dec 2011	1.075	Dec 2012	-		1.075	Continuing	Continuing	Continuing
		Subtotal	358.079	11.061		11.271		-		11.271			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support - JATO	SS/FP	Johns Hopkins Unv:Maryland	20.642	4.035	Dec 2011	3.993	Dec 2012	-		3.993	Continuing	Continuing	Continuing
Eng & Tech Srvc (Non FFRDC)	Various	Various:Various	8.672	4.567	Dec 2011	3.979	Dec 2012	-		3.979	Continuing	Continuing	Continuing
DFCS Installs	Various	Various:Various	0.559	-		-		-		-	Continuing	Continuing	Continuing
ILS Pubs - ICAP III	WR	FRC:Jacksonville, FL	1.273	0.424	Dec 2011	0.387	Dec 2012	-		0.387	Continuing	Continuing	Continuing
		Subtotal	31.146	9.026		8.359		-		8.359			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

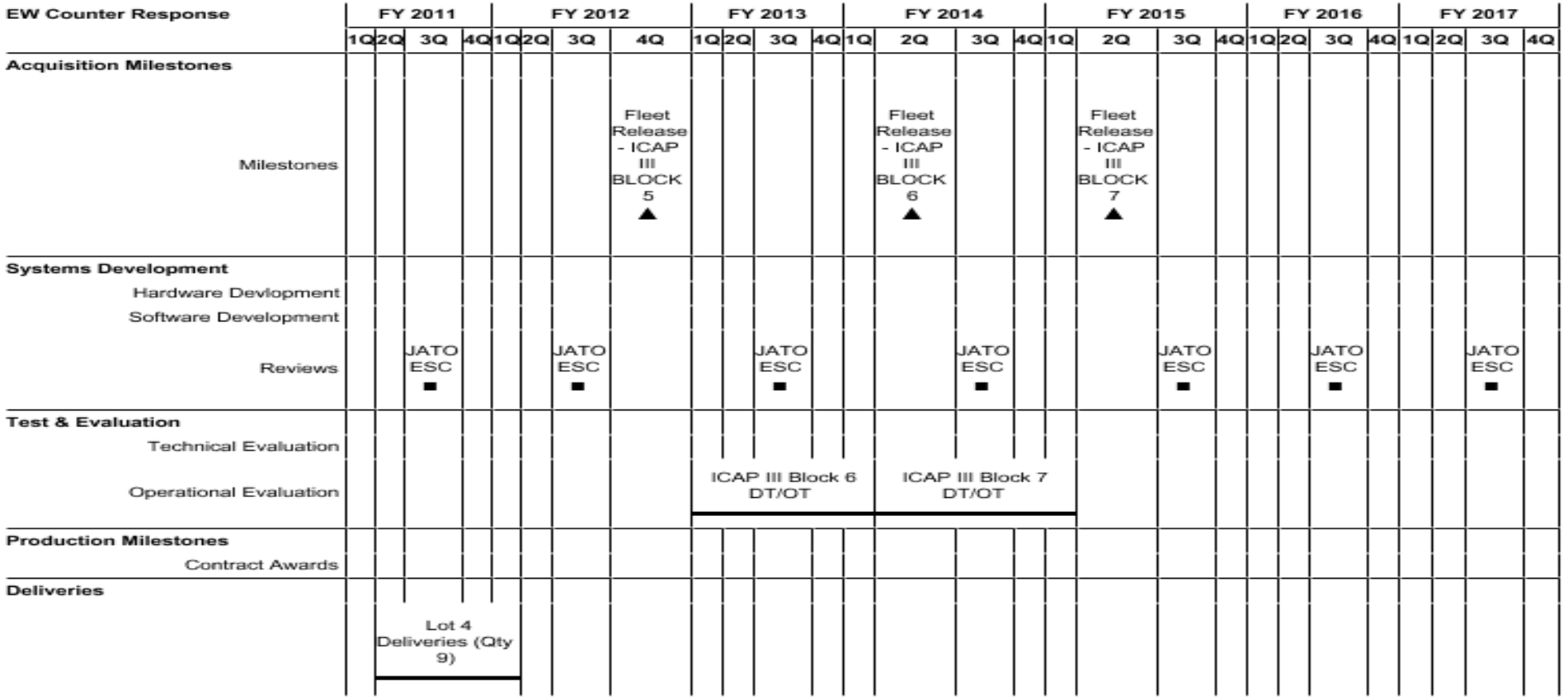
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	Various:Various	0.772	0.135	Dec 2011	0.098	Dec 2012	-		0.098	Continuing	Continuing	Continuing
		Subtotal	0.772	0.135		0.098		-		0.098			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	389.997	20.222		19.728		-		19.728			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*



2013PB - 0604270N - 0556

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 0556: *EW Counter Response*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
EW Counter Response				
Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 5	4	2012	4	2012
Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 6	2	2014	2	2014
Acquisition Milestones: Milestones: Fleet Release - ICAP III BLOCK 7	2	2015	2	2015
Systems Development: Reviews: JATO Executive Steering Committee 2011	3	2011	3	2011
Systems Development: Reviews: JATO Executive Steering Committee 2012	3	2012	3	2012
Systems Development: Reviews: JATO Executive Steering Committee 2013	3	2013	3	2013
Systems Development: Reviews: JATO Executive Steering Committee 2014	3	2014	3	2014
Systems Development: Reviews: JATO Executive Steering Committee 2015	3	2015	3	2015
Systems Development: Reviews: JATO Executive Steering Committee 2016	3	2016	3	2016
Systems Development: Reviews: JATO Executive Steering Committee 2017	3	2017	3	2017
Test & Evaluation: Operational Evaluation: ICAP III Block 6 DT/OT	1	2013	1	2014
Test & Evaluation: Operational Evaluation: ICAP III Block 7 DT/OT	2	2014	1	2015
Deliveries: ICAP III - Lot 4 FRP Deliveries (Qty 9)	2	2011	1	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1742: *EW Technical Development and T&E*	4.719	1.784	1.702	-	1.702	1.649	1.552	1.542	1.568	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project Unit 1742 EW Technical Development and Test and Evaluation (T&E) funds efforts that focus on the quick reaction prototyping of tactical information and electronic warfare systems. This program directly addresses various fleet requirements across multiple platforms (airborne, surface and subsurface), airborne and surface crypotologic operational requirements documents and the joint oversight council missions needs statement to research, assess, and develop information warfare and electronic warfare systems and capabilities. These systems/capabilities provide information dominance to friendly forces during conflict, which is necessary for successful mission accomplishment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: EW Technical Development and T&E	0.395	-	-
Articles:	0		
FY 2011 Accomplishments: Completed airborne Information Warfare jammer development, test, and evaluation to include ancillary equipment, cabling, hardware, antennas and installation on prototype aircraft.			
Title: EW Technical Development Studies & Analysis	2.633	1.584	1.500
Articles:	0	0	0
FY 2011 Accomplishments: Continued studies and vulnerability analysis on emerging/changing threats/targets for EW programs. ***FY 2012 Plans:*** Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs. ***FY 2013 Plans:*** Continue studies and vulnerability analysis on emerging/changing threats/targets for EW programs.			
Title: EW Technical Development/Develop and Systems Integration	1.181	-	-
Articles:	0		
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Completed development of EW capabilites in accordance with Fleet Forces Command and prioritized signals and networks that are first to be integrated into existing Maritime Cryptologic Systems for the 21st Century EW systems and deployed on air and surface platforms.			
Title: EW Technical Development/Program Management	0.510	0.200	0.202
Articles:	0	0	0
FY 2011 Accomplishments: Continued funding necessary travel expenses and training to support the Research & Development projects.			
FY 2012 Plans: Continue funding necessary travel expenses and training to support the Research & Development projects.			
FY 2013 Plans: Continue funding necessary travel expenses and training to support the Research & Development projects.			
Accomplishments/Planned Programs Subtotals	4.719	1.784	1.702

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Navy Cyber Warfare Development Group (NCWDG) (formerly known as the Navy Information Operations Command (NIOC) Suitland) is granted streamlined acquisition authority for the development of classified prototypes and special capabilities under the DASN(C4I).

E. Performance Metrics

The NCWDG serves as the Program Management Office of the EW Technical Development and Information Warfare (IW) program. As such, NCWDG is tasked as the Navy's principal technical agent to research, assess, and develop EW/IW capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPFF	Classified:Various	3.604	-		-		-		-	Continuing	Continuing	Continuing
Aircraft Integration	WR	NAWC CL:China Lake, CA	1.600	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.204	-		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	C/CPFF	Classified:Various	2.987	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPFF	Classified:Various	3.944	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Studies & Analyses	Various	Classified:Various	7.974	1.584	Nov 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	Continuing
		Subtotal	14.905	1.584		1.500		-		1.500			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NRL:Washington, DC	2.890	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	2.890	-		-		-		-			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	Various	Classified:Various	0.905	0.085	Oct 2011	0.084	Oct 2012	-		0.084	Continuing	Continuing	Continuing
Travel	WR	NCWDG:Washington DC	1.388	0.115	Oct 2011	0.118	Oct 2012	-		0.118	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Workforce Fund - 2009	Various	Various:Various	0.026	-		-		-		-	0.000	0.026	
		Subtotal	2.319	0.200		0.202		-		0.202			

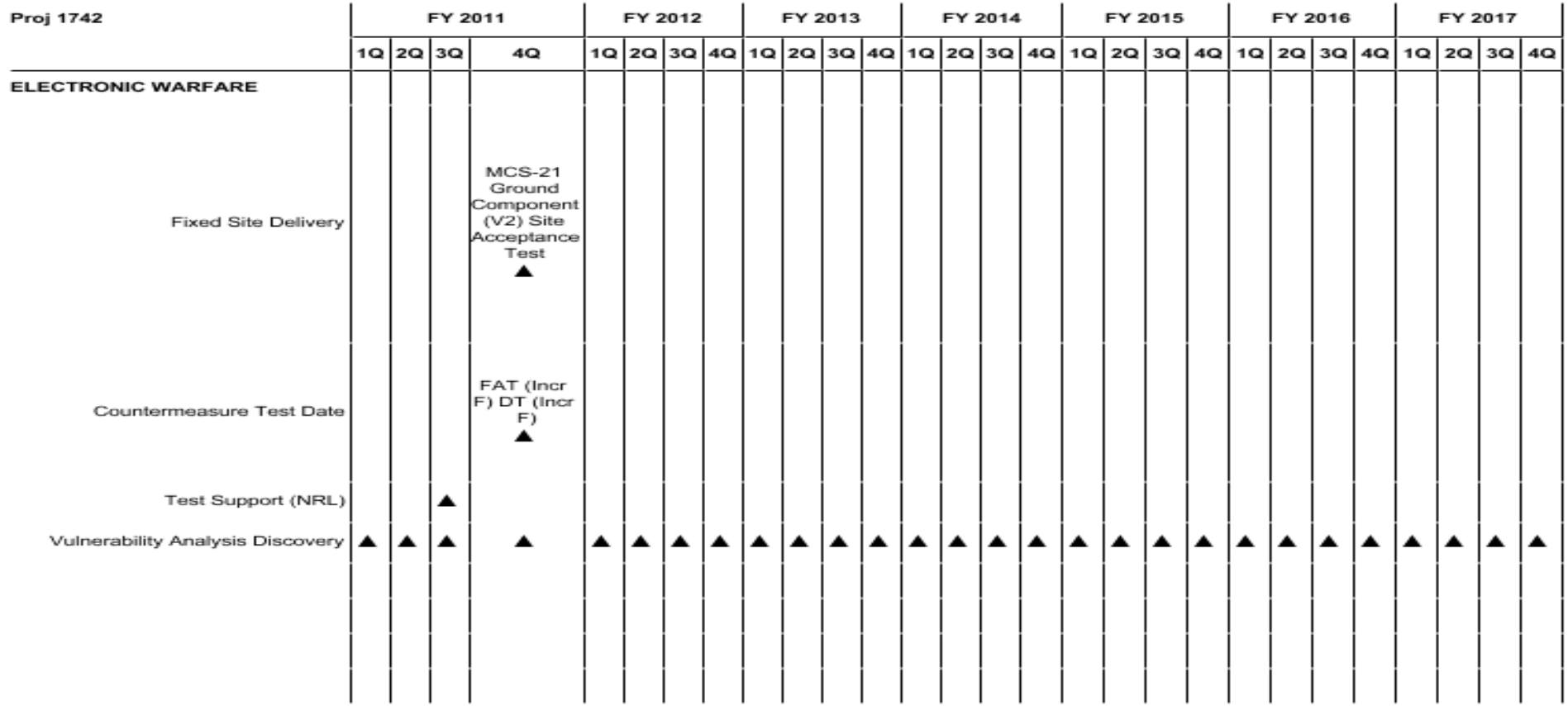
Remarks

Provides for official travel and training in direct support of Research & Development projects.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	25.318	1.784		1.702		-		1.702			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*



2013PB - 0604270N - 1742

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270N: *Electronic Warfare (EW) Dev*	**PROJECT** 1742: *EW Technical Development and T&E*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1742				
ELECTRONIC WARFARE: Fixed Site Delivery: Electronic Warfare: Fixed Site Delivery: Fixed Site Delivery #3	4	2011	4	2011
ELECTRONIC WARFARE: Countermeasure Test Date: Countermeasure Test Date: Countermeasure Delivery #3	4	2011	4	2011
ELECTRONIC WARFARE: Test Support (NRL): Test Support (NRL)	3	2011	3	2011
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: Vulnerability Analysis Discovery	1	2011	1	2011
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2011	2	2011	2	2011
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2011	3	2011	3	2011
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2011	4	2011	4	2011
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2012	1	2012	1	2012
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2012	2	2012	2	2012
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2012	3	2012	3	2012
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2012	4	2012	4	2012
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2013	1	2013	1	2013
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2013	2	2013	2	2013
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2013	3	2013	3	2013
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2013	4	2013	4	2013
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2014	1	2014	1	2014
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2014	2	2014	2	2014
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2014	3	2014	3	2014
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2014	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 1742: *EW Technical Development and T&E*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2015	1	2015	1	2015
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2015	2	2015	2	2015
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2015	3	2015	3	2015
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2015	4	2015	4	2015
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2016	1	2016	1	2016
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2016	2	2016	2	2016
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2016	3	2016	3	2016
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2016	4	2016	4	2016
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 1 2017	1	2017	1	2017
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 2 2017	2	2017	2	2017
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 3 2017	3	2017	3	2017
ELECTRONIC WARFARE: Vulnerability Analysis Discovery: VAD 4 2017	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2175: *Tactical Air Electronic Warfare*	49.353	62.100	29.874	-	29.874	14.408	13.897	2.711	2.848	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Integrated Defensive Electronic Countermeasures (IDECM) Block 3 (IB-3) introduced the new Fiber Optic Towed Decoy (FOTD) capability to the IDECM Block 2 Electronic Warfare (EW) Suite as a replacement for the ALE-50 decoy. The FOTD, when integrated with the rest of the F/A-18E/F EW suite (i.e., ALQ-214, ALR-67(V)3, ALE-47 and ALE-50), the associated cockpit controls, displays and other avionics significantly improves the survivability of the host aircraft in a Radio Frequency threat environment. Initial Operational Test & Evaluation found IB-3 effective, not suitable. Verification of Correction to Deficiencies completed in 2nd Qtr FY2011. An IB-3 MS III (Full Rate Production Decision) was approved in the 4th Qtr FY2011.

IDECM Block 4 (IB-4) is an Engineering Change Proposal (ECP) to the ALQ-214 to render it suitable for operation on F/A-18C/D aircraft (replacing the ALQ-126B and significantly improving F/A-18C/D survivability) while retaining all IDECM suite functionality when installed on F/A-18E/F aircraft. The IB-4 acquisition and contract strategy includes development of the Common On-Board-Jammer for the F/A-18 C/D/E/F aircraft through sole source contract awards for modifications to the ALQ-214. IB-4, ALQ-214 ECP, efforts include hardware and software design, development and test, delivery of 18 Engineering Development Models, integration and testing on the host aircraft. The F/A-18C/D EW Suite includes the ALR-67(V)2 Radar Warning Receiver (RWR), the ALE-47 Countermeasures Dispensing Set (CMDS), the mission computer and other avionics. In addition to performing the RWR function, the ALR-67(V)2 is the EW Bus Controller. The EW Bus is the primary interface between the EW Systems (Jammer, RWR, and CMDS). The mission computer is the Avionics Bus Controller, the interface between the EW suite and other avionics.

ALQ-214 Software Improvement will provide the ALQ-214 with Digital Radio Frequency Memory deny-delay, technique capability significantly improving F/A-18C/D/E/F survivability. Acquisition and contract strategy includes development, integration and test of the ALQ-214 software improvements through sole-source contract award. Minor modification to other avionics may be required in order to integrate this new capability. These other avionics may include, but are not limited to, the ALR-67(V)2, ALR-67(V)3, ALE-47, ALE-50, ALE-55, Mission Computer and Fire Control Radar.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Tactical Air EW	49.353	62.100	29.874
Articles:	6	0	0
FY 2011 Accomplishments: FY11 Base: The IDECM Block 4, ALQ-214 ECP engineering effort continued into FY11. In addition, engineering and logistics support with laboratory testing began in FY11.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
The Integrated Defensive Electronic Countermeasures (IDECM) Block 4, ALQ-214 Engineering Change Proposal (ECP) engineering effort will continue into FY12 and will include engineering and logistics support and flight testing. The ALQ-214 Software Improvement contract is planned for award to include development, integration and test of the ALQ-214 with Digital Radio Frequency Memory deny-delay, technique capability. ***FY 2013 Plans:*** The IDECM Block 4, ALQ-214 ECP engineering effort will conclude in FY13. Flight testing for the ALQ-214 ECP will resume. The ALQ-214 Software Improvement contract will continue into FY13 and will include engineering and logistics support.			
Accomplishments/Planned Programs Subtotals	49.353	62.100	29.874

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0576 1: *IDECM*	18.845	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	268.108
• APN/0576 2: *Common On-Board Jammer*	0.000	40.272	57.067	0.000	57.067	84.305	102.388	133.449	51.569	156.382	625.432
• PANMC/0182: *Airborne Expendable CM*	19.041	20.248	20.931	0.000	20.931	21.508	22.210	22.575	22.996	Continuing	Continuing

D. Acquisition Strategy

IDECM Block 3 (IB-3) sole source award of Full Rate Production (FRP) in FY 2012. Annual IB-3 production contracts will continue through FY 2041. The ALQ-214 ECP contract effort was awarded sole source to ITT Electronic Systems in December 2009. The contract is planned to continue through FY 2013. ALQ-214 Software Improvement acquisition is planned via sole-source award to ITT in FY 2012. ITT is the original developer/manufacturer and current sustainer of the ALQ-214.

E. Performance Metrics

IDECM Block 3: Successfully award FRP 2-6 Contract in 3rd Qtr FY 2012.

IDECM Block 4: Successfully conduct In-Process Review 3 (Production Cut-In 1) in 1st Qtr FY 2012.

ALQ-214 Software Improvement: Successfully award a software development contract in 2nd Qtr FY 2012.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Integration-IDECM	Various	Various:Various	70.761	-		-		-		-	0.000	70.761	
Aircraft Integration-IDECM Boeing	SS/CPFF	Boeing:St. Louis, MO	7.269	3.012	Mar 2012	-		-		-	0.000	10.281	10.281
Primary Hdw Dev AAR-47 FY07 SUPP ATK	SS/CPFF	ATK Missile:Clearwater, FL	16.000	-		-		-		-	0.000	16.000	16.000
Primary Hdw Dev AAR-47 FY07 SUPP AFB	MIPR	AFB:Eglin, FL	2.100	-		-		-		-	0.000	2.100	
Primary Hdw Dev AAR-47 FY07 SUPP NVS	MIPR	NVS:Fort Belvoir, VA	0.064	-		-		-		-	0.000	0.064	
Primary Hdw Dev - IDECM ITT	SS/FFP	ITT:Clifton, NJ	91.243	19.068	Dec 2011	-		-		-	0.000	110.311	110.311
Ship Suitability AAR-47	WR	NAWCAD:Pax River, MD	0.050	-		-		-		-	0.000	0.050	
Studies & Analysis DRFM (CONG)	MIPR	NUWC:Keyport, WA	0.018	-		-		-		-	0.000	0.018	
Systems Eng - IDECM BAE	SS/CPFF	BAE Systems:Nashua, NH	14.552	-		-		-		-	0.000	14.552	14.552
Systems Eng - IDECM	SS/CPFF	Various:Various	62.783	6.477	Mar 2012	5.186	Mar 2013	-		5.186	Continuing	Continuing	Continuing
Systems Eng - IDECM Raytheon	SS/CPFF	Raytheon:Goleta, CA	0.268	-		-		-		-	0.000	0.268	0.268
Risk Reduction DRFM (CONG)	SS/CPFF	ITT:Clifton, NJ	1.810	-		-		-		-	0.000	1.810	1.810
Risk Reduction IDECM ITT1	SS/CPFF	ITT:Clifton, NJ	2.495	-		-		-		-	0.000	2.495	2.495
Risk Reduction IDECM ITT2	SS/FP	ITT:Clifton, NJ	7.505	-		-		-		-	0.000	7.505	7.505
Risk Reduction ALQ-214 SW Imp	SS/CPFF	ITT:Clifton, NJ	3.427	-		-		-		-	0.000	3.427	3.427
		Subtotal	280.345	28.557		5.186		-		5.186			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev/Eng Supt AAR-47 (Non-FFRDC)	WR	NRL:Washington, DC	0.343	-		-		-		-	0.000	0.343	
Dev/Eng Supt AAR-47	WR	Various:Various	0.220	-		-		-		-	0.000	0.220	
Software Dev - IDECM	WR	Various:Various	6.843	-		-		-		-	0.000	6.843	
Integrated Log Supt AAR-47	SS/CPFF	ATK Missile:Clearwater, FL	0.650	-		-		-		-	0.000	0.650	0.650
Software Dev AAR-47	SS/CPFF	ATK Missile:Clearwater, FL	0.171	-		-		-		-	0.000	0.171	0.171
Integrated Log Supt - IDECM	WR	FRC-SE:Jacksonville, FL	0.413	0.096	Dec 2011	-		-		-	0.000	0.509	
MSS - IDECM (Non-FFRDC)	SS/CPFF	FRC-SE:Jacksonville, FL	0.200	-		-		-		-	0.000	0.200	0.200
Software Dev-ALQ-214 SW Dev	SS/CPFF	ITT:Clifton, NJ	-	11.452	Feb 2012	7.485	Dec 2012	-		7.485	Continuing	Continuing	Continuing
Software Dev-ALQ-214 SW Dev	SS/CPFF	Various:Various	-	4.997	Mar 2012	4.935	Mar 2013	-		4.935	Continuing	Continuing	Continuing
		Subtotal	8.840	16.545		12.420		-		12.420			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval Supt AAR-47	WR	NRL:Washington, DC	0.270	-		-		-		-	0.000	0.270	
Dev Test & Eval Supt ALQ-214 SW Imp	WR	Various:Various	-	0.475	Dec 2011	1.253	Dec 2012	-		1.253	Continuing	Continuing	Continuing
IDECM Test Supt (OPTEVFOR)	WR	Oper T&E for CD 30:VA	4.048	-		-		-		-	0.000	4.048	
IDECM Test Supt (Non-FFRDC)	SS/CPFF	Various:Various	1.486	-		-		-		-	0.000	1.486	1.486
Live Fire Test & Eval AAR-47	WR	NRL:Washington, DC	0.508	-		-		-		-	0.000	0.508	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Eval AAR-47	WR	NRL:Washington, DC	0.100	-		-		-		-	0.000	0.100	
Oper Test & Eval ALQ-214 SW Imp	WR	Various:Various	-	-		-		-		-	Continuing	Continuing	Continuing
Studies & Analysis (Non-FFRDC) (CONG)	SS/CPFF	John Hopkins Un:Laurel, MD	0.774	-		-		-		-	0.000	0.774	0.774
Flight Test - IDECM	WR	Various:Various	1.278	2.592	Dec 2011	0.605	Dec 2012	-		0.605	Continuing	Continuing	Continuing
Flight Test- IDECM	WR	NAWCWD:China Lake, CA	-	8.646	Dec 2011	2.988	Dec 2012	-		2.988	Continuing	Continuing	Continuing
		Subtotal	8.464	11.713		4.846		-		4.846			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AAR-47 Travel	Allot	NAVAIR:Pax River, MD	0.050	-		-		-		-	0.000	0.050	
Prog Mgmt DRFM	WR	NAWCAD:Pax River, MD	0.002	-		-		-		-	0.000	0.002	
PM Supt DRFM (Non-FFRDC)	SS/CPFF	Amelex:California, MD	0.146	-		-		-		-	0.000	0.146	0.146
Prog Mgmt Supt DRFM (CONG)	WR	NAWCAD:Pax River, MD	0.234	-		-		-		-	0.000	0.234	
Mgt & Prof Supt Srvc-IDECM (Non-FFRDC)	SS/CPFF	Amelex:California, MD	0.404	0.571	Dec 2011	-		-		-	0.000	0.975	0.975
Prog Mgmt Supt - IDECM	WR	Various:Various	19.985	-		-		-		-	Continuing	Continuing	Continuing
Prog Mgmt Supt (Non-FFRDC)	SS/CPFF	DPA, Inc.:Arlington, VA	0.077	-		-		-		-	0.000	0.077	0.077
Travel - IDECM	Allot	Various:Various	0.104	-		-		-		-	0.000	0.104	
Travel - IDECM NAWCAD	Allot	NAWCAD:Pax River, MD	0.224	-		-		-		-	0.000	0.224	
Travel	Allot	NAWCAD:Pax River, MD	0.435	0.185	Oct 2011	0.150	Oct 2012	-		0.150	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Impact Fees	WR	NAWCAD:Pax River, MD	0.032	-		-		-		-	0.000	0.032	
Eng Supt - IDECM NAWCAD	WR	NAWCWD:China Lake, CA	9.547	-		-		-		-	0.000	9.547	
Eng Supt - IDECM	WR	Various:Various	32.505	-		-		-		-	0.000	32.505	
Eng/Log Supt - DRFM (CONG) VAR	WR	Various:Various	0.524	-		-		-		-	0.000	0.524	
Eng/Log Supt - DRFM (CONG) NAWCAD	WR	NAWCAD:Pax River, MD	0.713	-		-		-		-	0.000	0.713	
Eng/Log Supt - DRFM (CONG) DTIC	MIPR	DTIC:Fort Belvoir, VA	0.067	-		-		-		-	0.000	0.067	
Eng/Log Supt - DRFM NAWCAD	WR	NAWCAD:Pax River, MD	0.120	-		-		-		-	0.000	0.120	
Eng/Log Supt - DRFM	WR	Various:Various	0.420	-		-		-		-	0.000	0.420	
Eng/Log Supt - IDECM NAWCAD	WR	NAWCAD:Pax River, MD	2.136	1.528	Dec 2011	1.331	Dec 2012	-		1.331	Continuing	Continuing	Continuing
Eng/Log Supt - IDECM	WR	Various:Various	5.726	2.252	Dec 2011	5.108	Dec 2012	-		5.108	Continuing	Continuing	Continuing
Eng/Log Supt - DRFM (CONG) NRL	WR	NRL:Washington, DC	0.375	-		-		-		-	0.000	0.375	
Eng/Log Supt - DRFM (CONG) FRCSE	WR	FRC-SE:Jacksonville, FL	0.050	-		-		-		-	0.000	0.050	
Eng/Log Supt - IDECM FRCSE	WR	FRC-SE:Jacksonville, FL	0.158	-		-		-		-	0.000	0.158	
Eng & Tech Srvcs (Non-FFRDC) L3	SS/CPFF	L-3/Titan:California, MD	0.448	-		-		-		-	0.000	0.448	0.448
Eng & Tech Srvcs (Non-FFRDC) NRL	SS/CPFF	NRL:Washington, DC	0.479	0.250	Dec 2011	0.258	Dec 2012	-		0.258	Continuing	Continuing	Continuing
Eng & Tech Srvcs (Non-FFRDC)	SS/CPFF	COTF:Norfolk, VA	0.534	0.499	Dec 2011	0.575	Dec 2012	-		0.575	Continuing	Continuing	Continuing
		Subtotal	75.495	5.285		7.422		-		7.422			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	373.144	62.100		29.874		-		29.874			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270N: *Electronic Warfare (EW) Dev*	**PROJECT** 2175: *Tactical Air Electronic Warfare*

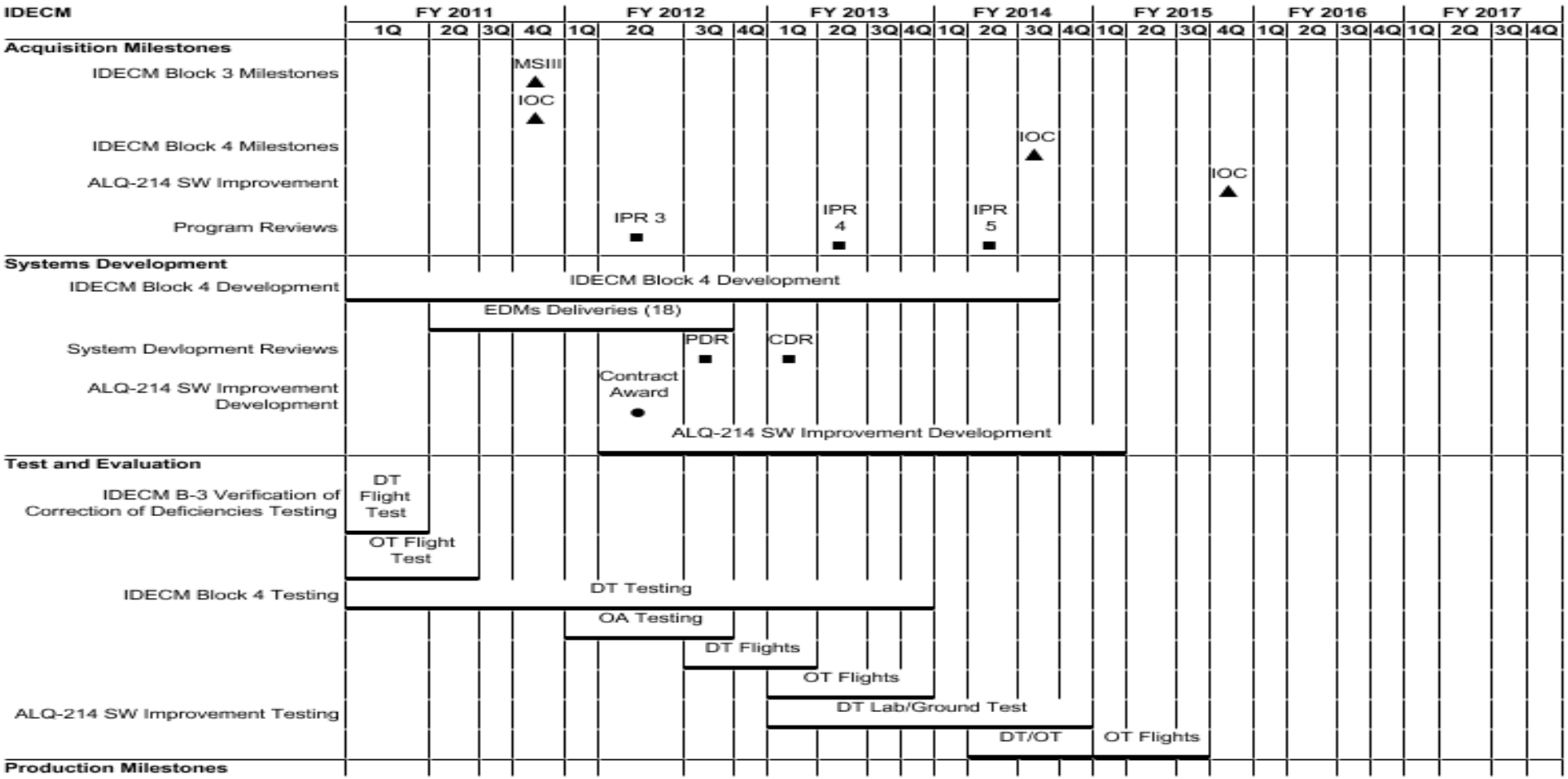
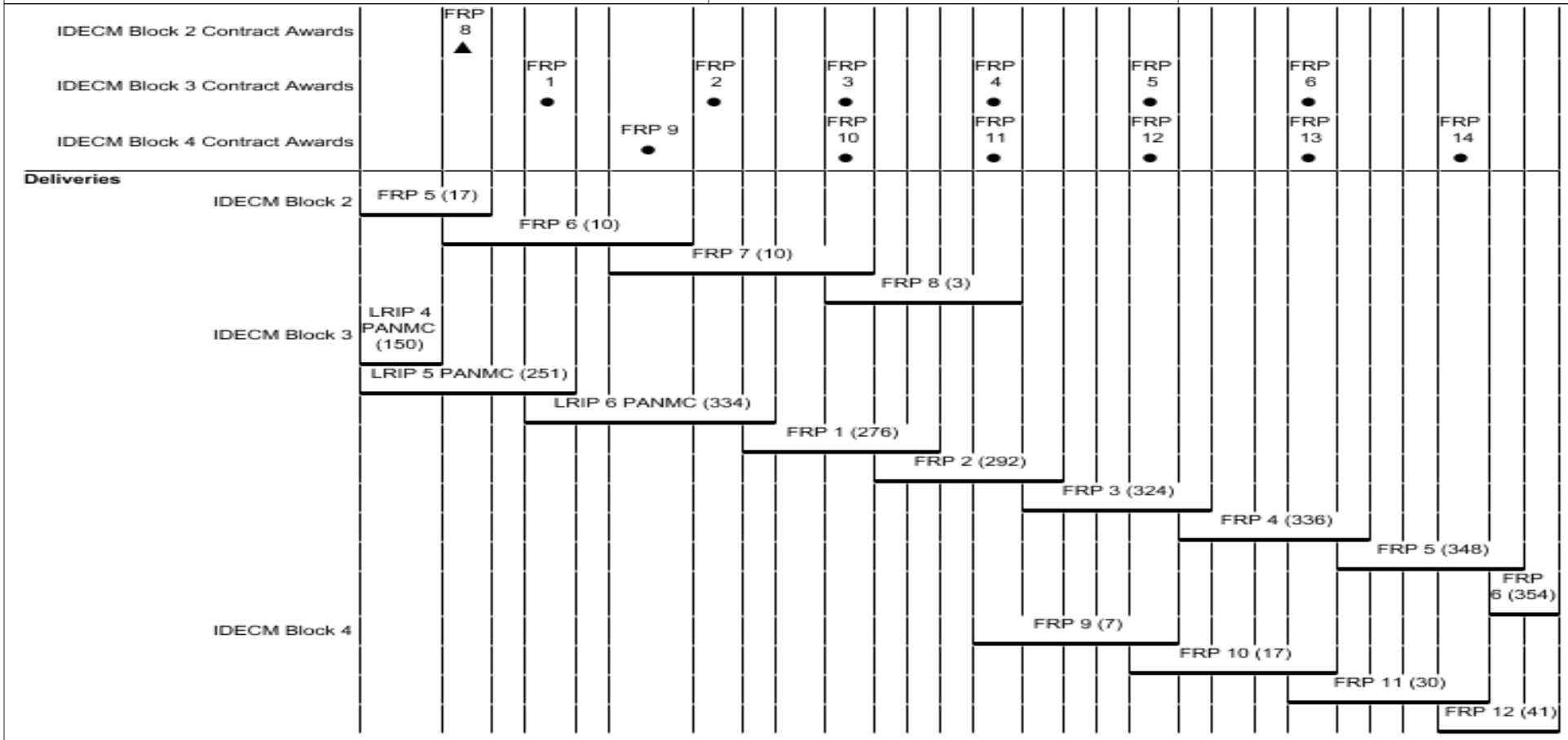


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*



2013PB - 0604270N - 2175

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604270N: *Electronic Warfare (EW) Dev*	**PROJECT** 2175: *Tactical Air Electronic Warfare*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
IDECM				
Acquisition Milestones: IDECM Block 3 Milestones: IDECM Block 3 Milestone III	4	2011	4	2011
Acquisition Milestones: IDECM Block 3 Milestones: IDECM Block 3 Initial Operating Capability (IOC)	4	2011	4	2011
Acquisition Milestones: IDECM Block 4 Milestones: IDECM Block 4 IOC	3	2014	3	2014
Acquisition Milestones: ALQ-214 SW Improvement: ALQ-214 SW Improvement (IOC)	4	2015	4	2015
Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 3	2	2012	2	2012
Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 4	2	2013	2	2013
Acquisition Milestones: Program Reviews: IDECM Block 4 In-Process Review (IPR) 5	2	2014	2	2014
Systems Development: IDECM Block 4 Development: IDECM Block 4 Development	1	2011	3	2014
Systems Development: IDECM Block 4 Development: IDECM Block 4 EDM Deliveries (18)	2	2011	3	2012
Systems Development: System Devlopment Reviews: ALQ-214 SW Improvement Development (PDR)	3	2012	3	2012
Systems Development: System Devlopment Reviews: ALQ-214 SW Improvement Development (CDR)	1	2013	1	2013
Systems Development: ALQ-214 SW Improvement Development: ALQ-214 SW Improvement (Contract Award)	2	2012	2	2012
Systems Development: ALQ-214 SW Improvement Development: ALQ-214 SW Improvement Development	2	2012	1	2015
Test and Evaluation: IDECM B-3 Verification of Correction of Deficiencies Testing: IDECM Block 3 VCD DT Flight Testing	1	2011	1	2011
Test and Evaluation: IDECM B-3 Verification of Correction of Deficiencies Testing: IDECM Block 3 VCD OT Flight Test	1	2011	2	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Development Testing (DT)	1	2011	4	2013
Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Operational Assessment (OA)	1	2012	3	2012
Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Development Testing Flights	3	2012	1	2013
Test and Evaluation: IDECM Block 4 Testing: IDECM Block 4 Operational Testing Flights	1	2013	4	2013
Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Development Testing (DT) Lab/Ground	1	2013	4	2014
Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Development Testing(DT)/Operational Testing (OT) Flights	2	2014	4	2014
Test and Evaluation: ALQ-214 SW Improvement Testing: ALQ-214 SW Improvement Operational Testing (OT) Flights	1	2015	3	2015
Production Milestones: IDECM Block 2 Contract Awards: IDECM Block 2 Full Rate Production (FRP) 8	2	2011	2	2011
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 1	4	2011	4	2011
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 2	3	2012	3	2012
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 3	2	2013	2	2013
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 4	2	2014	2	2014
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 5	2	2015	2	2015
Production Milestones: IDECM Block 3 Contract Awards: IDECM Block 3 Full Rate Production (FRP) 6	2	2016	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 9	2	2012	2	2012
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 10	2	2013	2	2013
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 11	2	2014	2	2014
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 12	2	2015	2	2015
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 13	2	2016	2	2016
Production Milestones: IDECM Block 4 Contract Awards: IDECM Block 4 Full Rate Production (FRP) 14	2	2017	2	2017
Deliveries: IDECM Block 2: IDECM Block 2 FRP 5 Deliveries (17)	1	2011	2	2011
Deliveries: IDECM Block 2: IDECM Block 2 FRP 6 Deliveries (10)	2	2011	2	2012
Deliveries: IDECM Block 2: IDECM Block 2 FRP 7 Deliveries (10)	2	2012	2	2013
Deliveries: IDECM Block 2: IDECM Block 2 FRP 8 Deliveries (3)	2	2013	2	2014
Deliveries: IDECM Block 3: IDECM Block 3 LRIP 4 Deliveries (150)	1	2011	1	2011
Deliveries: IDECM Block 3: IDECM Block 3 LRIP 5 Deliveries (251)	1	2011	4	2011
Deliveries: IDECM Block 3: IDECM Block 3 LRIP 6 Deliveries (334)	4	2011	4	2012
Deliveries: IDECM Block 3: IDECM Block 3 FRP 1 Deliveries (276)	4	2012	4	2013
Deliveries: IDECM Block 3: IDECM Block 3 FRP 2 Deliveries (292)	3	2013	3	2014
Deliveries: IDECM Block 3: IDECM Block 3 FRP 3 Deliveries (324)	3	2014	3	2015
Deliveries: IDECM Block 3: IDECM Block 3 FRP 4 Deliveries (336)	3	2015	3	2016
Deliveries: IDECM Block 3: IDECM Block 3 FRP 5 Deliveries (348)	3	2016	3	2017
Deliveries: IDECM Block 3: IDECM Block 3 FRP 6 Deliveries (354)	3	2017	4	2017
Deliveries: IDECM Block 4: IDECM Block 4 FRP 9 Deliveries (7)	2	2014	2	2015
Deliveries: IDECM Block 4: IDECM Block 4 FRP 10 Deliveries (17)	2	2015	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 2175: *Tactical Air Electronic Warfare*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Deliveries: IDECM Block 4: IDECM Block 4 FRP 11 Deliveries (30)	2	2016	2	2017
Deliveries: IDECM Block 4: IDECM Block 4 FRP 12 Deliveries (41)	2	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3327: *MAGTF EW Aviation Development*	-	10.912	-	-	-	-	-	-	-	0.000	10.912
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project unit supports the United States Marine Corps (USMC) development of Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) and the various elements of its distributed System of Systems that support the Commandant of the Marine Corps' Strategy and Vision 2025 and Joint Vision 2025. The SoS will address MAGTF EW sufficiency gaps in the areas of Electronic Attack, Electronic Warfare Support, and Electronic Protection with a multitude of payloads designed for carriage on a variety of organic MAGTF air and ground assets. Payload development plans follow an adaptable, modular and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational and sustainment cost.

Prior to FY12, Intrepid Tiger II efforts were budgeted under PU 0556.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: MAGTF EW Software Reprogrammable Payload (SRP) ***Articles:*** ***FY 2012 Plans:*** Transition SRP and associated components; Collaborative EW/EW Battle Management, EW Services Architecture (formerly Collaborative On-line Reconnaissance Operationally Responsive Attack Link), and Intrepid Tiger II(v)2 from the Joint Capabilities Technology Demonstration into a viable capability.	-	5.312 0	-
Title: Intrepid Tiger II (v)1 (ALQ-231) ***Articles:*** ***FY 2012 Plans:*** OCO: This project develops integration between Intrepid Tiger II(v)1 (ALQ-231) and USMC platforms including F/A-18, AV-8B, and the UAS. Initiation of incremental capability improvements and maintenance of threat effectiveness to Area of Regard defined threat sets employs fleet operator and networked utility assessment inputs. Production of 25 Intrepid Tiger II(v)1 (ALQ-231) Engineering Development Models. The project fully establishes initial supportability and maintenance concepts.	-	5.600 0	-
Accomplishments/Planned Programs Subtotals	-	10.912	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0587: *MAGTF EW for Aviation*	2.600	0.489	34.127	0.000	34.127	14.446	20.507	8.006	6.095	Continuing	Continuing

D. Acquisition Strategy

This project unit is part of USMC led efforts to ensure Marine Corps requirements are included in the budget process for the FYDP and beyond. These efforts include Software Reprogrammable Payload, Intrepid Tiger II(v)1 (ALQ-231), Intrepid Tiger II(v)2, Collaborative EW (Electronic Warfare)/EW Battle Management, EW Payload, and EW Service Architecture (formerly Collaborative On-line Reconnaissance Operationally Responsive Attack Link). These programs are the Marine Corps' initial steps to create systems to distribute EW capability across the battle space with the intent of replacing EA-6B capabilities for the Marine Air Ground Task Force by 2019.

E. Performance Metrics

Successful completion of Intrepid Tiger II(v)1 (ALQ-231) Engineering Development Model (EDM) Lot 1 Developmental Testing/Operational Testing.
Delivery of final EDM test articles prior to Full Operational Capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC AD:Patuxent River, MD	-	0.200	Nov 2011	-		-		-	0.000	0.200	
Systems Engineering	WR	NSWC:Various	-	0.200	Nov 2011	-		-		-	0.000	0.200	
Systems Engineering	WR	Naval Research Lab:Washington, DC	-	5.312	Dec 2011	-		-		-	0.000	5.312	
Systems Engineering	WR	NAWC WD:Pt. Mugu, CA	-	1.460	Nov 2011	-		-		-	0.000	1.460	
		Subtotal	-	7.172		-		-		-	0.000	7.172	

Remarks

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng & Tech Srvc (Non-FFRDC)	Various	Various:Various	-	1.440	Nov 2011	-		-		-	0.000	1.440	1.440
		Subtotal	-	1.440		-		-		-	0.000	1.440	1.440

Remarks

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	WR	NAWCAD:Patuxent River, MD	-	1.600	Nov 2011	-		-		-	0.000	1.600	
Flight Testing	WR	NAWCWD:China Lake, CA	-	0.700	Nov 2011	-		-		-	0.000	0.700	
		Subtotal	-	2.300		-		-		-	0.000	2.300	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

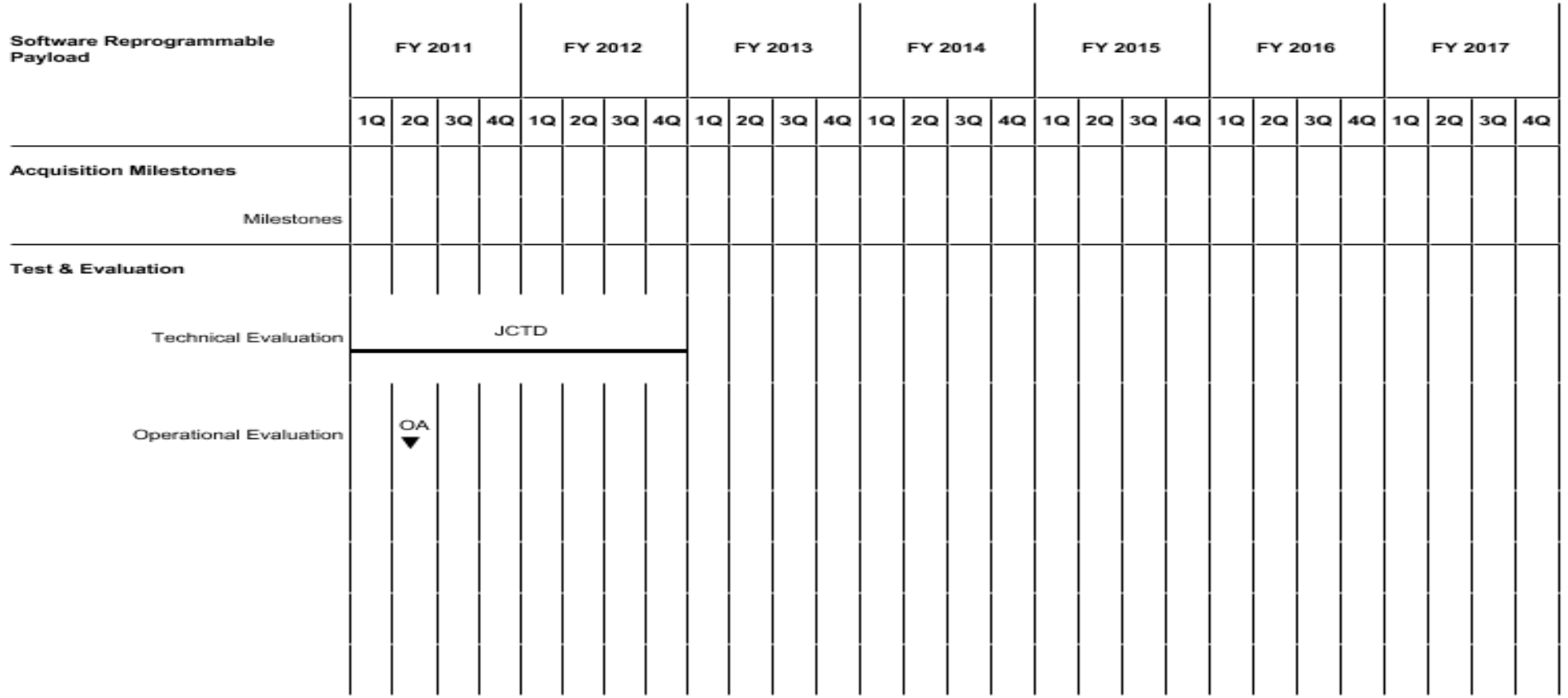
Remarks

Beginning in FY13, this program will be funded under Program Element 0604376M, Project Unit 3327.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	10.912		-		-		-	0.000	10.912	

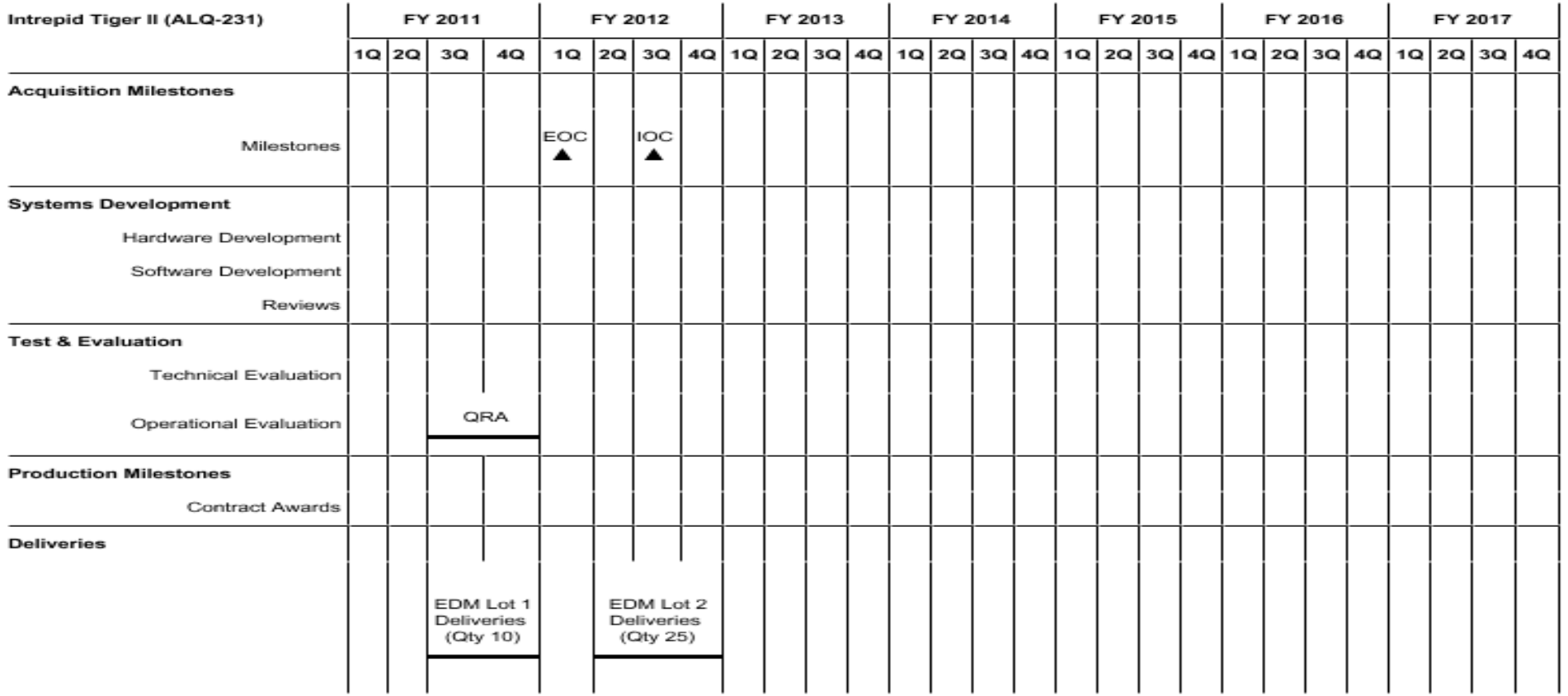
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*



2013PB - 0604270N - 3327

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*



2013PB - 0604270N - 3327

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604270N: *Electronic Warfare (EW) Dev*	PROJECT 3327: *MAGTF EW Aviation Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Software Reprogrammable Payload				
Test & Evaluation: Technical Evaluation: Joint Capability Technology Demonstration (JCTD)	1	2011	4	2012
Test & Evaluation: Operational Evaluation: Operational Assessment (OA)	2	2011	2	2011
Intrepid Tiger II (ALQ-231)				
Acquisition Milestones: Milestones: Early Operational Capability (EOC)	1	2012	1	2012
Acquisition Milestones: Milestones: IOC	3	2012	3	2012
Test & Evaluation: Operational Evaluation: Quick Reaction Assessment (QRA)	3	2011	4	2011
Deliveries: Engineering Development Model (EDM) Lot 1 Deliveries (Qty 10)	3	2011	4	2011
Deliveries: EDM Lot 2 Deliveries (Qty 25)	2	2012	4	2012

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	147.268	60.751	61.163	-	61.163	94.537	369.826	635.289	687.722	Continuing	Continuing
3058: *VH-71 Replacement Helo*	91.491	-	-	-	-	-	-	-	-	0.000	91.491
3300: *Presidential Helicopter VXX*	55.777	60.751	61.163	-	61.163	94.537	369.826	635.289	687.722	Continuing	Continuing

A. Mission Description and Budget Item Justification

Marine Helicopter Squadron One (HMX-1) is required to provide safe and timely transportation for the President and Vice President of the United States, heads of state and others as directed by the White House Military Office. Currently two Type, Model, Series aircraft are used by HMX-1 for the Presidential support mission - the VH-3D and the VH-60N. The VH-71 program was the replacement helicopter for the VH-3D and VH-60N. In order for the VH-71 to be available to most effectively assume Presidential vertical lift mission by FY10, two Increments were to be developed. Increment 1 was to provide an initial limited capability to fulfill the immediate need Presidential lift requirement. Three (3) test article aircraft, System Design and Development efforts (SDD), maintenance trainers, and associated logistics were initiated in 2005 for Increment 1. Included in the SDD contract were five (5) Increment 1 pilot production aircraft to support Initial Operational Capability. Increment 2 was to be developed to complete all of the Presidential support requirements. Two test articles were to be procured in FY09 to accommodate air vehicle structural differences between Increment 1 and 2 (main gear box, drive train, engines, tail unit and main rotor blades). The second test vehicle was to be procured instead of pursuing the planned modifications to one of the Increment 1 test vehicles due to the extent of the air vehicle structural differences. Due to increased cost and schedule growth the Secretary of Defense and Under Secretary of Defense (Acquisition, Technology and Logistics)'s USD (AT&L) directed cancellation of the VH-71 program. The VH-71 contract was cancelled in its entirety for the convenience of the Government on 1 June 2009. The VH-71 FY11 funding will be utilized to support the execution of the Secretary of Defense and USD (AT&L) decision to cancel the VH-71 program. The VXX is a follow-on program for the VH-71. An Acquisition Strategy for the VXX program is being established. Funding includes pre-Milestone (MS) B risk reduction activities, capability based assessments, Concept of Operations development, Analysis of Alternatives, specification development, system concept development, threat analysis, will cost/should cost strategies, establishing affordability targets, and recommended cost control measures in support of the FY10 Material Development Decision. Following a successful MS B decision and entrance into the Engineering and Manufacturing Development Phase, activities will focus on the integration of systems, production and qualification of test articles, demonstrate system integration, interoperability, safety and utility.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	159.785	180.070	393.044	-	393.044
Current President's Budget	147.268	60.751	61.163	-	61.163
Total Adjustments	-12.517	-119.319	-331.881	-	-331.881
• Congressional General Reductions	-	-0.019			
• Congressional Directed Reductions	-	-119.300			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-8.038	-			
• SBIR/STTR Transfer	-3.587	-			
• Program Adjustments	-	-	-332.042	-	-332.042
• Rate/Misc Adjustments	-	-	0.161	-	0.161
• Congressional General Reductions Adjustments	-0.892	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: The new direction of the acquisition strategy has changed significantly for the VXX schedule and changes are reflected in the new exhibit.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3058: *VH-71 Replacement Helo*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3058: *VH-71 Replacement Helo*	91.491	-	-	-	-	-	-	-	-	0.000	91.491
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The VH-71 program was cancelled on 1 June 2009.

A. Mission Description and Budget Item Justification

Marine Helicopter Squadron One (HMX-1) is required to provide safe and timely transportation for the President and Vice President of the United States, heads of state and others as directed by the White House Military Office. Currently two Type, Model, Series aircraft are used by HMX-1 for the Presidential support mission - the VH-3D and the VH-60N. The VH-71 program was the replacement helicopter for the VH-3D and VH-60N. In order for the VH-71 to be available to most effectively assume Presidential vertical lift mission by FY10, two Increments were to be developed. Increment 1 was to provide an initial limited capability to fulfill the immediate need Presidential lift requirement. Three (3) test article aircraft, System Design and Development (SDD) efforts, maintenance trainers, and associated logistics were initiated in 2005 for Increment 1. Included in the SDD contract were five (5) Increment 1 pilot production aircraft to support Initial Operational Capability. Due to increased cost and schedule growth the Secretary of Defense and Under Secretary of Defense (Acquisition, Technology and Logistics) USD (AT&L) directed cancellation of the current VH-71 program. The VH-71 contract was cancelled in its entirety for the convenience of the government on 1 June 2009. The Termination Proposal was received in the 3rd QTR of FY10. The reduction of FY10 funding for termination liability requires utilizing the identified FY11 funding for the negotiation and eventual settlement of the termination proposal. FY11 funding was utilized to support the execution of the Secretary of Defense and USD (AT&L)'s decision to cancel the VH-71 program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Program Management and Support	3.258	-	-
Articles:	0		
FY 2011 Accomplishments: Funding covered the Secretary of Defense and USD (AT&L)'s decision to cancel the current VH-71 program. Efforts included, but are not limited to, government integrated logistics support, program management support, systems engineering support, technical pubs, and travel for VH-71 program in support of the termination.			
Title: Product Development	88.233	-	-
Articles:	0		
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3058: *VH-71 Replacement Helo*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Funding covered termination costs of the contract based on the Secretary of Defense and USD (AT&L)'s decision to cancel the current VH-71 program. Lockheed Martin Corp Termination Proposal was received in the 3rd Quarter of FY10.			
Accomplishments/Planned Programs Subtotals	91.491	-	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The VH-71 program was designated an Acqusition Category ID program. The program received Milestone B/C approval from Under Secretary of Defense (Acquisition, Technology and Logistics) USD (AT&L) on 27 January 2005 and subsequently awarded a System Design and Development (SDD) contract to Lockheed Martin on 28 January 2005. The Secretary of Defense and USD (AT&L) directed cancellation of the VH-71 program due to increased cost and schedule growth. The program was cancelled on 1 June 2009.

E. Performance Metrics

The VH-71 program was cancelled on 1 June 2009.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3300: *Presidential Helicopter VXX*	55.777	60.751	61.163	-	61.163	94.537	369.826	635.289	687.722	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Marine Helicopter Squadron One (HMX-1) is required to provide safe and timely transportation for the President and Vice President of the United States, heads of state and others as directed by the White House Military Office. Currently two Type, Model, Series aircraft are used by HMX-1 for the Presidential support mission - the VH-3D and the VH-60N. The VXX Executive Helicopter Replacement Program will replace the VH-3D and VH-60N. An acquisition strategy for the VXX program is being established. Funding includes pre-Milestone (MS) B risk reduction activities, capability based assessments, Concept of Operations development, Analysis of Alternatives (AoA) guidance development, specification development, system concept development, threat analysis, will cost/should cost strategies, establishing affordability targets, and recommended cost control measures in support of the FY10 Material Development Decision. Following a successful MS B decision and entrance into the Engineering and Manufacturing Development Phase, activities will focus on the integration of systems, production and qualification of test articles, demonstrate system integration, interoperability, safety and utility.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Program Management and Support	22.604	30.568	27.520
Articles:	0	0	0
FY 2011 Accomplishments: Completed MS A activities. Upon completion of the AoA, and entrance into the Technology Development Phase funded activities of the proposed material solutions included: reducing technology risk, determining and maturing the appropriate set of technologies, and demonstrated technology on prototypes.			
FY 2012 Plans: Continue the funded activities of the proposed material solutions, including: reducing technology risk, determining and maturing the appropriate set of technologies, and to demonstrate technology on prototypes.			
FY 2013 Plans: Prepare for the Engineering and Manufacturing Development Phase funded activities of the proposed material solutions, including: reducing technology risk, determining and maturing the appropriate set of technologies, and to demonstrate technology on prototypes.			
Title: Test and Evaluation	2.286	3.500	3.700
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Supported VXX initial test and evaluation planning and documentation. ***FY 2012 Plans:*** Support VXX test and evaluation planning and documentation. ***FY 2013 Plans:*** Support VXX test and evaluation planning and documentation.			
Title: Product Development	30.887	26.683	29.943
Articles:	0	0	0
FY 2011 Accomplishments: Provided Government and Contractor VXX systems engineering support to accomplish technical activities to include trade studies, risk reduction, and early Technology Development phase activities. Provided Government VXX program management support. ***FY 2012 Plans:*** Provides Government VXX systems engineering support to accomplish technical activities to include trade studies and risk reduction activities. Provides Government VXX program management support. ***FY 2013 Plans:*** Provides Government VXX systems engineering support to accomplish technical activities to include trade studies and risk reduction activities. Provides Government VXX program management support. Preparation and release of Engineering and Manufacturing Development Request for Proposal.			
Accomplishments/Planned Programs Subtotals	55.777	60.751	61.163

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Acquisition Strategy will be provided and approved in support of the Milestone (MS) B decision. An estimated date for MS B is first quarter FY 2014. The VXX program continues to pursue risk reduction activities, capability based assessments, Concept of Operations development, trade study analysis, specification development, system concept development, threat analysis, will cost/should cost strategies, establishing affordability targets, and recommended cost control measures.

E. Performance Metrics

Major Defense Acquisition Program performance metrics will be provided upon program Acquisition Category designation.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev	TBD	TBD:TBD	28.345	23.756	Feb 2012	25.419	Jan 2013	-		25.419	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:Patuxent River, MD	4.012	2.827	Dec 2011	4.424	Nov 2012	-		4.424	Continuing	Continuing	Continuing
Training Support	WR	NAWCAD:Patuxent River, MD	0.116	0.100	Dec 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
		Subtotal	32.473	26.683		29.943		-		29.943			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NAWCAD:Patuxent River, MD	4.381	4.455	Dec 2011	4.450	Nov 2012	-		4.450	Continuing	Continuing	Continuing
Integrated Logistics Support	WR	FRC:Cherry Point, NC	0.692	0.580	Dec 2011	0.590	Nov 2012	-		0.590	Continuing	Continuing	Continuing
Integrated Logistics Support	WR	NAWCAD:Lakehurst, NJ	0.227	0.169	Dec 2011	0.170	Nov 2012	-		0.170	Continuing	Continuing	Continuing
Integrated Logistics Support	Various	Various:Various	2.400	-		-		-		-	Continuing	Continuing	Continuing
Studies and Analysis	WR	NAWCAD:Patuxent River, MD	3.781	0.157	Dec 2011	-		-		-	Continuing	Continuing	Continuing
Studies and Analysis	FFRDC	Various:Various	1.245	0.100	Dec 2011	-		-		-	0.000	1.345	1.345
		Subtotal	12.726	5.461		5.210		-		5.210			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NAWCAD:Patuxent River, MD	2.440	2.200	Dec 2011	2.300	Nov 2012	-		2.300	Continuing	Continuing	Continuing
Live Fire Test & Evaluation	WR	NAWCWD:China Lake, CA	1.200	1.300	Dec 2011	1.400	Nov 2012	-		1.400	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	3.640	3.500		3.700		-		3.700			

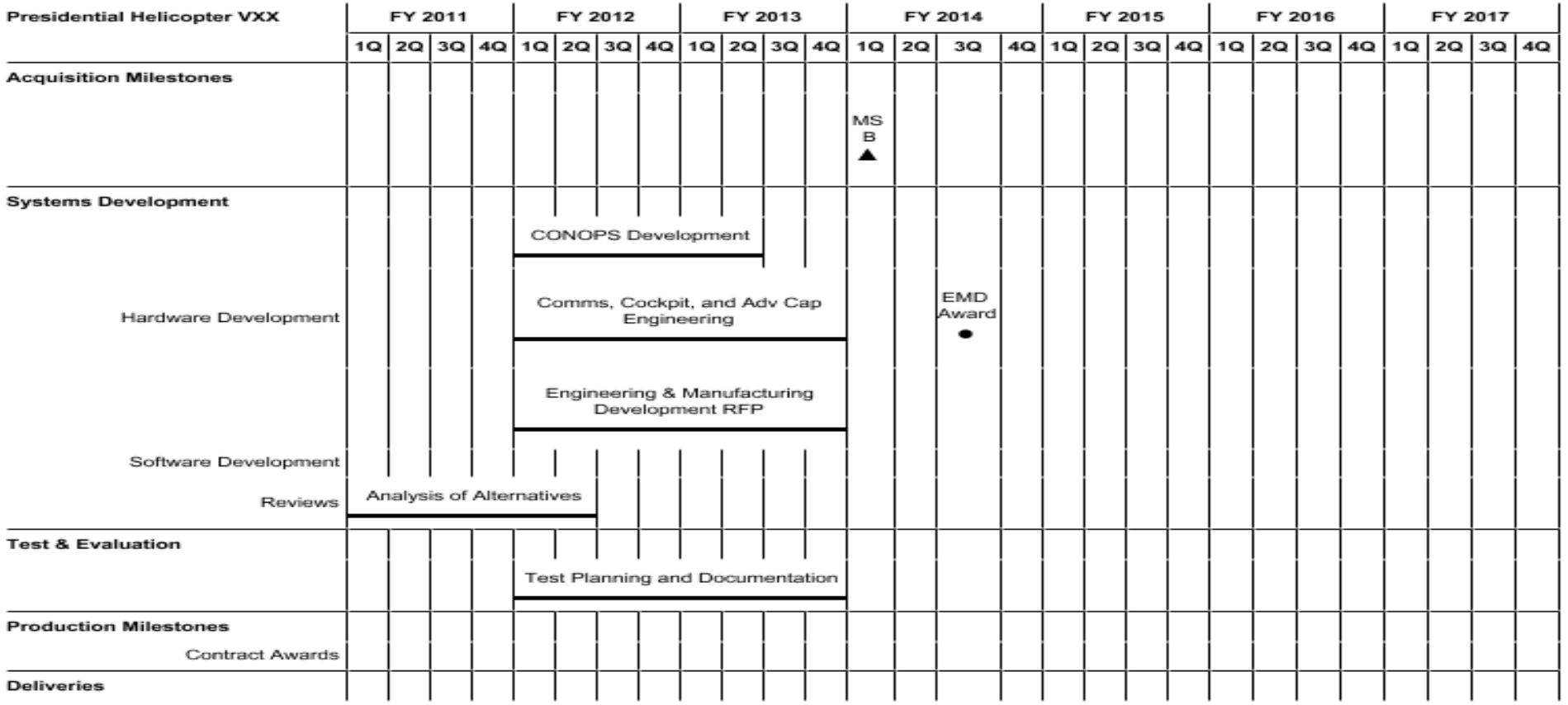
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	0.713	0.809	Dec 2011	0.820	Nov 2012	-		0.820	Continuing	Continuing	Continuing
Government Engineering Support	WR	NAWCAD:Patuxent River, MD	10.600	9.492	Nov 2011	8.100	Nov 2012	-		8.100	Continuing	Continuing	Continuing
Training Support	WR	NAWCTSD:Orlando, FL	0.297	0.158	Dec 2011	0.170	Nov 2012	-		0.170	Continuing	Continuing	Continuing
Program Management Support	WR	NAWCAD:Patuxent River, MD	20.838	14.428	Dec 2011	13.000	Nov 2012	-		13.000	Continuing	Continuing	Continuing
Transportation	Various	NAVAIR:Patuxent River, MD	0.050	0.020	Oct 2011	0.020	Oct 2012	-		0.020	Continuing	Continuing	Continuing
Travel	Various	NAVAIR:Patuxent River, MD	0.056	0.200	Oct 2011	0.200	Oct 2012	-		0.200	Continuing	Continuing	Continuing
		Subtotal	32.554	25.107		22.310		-		22.310			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	81.393	60.751		61.163		-		61.163			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*



2013PB - 0604273N - 3300

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604273N: *VH-71 Executive Helo Development*	PROJECT 3300: *Presidential Helicopter VXX*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Presidential Helicopter VXX				
Acquisition Milestones: MS B	1	2014	1	2014
Systems Development: CONOPS Development	1	2012	2	2013
Systems Development: Hardware Development: EMD Award	3	2014	3	2014
Systems Development: Hardware Development: Comms, Cockpit, and Adv Cap Engineering	1	2012	4	2013
Systems Development: Hardware Development: Engineering & Manufacturing Development RFP	1	2012	4	2013
Systems Development: Reviews: Analysis of Alternatives	1	2011	2	2012
Test & Evaluation: Test Planning and Documentation	1	2012	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	83.948	170.910	187.024	-	187.024	269.916	321.817	429.390	528.777	1.954	1,993.736
0557: *Next Generation Jammer*	83.948	170.910	187.024	-	187.024	269.916	321.817	429.390	528.777	1.954	1,993.736

A. Mission Description and Budget Item Justification

This project develops new technology in a Next Generation Jammer (NGJ) capability system, with increased electronic radiation power generation to replace the existing ALQ-99 Tactical Jamming System. NGJ is required to keep pace with threat weapons systems advances and continuous expansion of the Airborne Electronic Attack (AEA) mission area. NGJ capabilities will address AEA capability gaps, AEA sufficiency gaps, and address ALQ-99 shortfalls in scalability, flexibility, supportability, interoperability, availability, and capability. NGJ will utilize an adaptable, modular, and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational and sustainment cost.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	120.602	189.919	337.712	-	337.712
Current President's Budget	83.948	170.910	187.024	-	187.024
Total Adjustments	-36.654	-19.009	-150.688	-	-150.688
• Congressional General Reductions	-	-0.009			
• Congressional Directed Reductions	-	-19.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.527	-			
• SBIR/STTR Transfer	-2.659	-			
• Program Adjustments	-	-	-150.733	-	-150.733
• Rate/Misc Adjustments	-	-	0.045	-	0.045
• Congressional General Reductions Adjustments	-0.468	-	-	-	-
• Congressional Directed Reductions Adjustments	-30.000	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Since the previous President's Budget, Next Generation Jammer transitioned to a Block approach for development, changed their Acquisition Strategy, and OPNAV rephased program funding in POM 13, resulting in the following schedule changes: Milestone A moved from 2nd QTR 2012 to 3rd QTR 2013.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604274N: *Next Generation Jammer (NGJ)*

Technology Development (Block 1) contract award moved from 3rd QTR 2012 to 3rd QTR 2013. Test and Evaluation Master Plan moved from 1st QTR 2014 to 3rd QTR 2014. Technology Development (Block 2) was added in 2nd QTR 2015. Milestone B (Block 1) moved from 1st QTR 2015 to 3rd QTR 2015. EMD (Block 1) Award moved from 1st QTR 2015 to 3rd QTR 2015. Integrated Testing start moved from 1st QTR 2016 to 3rd QTR 2016. Milestone B (Block 2) added in 1st QTR 2017. EMD (Block 2) added in 2nd QTR 2017. First EDM Delivery moved from 4th QTR 2016 to 4th QTR 2017. Technology Development (Block 3) was added in 4th QTR 2017. Milestone C moved from 4th QTR 2017 to 2nd QTR 2018.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*	PROJECT 0557: *Next Generation Jammer*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0557: *Next Generation Jammer*	83.948	170.910	187.024	-	187.024	269.916	321.817	429.390	528.777	1.954	1,993.736
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project develops new technology in a Next Generation Jammer (NGJ) capability required to replace the existing ALQ-99 Tactical Jamming System. NGJ is required to keep pace with threat weapons systems advances and continuous expansion of the Airborne Electronic Attack (AEA) mission area. NGJ capabilities will address AEA capability gaps, AEA sufficiency gaps and address ALQ-99 shortfalls in scalability, flexibility, supportability, interoperability, availability, and capability. NGJ will utilize an adaptable, modular, and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational sustainment cost.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Next Generation Jammer	81.948	169.810	186.374
Articles:	0	0	0
FY 2011 Accomplishments: Continue technology maturation analysis/studies and initiate NGJ technology development activities to reduce technological risk and determine appropriate set of technologies for use in NGJ.			
FY 2012 Plans: Continue technology maturation efforts, release Technology Develoopment Request for Proposal, and develop products in support of Milestone A decision.			
FY 2013 Plans: Complete Technology Maturation efforts and Milestone A decision. Award Technology Development contracts.			
Title: Capability Development Document (CDD)	2.000	1.100	0.650
Articles:	0	0	0
FY 2011 Accomplishments: Finalization of CDD and initial routing through Joint Capabilities Integration Development System process for Milestone A.			
FY 2012 Plans: Update CDD and continue routing through Joint Capabilities Integration Development System process.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*	PROJECT 0557: *Next Generation Jammer*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Obtain CDD approval.			
Accomplishments/Planned Programs Subtotals	83.948	170.910	187.024

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Next Generation Jammer is designated a Pre-Major Defense Acquisition Program (MDAP), with Pre-MDAP Program Number 445, and activity will focus on technology maturation to include technology development strategies in preparation for Milestone A in FY13 and Milestone B in FY15.

E. Performance Metrics

To obtain sufficient technology maturation and technology demonstration to obtain favorable Milestone A and Milestone B decisions for continued program development.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*	PROJECT 0557: *Next Generation Jammer*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	TBD	Various:Various	-	-		123.895	Apr 2013	-		123.895	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPFF	ITT:Clifton, NJ	40.522	30.750	Apr 2012	3.375	Nov 2012	-		3.375	0.000	74.647	74.647
Primary Hardware Development	C/CPFF	BAE:Nashua, NH	40.128	30.750	Apr 2012	3.375	Nov 2012	-		3.375	0.000	74.253	74.253
Primary Hardware Development	C/CPFF	Raytheon:Goleta, CA	40.253	30.750	Apr 2012	3.375	Nov 2012	-		3.375	0.000	74.378	74.378
Primary Hardware Development	C/CPFF	Northrop Grumman:Baltimore, MD	40.247	30.750	Apr 2012	3.375	Nov 2012	-		3.375	0.000	74.372	74.372
Primary Hardware Development	SS/CPFF	Sparta, Inc.:Lake Forest, CA	1.245	-		-		-		-	0.000	1.245	1.245
Primary Hardware Development	SS/CPFF	Northrop Grumman Space & Mission Systems Corp.:Herndon, VA	1.765	-		-		-		-	0.000	1.765	1.765
Studies & Analysis (Non-FFRDC)	SS/CPFF	Mantech Systems Engineering Corp.:Fairfax, VA	1.571	-		0.750	Dec 2012	-		0.750	0.000	2.321	2.321
Studies & Analysis (Non-FFRDC)	Various	Various:Various	1.541	1.612	Dec 2011	2.070	Nov 2012	-		2.070	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:Patuxent River, MD	9.050	15.702	Nov 2011	20.137	Nov 2012	-		20.137	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCWD:Pt. Mugu, CA	3.472	10.374	Nov 2011	8.609	Nov 2012	-		8.609	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC Crane:Crane, IN	3.023	4.754	Dec 2011	4.157	Nov 2012	-		4.157	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	Johns Hopkins University Applied Physics Lab:Laurel, MD	2.760	4.652	Dec 2011	3.653	Dec 2012	-		3.653	Continuing	Continuing	Continuing
Systems Engineering	Various	Various:Various	2.708	7.172	Dec 2011	7.388	Dec 2012	-		7.388	Continuing	Continuing	Continuing
		Subtotal	188.285	167.266		184.159		-		184.159			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*	PROJECT 0557: *Next Generation Jammer*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng& Tech Srvc (Non FFRDC)	SS/FFP	NSMA:Arlington, VA	2.821	1.434	Dec 2011	0.850	Dec 2012	-		0.850	Continuing	Continuing	Continuing
Eng& Tech Srvc (Non FFRDC)	Various	Various:Various	4.419	2.010	Dec 2011	1.809	Dec 2012	-		1.809	Continuing	Continuing	Continuing
		Subtotal	7.240	3.444		2.659		-		2.659			

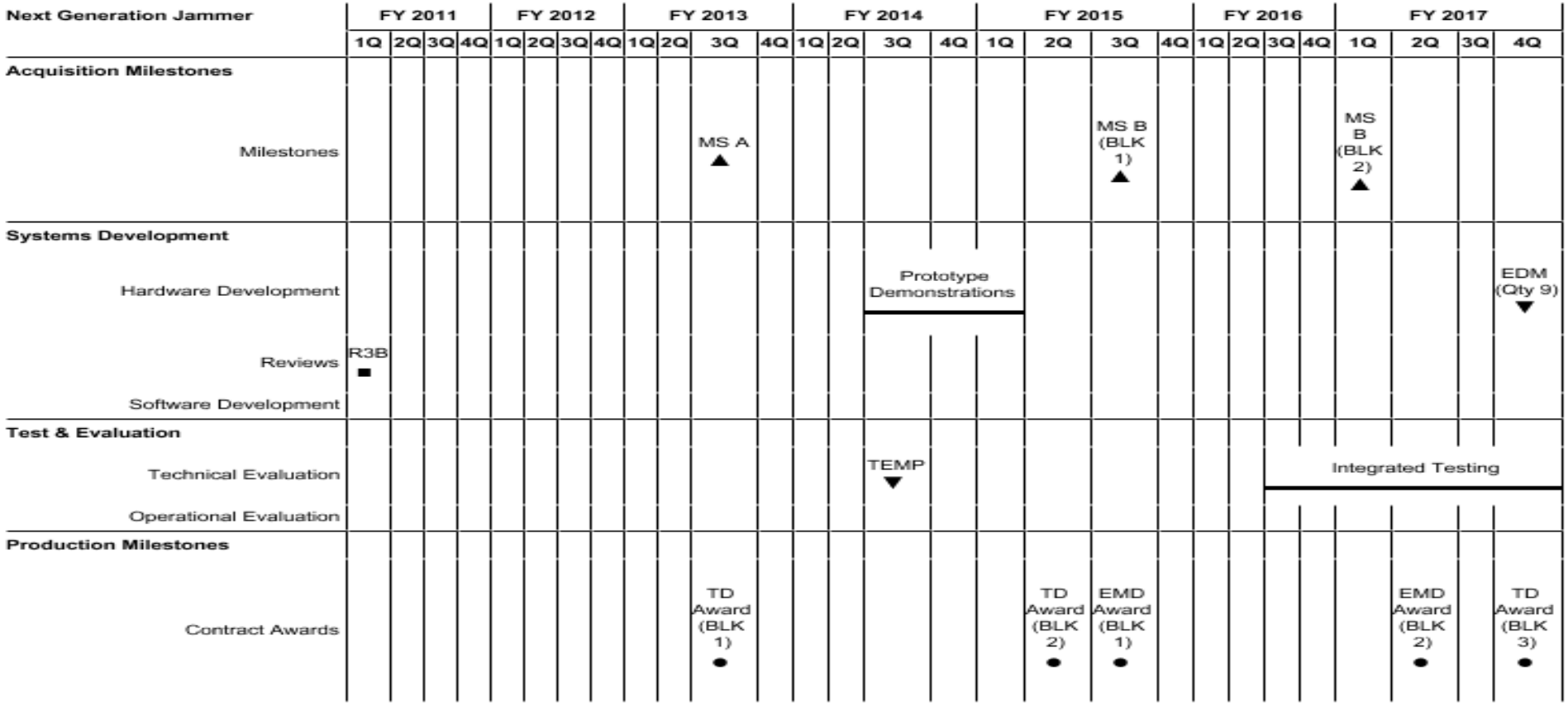
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	Various:Various	0.200	0.200	Dec 2011	0.206	Dec 2012	-		0.206	Continuing	Continuing	Continuing
		Subtotal	0.200	0.200		0.206		-		0.206			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	195.725	170.910		187.024		-		187.024			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604274N: *Next Generation Jammer (NGJ)*	PROJECT 0557: *Next Generation Jammer*



2013PB - 0604274N - 0557

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604274N: *Next Generation Jammer (NGJ)*	**PROJECT** 0557: *Next Generation Jammer*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Next Generation Jammer				
Acquisition Milestones: Milestones: Milestone A	3	2013	3	2013
Acquisition Milestones: Milestones: Milestone B (Block 1)	3	2015	3	2015
Acquisition Milestones: Milestones: Milestone B (Block 2)	1	2017	1	2017
Systems Development: Hardware Development: Prototype Demonstration	3	2014	1	2015
Systems Development: Hardware Development: Engineering Development Model (EDM) Deliveries	4	2017	4	2017
Systems Development: Reviews: Resource Requirements Review Board (R3B)	1	2011	1	2011
Test & Evaluation: Technical Evaluation: NGJ Test & Evaluation Master Plan (TEMP)	3	2014	3	2014
Test & Evaluation: Technical Evaluation: Integrated Testing	3	2016	4	2017
Production Milestones: Contract Awards: Technology Development (TD) Contract Award (Block 1)	3	2013	3	2013
Production Milestones: Contract Awards: Technology Development (TD) Contract Award (Block 2)	2	2015	2	2015
Production Milestones: Contract Awards: Technology Development (TD) Contract Award (Block 3)	4	2017	4	2017
Production Milestones: Contract Awards: Engineering & Manufacturing Development (EMD) Contract Award (Block 2)	2	2017	2	2017
Production Milestones: Contract Awards: Engineering & Manufacturing Development (EMD) Contract Award (Block 1)	3	2015	3	2015

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	609.159	675.521	337.480	-	337.480	150.372	89.976	29.875	25.927	Continuing	Continuing
3020: *MIDS/JTRS*	20.086	41.688	100.419	-	100.419	126.912	72.587	15.629	11.640	Continuing	Continuing
3073: *AMF JTRS*	307.910	349.560	58.187	-	58.187	0.007	-	-	-	0.000	715.664
3074: *GMR JTRS*	99.289	18.732	-	-	-	-	-	0.025	0.025	Continuing	Continuing
3075: *HMS JTRS*	67.363	116.054	116.030	-	116.030	2.752	0.313	-	-	0.000	302.512
3076: *JTRS Network Enterprise Domain (JNED)*	114.511	93.987	59.077	-	59.077	20.701	17.076	14.221	14.262	Continuing	Continuing
3078: *Digital Modular Radio*	-	4.500	3.767	-	3.767	-	-	-	-	0.000	8.267
9999: *Congressional Adds*	-	51.000	-	-	-	-	-	-	-	0.000	51.000

Note

In FY11-FY13, Program Element (PE) 0604280N represents the total JTRS RDT&E Budget (includes Multifunctional Information Distribution System (MIDS), Airborne and Maritime/Fixed Station (AMF) JTRS, Ground Mobile Radio (GMR) JTRS, Handheld/Manpack/Small Form Fit (HMS) JTRS, and JTRS Network Enterprise Domain (JNED)).

In FY14-FY17, Program Element (PE) 0604280N represents only the Navy share of the funding associated with all JTRS Development Projects. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program. Therefore in FY14-17 a portion of the JTRS RDT&E Budget is represented in this PE, in Army PE 0604280A, and in the Air Force PE 0604280F. JTRS Common Development includes funding for: MIDS, AMF JTRS, GMR JTRS, HMS JTRS, and JNED.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, and capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

AMF JTRS is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by civilian and military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio

networking capability as well as replace existing radio systems, which are facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

MIDS - Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency remapping, and programmable crypto are realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition. MIDS JTRS will also provide Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets.

GMR following a critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 will develop Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B. Phase 2 radios are all Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Enhanced Position Location and Reporting System (EPLRS), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms.

JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

JUSTIFICATION FOR BUDGET ACTIVITY:
This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	687.723	688.146	127.782	-	127.782
Current President's Budget	609.159	675.521	337.480	-	337.480
Total Adjustments	-78.564	-12.625	209.698	-	209.698
• Congressional General Reductions	-	-0.625			
• Congressional Directed Reductions	-	-63.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	51.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.250	-			
• SBIR/STTR Transfer	-16.076	-			
• Program Adjustments	-	-	210.169	-	210.169
• Rate/Misc Adjustments	-	-	-0.471	-	-0.471
• Congressional General Reductions Adjustments	-3.738	-	-	-	-
• Congressional Directed Reductions Adjustments	-60.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *GMR JTRS (Cong)*	-	51.000
Congressional Add Subtotals for Project: 9999	-	51.000
Congressional Add Totals for all Projects	-	51.000

Change Summary Explanation

The FY13 +$210.581M Program Adjustment is due to the following: JTRS Administrative transfer from Army and Air Force ($210.905M), NED administrative transfer to O&M,N (-14.088M), plus up for MIDS TTNT Waveform Development ($64.000M), Navy reduction to AMF (-$47.986M), and transfer to MIDS O&M,N (-2.250M).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3020: *MIDS/JTRS*	20.086	41.688	100.419	-	100.419	126.912	72.587	15.629	11.640	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY11-FY17, Project No. 3020 represents the total Multifunctional Information Distribution System (MIDS) RDT&E budget for those years. All references to MIDS funding includes funding for both MIDS-LVT and MIDS JTRS.

In FY14-FY17, Project No. 3020 represents the Navy share of the funding associated with MIDS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

MIDS-Low Volume Terminal (LVT) is a jam-resistant, secure, digital (voice and data) information distribution system enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 frequency remapping and programmable crypto are also realized in the MIDS JTRS design. The MIDS JTRS core terminal includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms in development by JNED. Total core terminal program requirements include: terminal development, F/A-18 Level 0 integration, software hosting (operating environment/waveforms) and production transition. MIDS JTRS will also provide Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: MIDS/JTRS	20.086	41.688	100.419

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
FY 2011 Accomplishments: Received Limited Production & Fielding 2 decision for Core Terminal program. Conducted Verification of Corrections of Deficiencies (VCD) testing for Initial Operational Capability (IOC) and Full Production and Fielding decision in 2012. Began development and implementation of a Crypto Modernization (CM) capability for MIDS JTRS, a mandate required by the NSA. Continued CM spec development and Engineering Change Proposal (ECP) Enhancements spec development for MIDS-LVT. Continued MIDS systems engineering, Communications Security (COMSEC), Information Assurance (IA) and program management support.			
FY 2012 Plans: Receive Full Production and Fielding (FP&F) decision for Core Terminal program (MIDS JTRS). Complete the Crypto Modernization (CM) and ECP Enhancements spec development for MIDS-LVT. Begin development of MIDS-LVT CM/Block Upgrade 2 (BU2) and Enhanced Throughput (ET) capabilities that will replace or update several hardware, software and firmware components within the terminal. Develop Frequency Remapping (FR), a required Department of Transportation (DOT) mandate to enable the continued use of MIDS Link-16 to remap at least 14 of its 51 data transmission and receipt time slots to frequencies which do not interfere with current and planned Federal Aviation Administration (FAA) safety of flight systems. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support.			
FY 2013 Plans: Deliver MIDS JTRS Crypto Modernization (CM) capability. Begin development to incorporate Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT). Begin development of the TTNT waveform. These capabilities provide Joint Airborne Network-Tactical Edge (JAN-TE) functionality to run advanced mission applications in a cross-platform/cross-domain tactical network enterprise and the ability to simultaneously participate in four Link-16 Nets. Continue the CM/Block Upgrade 2 (BU2) capability and enhancement efforts for MIDS-LVT to include finalizing the detailed technical and interface information in the Item Performance Specification and the Interface Control Document. Define the performance and interface requirements and provide engineering analysis to finalize interface with the Signal Message Processor (SMP) design. Continue Link 16 CM efforts to replace the current Communications Security/Transmission Security on the SMP to extend the operational lifetime of currently fielded MIDS-LVT Terminals. Continue MIDS systems engineering, COMSEC, Information Assurance (IA) and program management support.			
Accomplishments/Planned Programs Subtotals	20.086	41.688	100.419

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEA/0604280A: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	1.236	0.270	0.000	0.000	0.000	1.506
• RDTEF/0604280F: *MIDS JTRS*	0.000	0.000	0.000	0.000	0.000	3.065	0.850	0.000	0.000	0.000	3.915
• APN/0145: *FA-18E/F*	6.640	7.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	16.312
• APN/0525: *F-18 Series*	3.895	0.000	0.000	0.000	0.000	0.000	19.937	26.458	26.908	Continuing	Continuing
• APN/0143: *EA-18G*	12.001	11.806	8.401	0.000	8.401	0.000	0.000	0.000	0.000	0.000	32.208
• O&M, 4B7N: *Space and Electronic Warfare Systems (MIDS LVT)*	3.729	3.175	3.051	0.000	3.051	3.688	3.682	3.616	3.637	Continuing	Continuing
• O&M, 4A6M: *Service Wide Comms (MIDS JTRS)*	15.795	14.457	15.518	0.000	15.518	15.133	14.854	15.250	16.913	Continuing	Continuing

D. Acquisition Strategy

MIDS JTRS development was initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. Development efforts included the Phase 2B Core terminal. The U.S. prime contractors from the MIDS-LVT program, Data Link Solutions (DLS) and ViaSat Inc., cooperatively designed and developed the Core terminal. Each prime contractor built and qualified Production Verification Terminals. The U.S. implemented a continuous competition strategy between DLS and ViaSat that will be maintained throughout the MIDS JTRS production phase. This strategy was successfully used on MIDS-LVT production. The FY13 budget supports development and implementation of Crypto Modernization, Frequency Remapping, and Enhanced Throughput capabilities for the MIDS-LVT terminal as well as the initial development to incorporate Concurrent Multi-Netting-4 (CMN-4) and Tactical Targeting Network Technology (TTNT) into MIDS JTRS.

E. Performance Metrics

The five ACAT ID JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, MIDS employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts, as required.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS HW/SW (Phase 2B Core)1	C/CPIF	DLS:Cedar Rapids, IA	120.134	-		-		-		-	0.000	120.134	120.134
MIDS JTRS HW/SW (Phase 2B Core)	C/CPIF	ViaSat Inc:Carlsbad, CA	125.570	-		-		-		-	0.000	125.570	125.570
MIDS JTRS HW/SW (Phase 2C TTNT JPCP) DLS	C/CPFF	DLS:Cedar Rapids, IA	11.667	-		-		-		-	0.000	11.667	11.667
MIDS JTRS HW/SW (Phase 2C TTNT JPCP) Via	C/CPFF	ViaSat Inc:Carlsbad, CA	5.548	-		-		-		-	0.000	5.548	5.548
MIDS JTRS Production Transition dls	C/FFP	DLS:Cedar Rapids, IA	18.771	-		-		-		-	0.000	18.771	18.771
MIDS JTRS Production Transition via	C/FFP	ViaSat Inc.:Carlsbad, CA	2.768	-		-		-		-	0.000	2.768	2.768
MIDS JTRS Preoperational Support dls	C/CPFF	DLS:Cedar Rapids, IA	0.767	-		-		-		-	0.000	0.767	0.767
MIDS JTRS Preoperational Support via	C/CPFF	ViaSat Inc.:Carlsbad, CA	0.163	-		-		-		-	0.000	0.163	0.163
MIDS JTRS Spec. Development (Phase 2A) dls	C/FFP	DLS:Cedar Rapids, IA	1.383	-		-		-		-	0.000	1.383	1.383
MIDS JTRS Spec. Development (Phase 2A) via	C/FFP	ViaSat Inc.:Carlsbad, CA	0.704	-		-		-		-	0.000	0.704	0.704
MIDS JTRS Proposal Prep (Phase 2B Core) dls	C/FFP	DLS:Cedar Rapids, IA	0.600	-		-		-		-	0.000	0.600	0.600
MIDS JTRS Proposal Prep (Phase 2B Core) via	C/FFP	ViaSat Inc.:Carlsbad, CA	1.922	-		-		-		-	0.000	1.922	1.922
MIDS JTRS Crypto Mod	C/CPFF	ViaSat Inc:Carlsbad, CA	12.439	1.574	Feb 2012	-		-		-	0.000	14.013	6.575
MIDS JTRS Crypto Mod	C/CPFF	DLS:Cedar Rapids, IA	7.736	0.306	Feb 2012	-		-		-	0.000	8.042	6.575
MIDS-LVT CM/ECP Spec Dev	C/FFP	BAE:Fort Wayne, NJ	0.581	-		-		-		-	0.000	0.581	0.581
MIDS-LVT CM/ECP Spec Dev	C/FFP	DLS:Cedar Rapids, IA	1.796	-		-		-		-	0.000	1.796	1.796
MIDS-LVT CM/ECP Spec Dev	C/FFP	ViaSat:Carlsbad, CA	2.133	-		-		-		-	0.000	2.133	1.980
MIDS-LVT CM/FR/ET Development	C/CPFF	DLS:Cedar Rapids, IA	-	16.874	Jul 2012	8.911	Mar 2013	-		8.911	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS-LVT CM/FR/ET Development	C/CPFF	ViaSat:Carlsbad, CA	-	16.875	Jul 2012	8.911	Mar 2013	-		8.911	Continuing	Continuing	Continuing
MIDS-LVT CM/FR/ET Software	C/CPFF	BAE:Fort Wayne, NJ	-	4.820	Jul 2012	3.640	Mar 2013	-		3.640	Continuing	Continuing	Continuing
MIDS JTRS CMN-4/TTNT Development	C/CPFF	DLS:Cedar Rapids, IA	-	-		18.854	Dec 2012	-		18.854	Continuing	Continuing	Continuing
MIDS JTRS CMN-4/TTNT Development	C/CPFF	ViaSat:Carlsbad, CA	-	-		18.855	Dec 2012	-		18.855	Continuing	Continuing	Continuing
MIDS JTRS TTNT Waveform Development	C/CPFF	TBD:TBD	-	-		14.000	Dec 2012	-		14.000	Continuing	Continuing	Continuing
		Subtotal	314.682	40.449		73.171		-		73.171			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Development Support (Unique) cl	WR	NAWS, China Lake:Ridgecrest, CA	1.526	-		-		-		-	0.000	1.526	1.526
F/A-18 Level 0 Integrated Logistics Suppor (Unique) pax	WR	NAWC:Pax River, MD	0.412	-		-		-		-	0.000	0.412	0.412
		Subtotal	1.938	-		-		-		-	0.000	1.938	1.938

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Developmental Test & Evaluation (Unique)	WR	NAWC:Pax River, MD	5.409	-		-		-		-	0.000	5.409	5.409
F/A-18 Level 0 OperationalTest & Evaluation (Unique)	WR	NAWS China Lake:Ridgecrest, CA	1.028	-		-		-		-	0.000	1.028	1.028

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
F/A-18 Test Assets dls	C/FFP	DLS:Cedar Rapids, IA	8.850	-		-		-		-	0.000	8.850	8.850
F/A-18 Test Assets via	C/FFP	ViaSat, Inc:Carlsbad, CA	7.365	-		-		-		-	0.000	7.365	7.365
* F/A-18 EDMs dls	C/FFP	DLS:Cedar Rapids, IA	2.740	-		-		-		-	0.000	2.740	2.740
* F/A-18 EDMs via	C/FFP	ViaSat, Inc.:Carlsbad, CA	2.475	-		-		-		-	0.000	2.475	2.475
Engineering Support and Labor/SCS Changes	WR	NAWS China Lake:Ridgecrest, CA	10.519	-		-		-		-	0.000	10.519	10.519
Government Testing	WR	SSC:San Diego, CA	1.745	-		-		-		-	0.000	1.745	1.745
NAVAIR Labor	WR	NAWC:Pax River, MD	4.231	-		-		-		-	0.000	4.231	4.231
ECP 6277 Preparation	WR	NAWC:Pax River, MD	1.963	-		-		-		-	0.000	1.963	1.963
JTRS CM Test Assets (DLS)	C/FFP	DLS:Cedar Rapids, IA	0.633	-		-		-		-	0.000	0.633	
JTRS CM Test Assets (ViaSat)	C/FFP	ViaSat:Carlsbad, Ca	0.853	-		-		-		-	0.000	0.853	
MIDS-LVT Enhancements FAQT	WR	SSC:San Diego, Ca	-	-		1.963	Nov 2012	-		1.963	0.000	1.963	
MIDS JTRS CMN-4/TTNT Testing	WR	SSC:San Diego, Ca	-	-		1.700	Jan 2013	-		1.700	0.000	1.700	
MIDS JTRS CMN-4/TTNT F/A-18 Evaluation	WR	NAWS China Lake:Ridgecrest, CA	-	-		2.600	Mar 2013	-		2.600	0.000	2.600	
MIDS-LVT Enhancements F/A-18 Evaluation	WR	NAWS China Lake:Ridgecrest, CA	-	-		1.607	Dec 2012	-		1.607	0.000	1.607	
		Subtotal	47.811	-		7.870		-		7.870	0.000	55.681	

Remarks

Items marked with an asterisk (*) designate Navy unique tasks.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	General Dynamics/ Sentek:San Diego, Ca	15.145	-		-		-		-	0.000	15.145	15.145
Workforce Acquisition Fund	C/FP	Not Specified:Not Specified	0.135	-		-		-		-	0.000	0.135	0.135
Travel	WR	Not Specified:Not Specified	1.027	0.008	Dec 2011	0.100	Oct 2012	-		0.100	0.000	1.135	1.020
Government Engineering	WR	SSC:San Diego, Ca	23.901	0.364	Nov 2011	4.301	Nov 2012	-		4.301	0.000	28.566	23.745
Airborne Networking Support	WR	SSC:San Diego, Ca	1.313	-		-		-		-	0.000	1.313	1.313
Program Management Support	C/CPFF	Booz Allen Hamilton/ SSC:San Diego, Ca	8.272	0.626	Jan 2012	2.874	Dec 2012	-		2.874	0.000	11.772	8.511
Information Assurance Support	MIPR	NSA:Fort George Meade, MD	0.203	0.241	Nov 2011	5.071	Jan 2013	-		5.071	0.000	5.515	0.610
Systems Engineering Support	MIPR	MITRE:Bedford, Ma	-	-		4.100	Nov 2012	-		4.100	0.000	4.100	
Contractor Engineering Services	C/CPFF	Sentek:San Diego, Ca	-	-		2.932	Dec 2012	-		2.932	0.000	2.932	
		Subtotal	49.996	1.239		19.378		-		19.378	0.000	70.613	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	414.427	41.688		100.419		-		100.419			

Remarks

In PYs-FY13, Project No. 3020 represents the total MIDS RDT&E budget for those years. In FY14-FY17, Project No. 3020 represents the Navy share of the funding associated with MIDS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3020: *MIDS/JTRS*

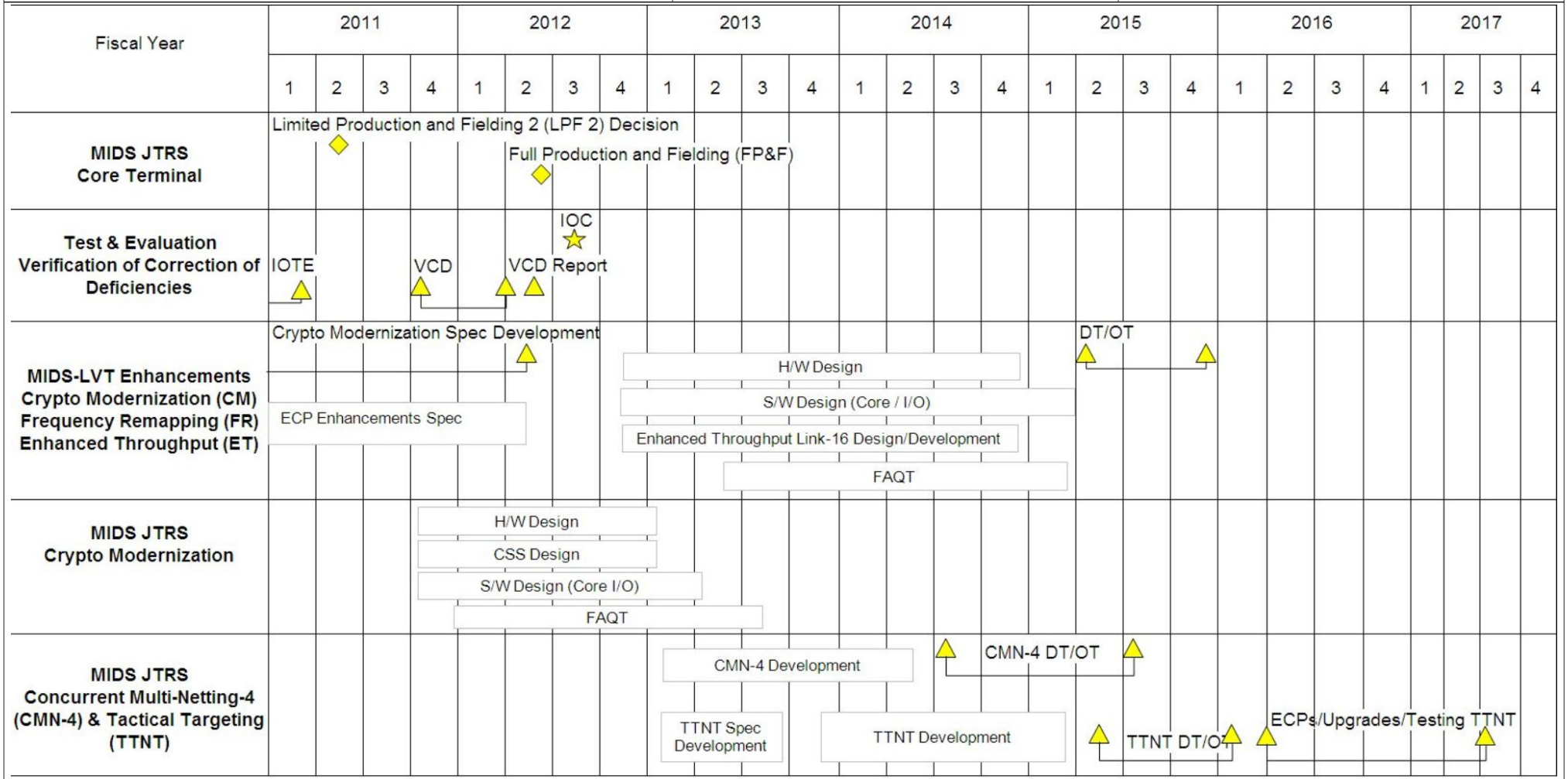


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3020: *MIDS/JTRS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3020				
MIDS JTRS Core Terminal: Limited Fielding and Production 2	2	2011	2	2011
MIDS JTRS Core Terminal: Full Production and Fielding Decision	2	2012	2	2012
MIDS JTRS Core Terminal: Test and Evaluation-Initial Operational Capability (IOC)	3	2012	3	2012
MIDS JTRS Core Terminal: Verification of Correction of Deficiencies (VCD)	4	2011	2	2012
MIDS-LVT Enhancements: Crypto Modernization (CM) -Spec Development	1	2011	2	2012
MIDS-LVT Enhancements: CM -ECP Enhancements	1	2011	2	2012
MIDS-LVT Enhancements: Enhanced Throughput Link-16 Design/Development	4	2012	4	2014
MIDS-LVT Enhancements: CM -H/W Design	4	2012	4	2014
MIDS-LVT Enhancements: CM -S/W Design	4	2012	1	2015
MIDS-LVT Enhancements: CM -FAQT	2	2013	1	2015
MIDS-LVT Enhancements: CM -DT and OT	2	2015	4	2015
MIDS JTRS Crypto Modernization: H/W Design	4	2011	1	2013
MIDS JTRS Crypto Modernization: CSS Design	4	2011	1	2013
MIDS JTRS Crypto Modernization: S/W Design (Core I/O)	4	2011	2	2013
MIDS JTRS Crypto Modernization: FAQT	4	2011	3	2013
MIDS JTRS CMN-4/TTNT: CMN-4 Development	1	2013	2	2014
MIDS JTRS CMN-4/TTNT: CMN-4 DT/OT	3	2014	3	2015
MIDS JTRS CMN-4/TTNT: TTNT Spec Development	1	2013	3	2013
MIDS JTRS CMN-4/TTNT: TTNT Development	4	2013	1	2015
MIDS JTRS CMN-4/TTNT: TTNT DT/OT	2	2015	1	2016
MIDS JTRS CMN-4/TTNT: ECPs/Upgrages/Testing TTNT	1	2016	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3073: *AMF JTRS*	307.910	349.560	58.187	-	58.187	0.007	-	-	-	0.000	715.664
Quantity of RDT&E Articles	15	0	0	0	0	0	0	0	0		

Note

In FY11-FY13, Project No. 3073 represents the total Airborne Maritime/Fixed Joint Tactical Radio Systems (AMF JTRS) RDT&E budget for those years.

In FY14-FY17, Project No. 3073 represents the Navy share of the funding associated with AMF JTRS. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

In FY12, Project No. 3073 also includes funding associated with system and shipboard integration planning/design and OPEVAL planning and coordination of Mobile User Objective Systems (MUOS) terminals on Navy platforms and shore locations.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

Airborne Maritime/Fixed Joint Tactical Radio Systems (AMF JTRS) is a key enabler to the transformation of airborne, maritime, and land based communications toward network-centric operations. AMF JTRS will operate with legacy radios and waveforms used by military airborne, surface, subsurface, and fixed station platforms. AMF JTRS is intended to provide new radio networking capability and will replace existing radio systems, facing long-term sustainment issues. AMF JTRS capabilities will be incrementally developed, with each increment building on the technological achievements of its predecessor, while providing expanded capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AMF JTRS	307.910	349.560	58.187
Articles:	15	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued Engineering Development Model (EDM) hardware and non-waveform software build 2.1 & 2.3 development and integration. Conducted initial hardware and software demonstration with the AMF JTR Set-SA for Wideband Networking Waveform (WNW). Delivered AMF JTR Set-SA EDMs with initial Link 16 capability to the Army and initial WNW/Link 16 capability to the Air Force. A total of 15 EDMs were delivered. Continued platform integration development for AMF test program. Continued Acquisition documentation for Milestone C; continued NSA information assurance activities and verification of design. Continued development engineering and management support for associated JTR system components. ***FY 2012 Plans:*** Restructure program due to schedule delays, technical challenges, increased costs, and changing Service priorities. Closeout of existing prime contract. Conduct market research to support non-developmental items (NDI) acquisition planning. Modify material solutions for incremental acquisition strategy - focused on using NDI to meet user needs. Rephase delivery of waveform capabilities aligned with Army battlefield network implementation and maturity of NDI products. Develop Request For Proposal (RFP) and award contract for NDI solution for Apache Block 3, Lot 4. Acquire initial Link 16/SRW integration assets for Apache Block 3, Lot 4. Sponsor NDI vendors for NIE and waveform certification efforts. Support legacy radio certification of networking capabilities. Develop Request for Information (RFI)/RFP for Phase 2 NDI solutions for SRW/WNW in Army Aviation platforms (Apache, Blackhawk & Chinook). ***FY 2013 Plans:*** Support Development Test (DT) /Operational Test & Evaluation flight tests with Apache Lot 4. Complete all USG developmental/ validation testing conducted on Phase 1 EDM articles and begin government DT on Low Rate Initial Production (LRIP) articles. Conduct Phase 1 Milestone C and award the LRIP contract option for Apache Block 3, Lot 4. Award contract(s) for Phase 2 NDI solutions for SRW/WNW in Army Aviation platforms (Apache, Blackhawk & Chinook). Conduct waveform confidence testing for SRW/WNW-AJ. Sponsor NDI vendors for NIE and waveform certification efforts. Support legacy radio certification of networking capabilities. Develop RFI for Phase 3 NDI solutions for MUOS in user platforms.			
Accomplishments/Planned Programs Subtotals	307.910	349.560	58.187

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEA/0604280A: *AMF JTRS*	0.000	0.000	0.000	0.000	0.000	19.467	2.091	0.000	0.000	0.000	21.558
• RDTEF/0604280F: *AMF JTRS*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	154.189

D. Acquisition Strategy

AMF JTRS is undergoing a program restructure in accordance with Milestone Decision Authority (MDA) direction. AMF has been directed to submit a program restructure plan, updated contract strategy, updated Acquisition Strategy, revised APB and an updated Test Evaluation Master Plan (TEMP) for MDA approval. The

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

program is revising its material solution strategy to leverage commercially available tactical radios in order to rapidly deliver AMF capabilities to the warfighter. The strategy will support a "family of radios" concept in which multiple Non-Developmental Item (NDI) radios can be selected from the vendor base and tailored to platform needs. The near term need for the Army is delivery of a Link 16 and SRW capability on the Apache platform. Near term objective capabilities include VHF/UHF Line of Sight (VULOS) waveforms. The FY13 budget supports the AMF restructure effort by acquiring initial integration assets, executing integration and LRIP contracts for Phase 1 and market research for Phase 2 SRW/WNW integration/procurement.

AMF JTRS is planning to a phased capability delivery approach with each phase building on the technological achievements of the preceding phase. Phase 1 consists of an NDI procurement of a Multichannel Link 16 Tactical Radio and initial Soldier Radio Waveform (SRW) capability. Phase 2 will procure multichannel radios for SRW and Wideband Networking Waveform (WNW). Phase 3 will procure multichannel radios for Mobile User Objective System (MUOS) capability.

E. Performance Metrics

The five ACAT ID JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, AMF employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MIDS JTRS HW/SW (Phase 2A/2B Core)	C/CPIF	DLS:Cedar Rapids, IA	8.563	-		-		-		-	0.000	8.563	8.563
MIDS JTRS HW/SW (Phase 2A/2B Core)	C/CPIF	ViaSat Inc:Carlsbad, CA	4.078	-		-		-		-	0.000	4.078	4.078
AMF JTRS Development - JTR System (Pre-SDD)	C/CPFF	The Boeing Co:Anaheim, CA	45.603	-		-		-		-	0.000	45.603	45.603
AMF JTRS Development - JTR System (Pre-SDD)	C/CPFF	Lockheed Martin:Manassas, VA	45.335	-		-		-		-	0.000	45.335	45.335
AMF JTRS Development - JTR SET (SDD)	C/CPIF	Lockheed Martin:Manassas, VA	804.104	271.971	Oct 2011	-		-		-	0.000	1,076.075	
AMF JTRS - Systems Engineering	WR	Various:Various	115.745	14.190	Oct 2011	12.163	Oct 2012	-		12.163	0.000	142.098	
AMF JTRS- NDI Integration and Certification	TBD	Various:Various	-	33.620	Aug 2012	19.356	Oct 2012	-		19.356	0.000	52.976	
Systems Engineering - JTRS Implementation-Navy Unique	WR	Various:Various	15.634	-		-		-		-	0.000	15.634	15.634
H/W Development: DMR HF Power Amplifier	C/FFP	GDDS:Various	6.227	-		-		-		-	0.000	6.227	6.227
Systems Engineering - JTF WARNET	WR	Various:Various	7.481	-		-		-		-	0.000	7.481	7.481
JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)	C/CPAF	General Dynamics C4 Systems:Scottsdale, AZ	-	-		-		-		-	0.000	0.000	
		Subtotal	1,052.770	319.781		31.519		-		31.519	0.000	1,404.070	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Acquisition, and ILS Support	WR	Various:Various	32.295	7.002	Oct 2011	2.518	Oct 2012	-		2.518	0.000	41.815	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Dev: DMR Build 6.4	C/FFP	GDDS:Various	12.861	-		-		-		-	0.000	12.861	12.861
		Subtotal	45.156	7.002		2.518		-		2.518	0.000	54.676	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF JTRS - Test and Evaluation and Test Support	WR	Various:Various	51.860	15.940	Oct 2011	20.100	Oct 2012	-		20.100	0.000	87.900	
DMR T&E (FOTE) SD	WR	SSC:San Diego, CA	7.093	-		-		-		-	0.000	7.093	7.093
DMR T&E (FOTE) CHARL	WR	SSC:Charleston, SC	1.732	-		-		-		-	0.000	1.732	1.732
MUOS SST- Navy Specific Integration	C/CPIF	Various:Various	-	1.267	Dec 2011	-	Dec 2012	-		-	0.000	1.267	
MUOS SST - Navy Specific Integration	WR	SSC:San Diego, CA	-	0.712	Oct 2011	-	Oct 2012	-		-	0.000	0.712	
MUOS SST- Navy Specific Integration	WR	SSC:Charleston, SC	-	0.128	Oct 2011	-		-		-	0.000	0.128	
		Subtotal	60.685	18.047		20.100		-		20.100	0.000	98.832	

Remarks

MUOS Shipboard/Submarine Terminals(MUOS SST)- Navy Specific Integration for Navy to complete system and shipboard integration planning/design and OPEVAL of MUOS terminals on Navy platforms and shore locations.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AMF Business Operations Management and Support	WR	Various:Various	32.375	4.730	Oct 2011	4.050	Oct 2012	-		4.050	0.007	41.162	
Acquisition Workforce Fund - 2009	C/FP	Various:Various	1.039	-		-		-		-	0.000	1.039	1.039

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	33.414	4.730		4.050		-		4.050	0.007	42.201	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,192.025	349.560		58.187		-		58.187	0.007	1,599.779	

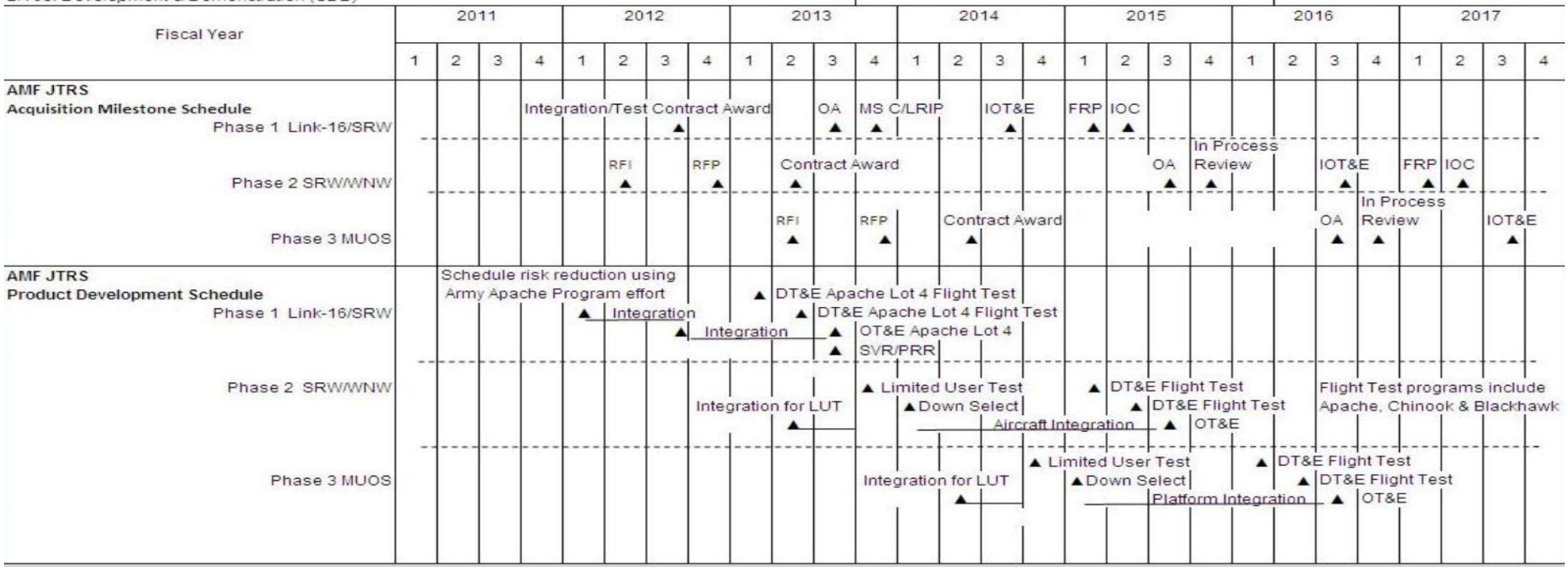
Remarks

The AMF JTRS is a Joint Acquisition Category ID (ACAT ID) program that combines the requirements of the United States Army, United States Marine Corps, United States Navy, and United States Air Force into a single Program of Record. AMF will deliver capabilities in three phases. Phase 1 consists of an NDI procurement of a Commercial Multichannel Link 16 Tactical Radio. Phase 2 consists of a competitive approach to procure the Commercial Multichannel Link 16 Tactical Radios that will instantiate additional waveforms (e.g. Soldier Radio Waveform (SRW) and Wideband Networking Waveform (WNW) for use in a classified security domain. Phase 3 consists of a full and open competition for a Mobile User Objective System (MUOS) capable Commercial Multichannel Tactical Radio.

Prior Year (PY) column only includes the Navy portion of the budget for AMF JTRS; prior to FY07, Air Force AMF JTRS funding resided in Air Force PE 0604280F, Project 5068. FY07-FY11 PYs represent the total AMF JTRS RDT&E budget for those years. In FY12-FY13, Project No. 3073 represents the total AMF JTRS RDT&E budget. In FY14-17 Project No. 3073 represents a portion of the total AMF JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3073: *AMF JTRS*

EXHIBIT R-4, RDT&E Schedule Profile: 2013 Navy
APPROPRIATION/BUDGET ACTIVITY
1319: Research, Development, Test & Evaluation, Navy
BA 05: Development & Demonstration (SDD)
R-1 ITEM NOMENCLATURE
PE 0604280N: JT Tact Radio Sys (JTRS)
DATE: February 2012
PROJECT
3073: AMF JTRS



ACRONYMS:		
IHSD: Integrated Hardware/Software Demonstration	LRIP: Low-Rate Initial Production	EDM: Engineering Development Model
MS: Milestone	LUT: Limited User Test	OT&E: Operational Test & Evaluation
FRP: Full Rate Production	OA: Operational Assessment	IGED: Initial Government EDM Delivery
SVR/PRR: System Verification Review & Production Readiness R	IOC: Initial Operational Capability	IOT&E: Initial Operational Test & Evaluation
VU/LOS: Very High Frequency/Ultra High Frequency Line of Sight	SW: Software Build	WNW: Wideband Networking Waveform
DSVR: Delta System Verification Review	MUOS: Mobile User Objective Systems	EOT: Early Operational Test

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3073: *AMF JTRS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3073				
Link 16/SRW Integration test/Contract Award	3	2012	3	2012
Link 16/SRW Operational Assessment (OA)	3	2013	3	2013
Link 16/SRW Milestone C (MS C)/LRIP	4	2013	4	2013
Link 16/SRW IOT&E	3	2014	3	2014
Link 16/SRW FRP Decision	1	2015	1	2015
Link 16/SRW IOC	2	2015	2	2015
SRW/WNW Request For Proposal (RFI)	2	2012	2	2012
-SRW/WNW Request For Proposal (RFP)	4	2012	4	2012
-SRW/WNW Contract Award	2	2013	2	2013
-SRW/WNW Operational Assessment (OA)	3	2015	3	2015
SRW/WNW In Process Review (IPR)	4	2015	4	2015
-SRW/WNW IOT&E	3	2016	3	2016
SRW/WNW FRP Decision	1	2017	1	2017
SRW/WNW IOC	2	2017	2	2017
-MUOS Request For Proposal (RFI)	2	2013	2	2013
-MUOS Request For Proposal (RFP)	4	2013	4	2013
MUOS Contract Award	2	2014	2	2014
MUOS Operational Assessment (OA)	3	2016	3	2016
MUOS In Process Review (IPR)	4	2016	4	2016
MUOS IOT&E	3	2017	3	2017
Link 16/SRW Integration (I)	1	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3073: *AMF JTRS*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Link 16/SRW Integration (II)	3	2012	3	2013
DT&E Apache Lot 4 Flight Test (I)	1	2013	1	2013
DT&E Apache Lot 4 Flight Test (II)	2	2013	2	2013
Link 16/SRW IOT&E Apache Lot 4	3	2013	3	2013
SVR/PRR	3	2013	3	2013
Integration for Limited User Test (LUT)	2	2013	3	2013
Limited User Test (LUT)	4	2013	4	2013
Aircraft Integration	1	2014	3	2015
Down Select	1	2014	1	2014
DT&E Flight Test (I)	1	2015	1	2015
DT&E Flight Test (II)	2	2015	2	2015
OT&E	3	2015	3	2015
MUOS Integration for Limited User Test (LUT)	2	2014	3	2014
MUOS Limited User Test (LUT)	4	2014	4	2014
MUOS Down Select	1	2015	1	2015
MUOS Platform Integration	1	2015	3	2016
MUOS DT&E Flight Test (I)	1	2016	1	2016
MUOS DT&E Flight Test (II)	2	2016	2	2016
MUOS OT&E	3	2016	3	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3074: *GMR JTRS*	99.289	18.732	-	-	-	-	-	0.025	0.025	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY11-FY13, Project No. 3074 represents the total Joint Tactical Radio System (JTRS) Ground Mobile Radio (GMR) RDT&E budget for those years.

In FY14-FY17, Project No. 3074 represents the Navy share of the funding associated with JTRS GMR. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this Project Element (PE), in Army PE 0604280A, and in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: GMR JTRS	99.289	18.732	-
Articles:	0	0	
FY 2011 Accomplishments:			
Supported the design and development of the GMR product, technical support to the Program Management Office (PMO), Field Testing, and Customer Test (CT). Completed Production Qualification Test (PQT).			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct close out of the Software Design and Development (SDD) contract. Activities include: identifying critical deliverables such as hardware, design specifications, instrumentation, modeling tools, simulators, etc. for delivery to the Government. Continue support to the GMR PMO (travel, training, payroll, etc.).			
Accomplishments/Planned Programs Subtotals	99.289	18.732	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEA/0604805A: *JTRS Cluster 1/ GMR*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	571.542

D. Acquisition Strategy

Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

E. Performance Metrics

Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS GMR GFE	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	4.000	-		-		-		-	0.000	4.000	4.000
JTRS GMR GFE	C/CPAF	GENERAL DYNAMICS:Scottsdale, AZ	0.702	-		-		-		-	0.000	0.702	0.702
JTRS GMR SDD	C/CPAF	BOEING:Huntington Beach, CA	846.719	10.278	Oct 2011	-		-		-	0.000	856.997	850.886
JTRS DEVELOPMENT - System Engineering Support	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	16.738	-		-		-		-	0.000	16.738	16.738
Technology Development Efforts	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	20.966	-		-		-		-	0.000	20.966	23.216
		Subtotal	889.125	10.278		-		-		-	0.000	899.403	895.542

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Antenna Study	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	2.025	-		-		-		-	0.000	2.025	2.025
JTRS Tech Support	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	9.344	-		-		-		-	0.000	9.344	9.344
JTRS MUOS Support	C/CPFF	Johns Hopkins University:Laurel, MD	0.623	-		-		-		-	0.000	0.623	0.623
DIACAP Support	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	0.960	-		-		-		-	0.000	0.960	1.460
		Subtotal	12.952	-		-		-		-	0.000	12.952	13.452

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EPG test bed & test planning	MIPR	EPG:Fort Huachuca, AZ	18.297	-		-		-		-	0.000	18.297	18.297
JTRS M&S	MIPR	USAIC:Fort Huachuca, AZ	7.384	-		-		-		-	0.000	7.384	7.384
JTRS Test In-house Spt & Gov activities	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	11.380	-		-		-		-	0.000	11.380	11.380
JTRS EOA/CLUT/NIR/NIE Dev. FIeld Test Activity	MIPR	EPG:Fort Huachuca, AZ	17.024	-		-		-		-	0.000	17.024	17.024
		Subtotal	54.085	-		-		-		-	0.000	54.085	54.085

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Business Engineering Mgmt	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	16.191	-		-		-		-	0.000	16.191	16.791
PMO Support	MIPR	PEO C3T:Aberdeen Proving Grounds, MD	26.990	8.454	Dec 2011	-		-		-	0.000	35.444	35.444
JTRS MITRE support	MIPR	MITRE:Aberdeen Proving Grounds, MD	0.513	-		-		-		-	0.000	0.513	0.513
Acquisition Workforce Fund	C/FP	Not Specified:Not Specified	1.167	-		-		-		-	0.000	1.167	1.167
		Subtotal	44.861	8.454		-		-		-	0.000	53.315	53.915

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,001.023	18.732		-		-		-	0.000	1,019.755	1,016.994

Remarks

Prior Years (PYs) column only reflects prior year Navy Joint Tactical Radio System (JTRS) Ground Mobile Radio (GMR) costs for FY07-11. Prior to FY07, JTRS GMR funding resided in Army Program Element (PE) 0604805A, Project 615. In FY12 and FY13, Project No. 3074 represents the total JTRS GMR RDT&E budget. In FY14-17, Project No. 3074 represents

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

a portion of the total JTRS GMR RDT&E budget. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3074: *GMR JTRS*

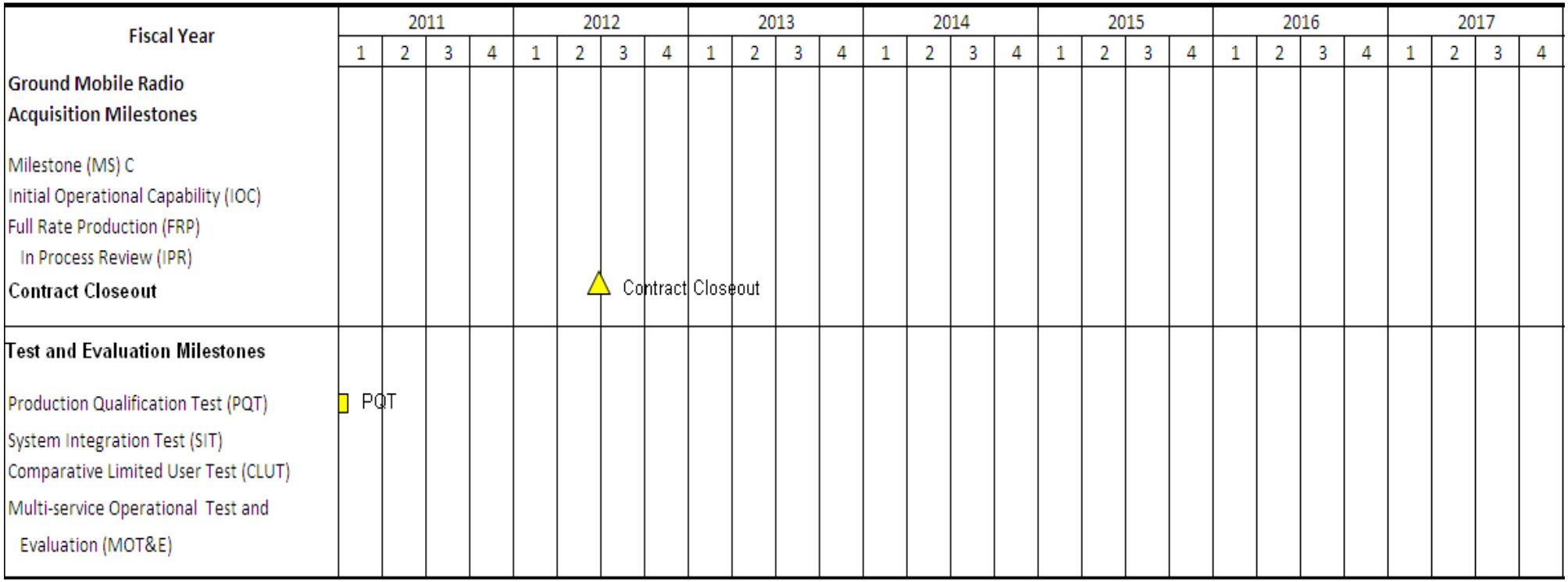


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3074: *GMR JTRS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3074				
Contract Closeout	2	2012	2	2012
PQT	1	2011	1	2011

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3075: *HMS JTRS*	67.363	116.054	116.030	-	116.030	2.752	0.313	-	-	0.000	302.512
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY11-FY13, Project No. 3075 represents the total HMS JTRS RDT&E budget for those years.

In FY14-FY17, Project No. 3075 represents the Navy share of the funding associated with HMS JTRS. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for JointVision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

HMS provides the JTRS capability to meet Joint Ground Mounted, Dismounted & Embedded Radio Requirements. Increment 1, Phase 1 developed Small-Form-Fit (SFF) SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B. Phase 2 radios are all Type 1 compliant for use in a classified environment running Very High Frequency/Ultra High Frequency (V/UHF) Line of Sight (LOS) w/Air Traffic Control (ATC), Satellite Communications (SATCOM), High Frequency (HF), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), JTRS Bowman Waveform (JBW) and Single Channel Ground to Air Radio System (SINCGARS) waveforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: HMS JTRS	67.363	116.054	116.030
Articles:	0	0	0
FY 2011 Accomplishments: Completed Phase 1 and 2 Contractor Developmental Test (CDT); Completed Government Developmental Test 2 (GDT2) and the Verification of Correction of Deficiencies (VCD) test for Phase 1 AN/PRC-154 Rifleman Radio; Achieved a Milestone C; Started			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
preparation for the Phase 1 Initial Operational Test & Evaluation; Provided technical support for Phase 1 and Phase 2; Completed Phase 2 GDT1 and Phase 2 Limited User Test (LUT). ***FY 2012 Plans:*** Perform Phase 1 Initial Operational Test & Evaluation (IOT&E); Obtain Phase 1 Information Assurance certification; Perform cold and hot climate testing for Phase 1; Receive Phase 2 Information Assurance certification; Complete Phase 2 GDT2 and Phase 2 Multi-Service Operational Test & Evaluation (MOTE); Perform hot climate testing for Phase 2; Porting efforts for Mobile User Objective System (MUOS) waveform; Start Small Form Fit (SFF)-B CDT; Initiate redesign of SFF-B capabilities; Provide technical and engineering support for completion of Phase 1 and Phase 2 efforts. ***FY 2013 Plans:*** Receive Information Assurance certification for Phase 2 radios with MUOS capability; Continue MUOS porting and testing activities; Initiate Manpack capabilities of Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ), Very High Frequency/ Ultra High Frequency Line-of-Sight (V/UHF LOS) with Air Traffic Control (ATC); Initiate efforts to port Public Key Information (PKI) functionality onto Phase 2 radios; Provide technical and engineering support for development efforts.			
Accomplishments/Planned Programs Subtotals	67.363	116.054	116.030

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEA/0604280A: *HMS JTRS*	0.755	0.000	0.000	0.000	0.000	28.217	4.712	4.615	0.000	0.000	38.299
• RDTEF/0604280F: *HMS JTRS*	0.000	0.000	0.000	0.000	0.000	2.857	0.336	0.000	0.000	0.000	3.193
• RDTEA/0604805A: *JTRS Cluster 5 / HMS*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	242.657
• OPN/3057: *COMMUNICATION ITEMS UNDER $5M*	5.100	0.000	3.300	0.000	3.300	26.434	59.914	67.873	66.414	Continuing	Continuing

D. Acquisition Strategy

This project supports the JTRS HMS Engineering and Manufacturing Development phase efforts. The JTRS HMS Program began with the development of the HMS Radios following Milestone (MS) B approval on April 26, 2004. HMS uses an evolutionary acquisition strategy and will deliver NSA certified capabilities. Following full and open competition, a single Cost-Plus-Award Fee (CPAF) contract was awarded on July 16, 2004. The contract is structured to address Increment 1. JTRS HMS Increment 1 consists of two phases of development. Increment 1, Phase 1 developed SFF-A (1 and 2 Channel), SFF-D and AN/PRC-154 Rifleman Radio running Soldier Radio Waveform (SRW) for use in a sensitive but unclassified environment (Type 2). Increment 1, Phase 2 will develop the 2 Channel Manpack and SFF-B which are Type 1 compliant for use in a classified environment running Ultra High Frequency (UHF), Satellite Communications (SATCOM), High Frequency (HF), Soldier Radio Waveform (SRW), Mobile User Objective System (MUOS), and Single Channel Ground to Air Radio System (SINCGARS) waveforms. The FY13 Budget

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

supports continued porting efforts of MUOS and HF waveforms to the Manpack, continued follow-on Manpack Capabilities of JTRS Bowman Waveform (JBW), SRW Teleops, Over-The-Air-Rekeying/Over-The-Air-Zeroizing (OTAR/OTAZ), and Very High Frequency/Ultra High Frequency Line-of-Sight (V/UHF LOS) and initiate efforts to port Public Key Information (PKI) functionality onto Phase 2 radios.

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, JTRS HMS employs Earned Value Metrics to monitor contract performance on the Prime Development Contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS HMS Design, Development and Manufacture of Engineering Development Models (EDMs)	C/CPAF	General Dynamics C4 Systems:Scottsdale, AZ	494.154	80.138	Oct 2011	93.842	Oct 2012	-		93.842	2.272	670.406	668.134
JTRS HMS Development System Engineering Support	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	24.964	-		-		-		-	0.000	24.964	24.964
Technology Development efforts	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	8.317	-		-		-		-	0.000	8.317	8.317
		Subtotal	527.435	80.138		93.842		-		93.842	2.272	703.687	701.415

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Engineering/Technical Support	MIPR	PEO C3T, ARL, CACI, CECOM, CERDEC, LCMC, DSCI:Ft. Monmouth, NJ/APG, MD; San Diego, CA	39.720	8.092	Oct 2011	6.795	Oct 2012	-		6.795	0.152	54.759	54.607
		Subtotal	39.720	8.092		6.795		-		6.795	0.152	54.759	54.607

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS EPG test bed and planning .	MIPR	EPG:Ft. Huachuca, AZ	0.300	-		-		-		-	0.000	0.300	0.300
JTRS Modeling and Simulation.	MIPR	USAIC:Ft. Huachuca, AZ	0.650	-		-		-		-	0.000	0.650	0.650

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS Test In-house Support & Government	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD; SSC PAC: San Diego, CA	11.924	0.279	Oct 2011	0.287	Oct 2012	-		0.287	0.000	12.490	12.490
Phase1 T&E (CDT, GDT, LUT, OT)	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	14.994	3.279	Oct 2011	-	Oct 2012	-		-	0.000	18.273	20.039
Phase2 T&E (CDT, GDT, LUT, OT)	MIPR	PEO C3T:Ft. Monmouth, NJ/APG,MD	9.871	16.568	Oct 2011	-		-		-	0.000	26.439	29.371
Follow on Delta Development & Testing	MIPR	EPG, ATEC, AEC, MBL, ARLSLAD, CERDEC:Ft. Huachuca, AZ; Ft. Benning, GA; Ft. Monmouth,AP	-	2.000	May 2012	9.949	Oct 2012	-		9.949	0.171	12.120	11.949
		Subtotal	37.739	22.126		10.236		-		10.236	0.171	70.272	74.799

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Management Office Support	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	36.844	4.828	Oct 2011	4.426	Oct 2012	-		4.426	0.454	46.552	46.098
JTRS Business/Management	MIPR	PEO C3T:Ft. Monmouth, NJ/APG, MD	14.424	0.870	Oct 2011	0.731	Oct 2012	-		0.731	0.016	16.041	16.025
Acquistion Workforce Fund	C/FP	Not Specified:Not Specified	0.634	-		-		-		-	0.000	0.634	0.634
		Subtotal	51.902	5.698		5.157		-		5.157	0.470	63.227	62.757

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	656.796	116.054		116.030		-		116.030	3.065	891.945	893.578

Remarks

PYs column only reflects prior year Navy HMS costs for FY07-11. Prior to FY07, HMS JTRS funding resided in Army PE 0604805A, Project 61A. In FY12-FY13, Project No. 3075 represents the total HMS JTRS RDT&E budget. In FY14-17 Project No. 3075 represents a portion of the total HMS JTRS RDT&E budget. As part of the JTRS joint program acquisition strategy, each MILDEP budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3075: *HMS JTRS*

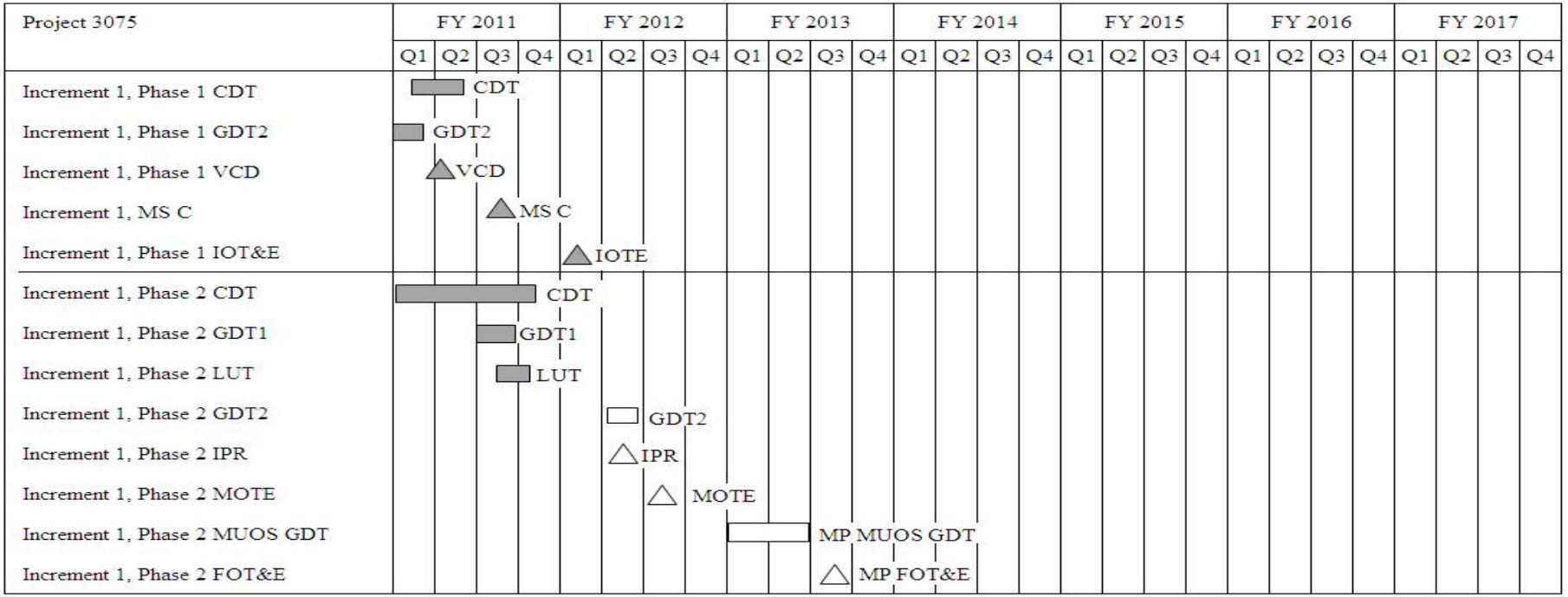


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3075: *HMS JTRS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3075				
Increment 1, Phase 1 CDT	1	2011	2	2011
Increment 1, Phase 1 GDT2	1	2011	1	2011
Increment 1, Phase 1 VCD	2	2011	2	2011
Increment 1, MS C	3	2011	3	2011
Increment 1, Phase 1 IOT&E	1	2012	1	2012
Increment 1, Phase 2 CDT	1	2011	4	2011
Increment 1, Phase 2 GDT1	3	2011	3	2011
Increment 1, Phase 2 LUT	3	2011	4	2011
Increment 1, Phase 2 GDT2	2	2012	2	2012
Increment 1, Phase 2 IPR	2	2012	2	2012
Increment 1, Phase 2 MOTE	3	2012	3	2012
Increment 1, Phase 2 Manpack MUOS GDT	1	2013	2	2013
Increment 1, Phase 2 Manpack FOT&E	3	2013	3	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3076: *JTRS Network Enterprise Domain (JNED)*	114.511	93.987	59.077	-	59.077	20.701	17.076	14.221	14.262	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY11-FY13, Project No. 3076 represents the total JNED RDT&E budget.

In FY14-FY17, Project No. 3076 represents the Navy share of the funding associated with JNED. As part of the JTRS joint program budget strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17, a portion of JTRS development is represented in this PE, the Army PE 0604280A, and the Air Force PE 0604280F.

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

JNED is responsible for the development and delivery of software-defined, legacy radio waveforms and networking waveforms that support Net-Centric operational warfare at sea, air and on the ground. Networking waveforms extend the Global Information Grid (GIG) to the last tactical mile and to the warfighter. The JNED team is responsible for (1) the overall management and oversight of the JTRS Waveform program, (2) development, validation, and evolution of a common JTRS Software Communications Architecture (SCA), (3) development and evolution of waveform software applications, (4) development of software cryptographic algorithms and equipment applications, (5) testing and certification of JTRS waveforms, network services, network management, and software products, and (6) JTRS networking and network management software components. Services are responsible for acquiring and fielding host radio hardware and integrating JTRS into Service platforms.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Soldier Radio Waveform (SRW)	2.129	-	-
Articles:	0		
Description: Soldier Radio Waveform (SRW) will operate on JTR sets to provide a networked battlefield communications capability for disadvantaged users engaged in land combat operations and will support voice, data, and video communications			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
on and over the immediate battlefield. These forces include vehicles, rotary wing, dismounted soldiers, munitions, sensors, and unmanned air vehicles (UAV). Functional software applications will use SRW enabled JTR sets over Internet Protocol (IP) capable networks and sub-networks. SRW will be interoperable with higher throughput, IP-based network waveforms, such as WNW. As applicable, these IP-based networking waveforms will enable information exchanges through the GIG to the soldier and provide entirely new capabilities for battlefield communications and information sharing. Platforms include: AMF and HMS. ***FY 2011 Accomplishments:*** Continued Software In Service Support for the SRW waveform.			
Title: Mobile User Objective System (MUOS) ***Articles:*** ***Description:*** Mobile User Objective System (MUOS) will enable MUOS satellites to provide worldwide communication satellite coverage for DoD requirements. MUOS will provide functionality comparable to commercial mobile phone systems. MUOS offers secure streaming video, netted communications, and voice/data in real time to provide essential connectivity. JNED program will modify this waveform, making it compatible and certifiable to meet DoD security requirements plus enable porting to JTR sets. Platforms include: HMS and AMF. ***FY 2011 Accomplishments:*** Continued development of MUOS v3.1. ***FY 2012 Plans:*** Complete development of MUOS v3.1 in 4Q FY12. Begin Software In Service Support for the MUOS waveform. ***FY 2013 Plans:*** Continue Software In Service Support for the MUOS waveform.	39.150 0	42.627 0	12.300 0
Title: Joint Airborne Networking -Tactical Edge (JAN-TE) ***Articles:*** ***Description:*** Joint Airborne Networking - Tactical Edge (JAN-TE) will operate on JTR airborne sets to provide a networked tactical communications capability for tactical aircraft. JAN-TE will provide increased throughput, highly responsive connectivity, and ad hoc mobile networking for fighters engaged in air operations. This networking waveform is uniquely designed and engineered for highly maneuverable, fast moving aircraft for rapidly establishing networks to share high value data communications. USD(AT&L) directed that the development of the JAN-TE waveform be discontinued after Critical Design Review in October 2008, but allowed the Navy and/or Air Force to continue funding its development independently, if desired. In FY2011, the Navy began to budget and execute funding for continuation of JAN-TE's development.	2.250 0	3.000 0	3.000 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued development of the JAN-TE waveform. ***FY 2012 Plans:*** Continue development of the JAN-TE waveform. ***FY 2013 Plans:*** Continue development of the JAN-TE waveform.			
Title: Network Enterprise Services (NES)	39.275	25.691	13.242
Articles:	0	0	0
Description: Network Enterprise Services (NES): Includes development and acquisition of JTRS Network Enterprise Services (JNES) to include JTRS WNW Network Manager (JWNM), JTRS Enterprise Network Manager (JENM), Soldier Radio Waveform Network Manager (SRWNM), and Enterprise Network Services (ENS). Provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities. ***FY 2011 Accomplishments:*** Completed development and performed FQT for JENM Phase 1 in 4Q FY11 and began JENM Phase 2 enhancement effort. Completed development and performed FQT for SRWNM 1.0.2. in 2Q FY11. Completed development and performed FQT for ENS Phase 1 SoftINC in 3Q FY11 and ENS Phase 1 TDC in 3Q FY11. Began Software In Service Support for Network Services. Continued Software In Service Support for Network Managers. ***FY 2012 Plans:*** Continue to provide JNED technical support, including waveform development, systems engineering, spectrum allocation, system security engineering, problem resolution and support of Software Communications Architecture (SCA) activities. Complete development and perform FQT for JENM Phase 2 in 4Q FY12. Continue Software In Service Support for Network Services and Network Managers. Begin JENM Phase 3 effort. ***FY 2013 Plans:*** Complete development and perform FQT for JENM Phase 3 in 2Q FY13. Continue Software In Service Support for Network Services and Network Managers.			
Title: Legacy Radio Waveforms	31.707	22.669	30.535
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Legacy Radio Waveforms: Includes the development and acquisition of legacy software and other related activities to support the legacy waveform development. ***FY 2011 Accomplishments:*** Continued to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continued JNED program management office support. Continued Software In Service Support for Legacy waveforms. ***FY 2012 Plans:*** Continue to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continue JNED program management office support. Continue Software In Service Support for Legacy waveforms. ***FY 2013 Plans:*** Continue to support waveform integration, test and evaluation to include hardware and Software Waveform Certification Process (SCA compliance testing) to meet program requirements. Continue JNED program management office support. Continue Software In Service Support for Legacy waveforms.			
Accomplishments/Planned Programs Subtotals	114.511	93.987	59.077

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDTEA/0604280A: *JNED*	0.000	0.000	0.000	0.000	0.000	23.621	19.909	21.788	26.849	Continuing	Continuing
• RDTEF/0604280F: *JNED*	0.628	0.000	2.594	0.000	2.594	23.901	20.209	22.705	22.529	Continuing	Continuing
• O&M, 4A6M: *Service Wide Communications (JNED)*	40.238	39.514	42.264	0.000	42.264	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

JNED, formerly Joint Waveforms Program Office, is responsible for common core activities including developing and evolving the software-defined legacy and networking waveforms that operate on multiple hardware sets and in all operational environments that support network-centric operational warfare, as well as common networking services solutions. Waveform developments will be procured through full and open contract competitions, except when special circumstances support sole source acquisition. The JNED program is developing waveforms and Cryptographic Equipment applications (CEAs) for use within the JTRS community. The module developer will develop CEAs. The FY13 Budget supports continued development of waveforms, supporting software, and testing support, as well as the National Security Agency (NSA) evaluation of software crypto libraries.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

E. Performance Metrics

The five ACAT 1D JTRS programs are employing mature, software-defined radio technologies and developing more than 10 million lines of code as part of the Increment 1 baseline. Early on, a JTRS enterprise software metrics requirements effort established a baseline of standard software metrics which are monitored on each JTRS contract involving software development. Example metrics are: the number of requirements and the number of use cases required for design are estimated during the requirement and design phase and analyzed for trend-actual vs. scheduled; the software lines of code (SLOC) counts are used to determine progress during the coding phase; and the execution of test cases as well as trouble reports are monitored during the integration and test phase. Further, a software complexity product metric is collected which demonstrates the testability of the code and is an important criterion for software certification. These software metrics are used to quantify the quality and progress of each software product's development over time. Additionally, JNED employs Earned Value Metrics to monitor contract performance on its Prime Development Contracts.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture Development and Validation, Evolve and Provide CM Mgmt of SCA	WR	Johns Hopkins:Laurel, MD	2.350	-		-		-		-	Continuing	Continuing	Continuing
Wideband Networking Waveform (WNW)	C/CPAF	BOEING:Huntington Beach, CA	104.101	-		-		-		-	0.000	104.101	104.094
Soldier Radio Waveform (SRW)	C/CPIF	ITT:Clifton, NJ	91.531	-		-		-		-	0.000	91.531	91.470
Mobile User Objective System (MUOS)	C/CPIF	Lockheed Martin:Sunnyvale, CA	132.971	40.439	Nov 2011	11.993	Dec 2012	-		11.993	0.000	185.403	149.159
Joint Airborne Networking -Tactical Edge (JAN-TE) Development	C/CPFF	Rockwell Collins:Cedar Rapids, IA	41.464	2.700	Dec 2011	2.700	Dec 2012	-		2.700	Continuing	Continuing	Continuing
Legacy Software-Defined Radio Waveforms	Various	Various:Various	51.915	1.405	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Network Enterprise Services Development	C/CPIF	ITT:Clifton, NJ	60.124	-		-		-		-	0.000	60.124	61.072
Network Enterprise Services Development	Various	BOEING:Huntington Beach, CA	220.727	20.282	Oct 2011	11.663	Dec 2012	-		11.663	Continuing	Continuing	Continuing
Network Enterprise Services Development	Various	RCI:Cedar Rapids, IA	21.798	-		-		-		-	0.000	21.798	32.287
Post FQT / Software Sustainment	Various	ITT:Clifton, NJ	1.938	-		-		-		-	0.000	1.938	6.148
Post FQT / Software Sustainment	Various	RCI:Cedar Rapids, IA	1.012	-		-		-		-	0.000	1.012	1.297
Post FQT / Software Sustainment	Various	BAE:Wayne, NJ	-	-		0.869	Dec 2012	-		0.869	Continuing	Continuing	Continuing
Post FQT / Software Sustainment	Various	Boeing:Huntington Beach, CA	1.247	-		12.538	Dec 2012	-		12.538	0.000	13.785	9.991
Post FQT / Software Sustainment	Various	LANT:Charleston, SC	2.043	0.024	Oct 2011	1.708	Dec 2012	-		1.708	0.000	3.775	4.805
Joint Airborne Networking - Tactical Edge (JAN-TE) Post FQT/Software Sustainment	C/CPFF	RCI:Cedar Rapids, IA	-	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Certification (Interim SCA Compliance Testing)	MIPR	NSA:Ft. Meade, MD	16.004	2.198	Jan 2012	1.250	Dec 2012	-		1.250	Continuing	Continuing	Continuing
		Subtotal	749.225	67.048		42.721		-		42.721			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FFRDC - MITRE Technical Support	MIPR	MITRE:Ft. Monmouth, NJ	10.497	0.360	Oct 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	10.497	0.360		-		-		-			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	SRA / SSC PAC / SSC LANT:San Diego, CA / San Diego, CA / Charleston, SC	226.140	26.279	Dec 2011	16.056	Dec 2012	-		16.056	Continuing	Continuing	Continuing
Joint Airborne Networking - Tactical Edge (JAN-TE) PMO	C/CPFF	RCI:Cedar Rapids, IA	-	0.300	Dec 2011	0.300	Dec 2012	-		0.300	Continuing	Continuing	Continuing
Acquisition Workforce Fund	C/FP	Not Specified:Not Specified	1.030	-		-		-		-	0.000	1.030	1.030
		Subtotal	227.170	26.579		16.356		-		16.356			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	986.892	93.987		59.077		-		59.077			

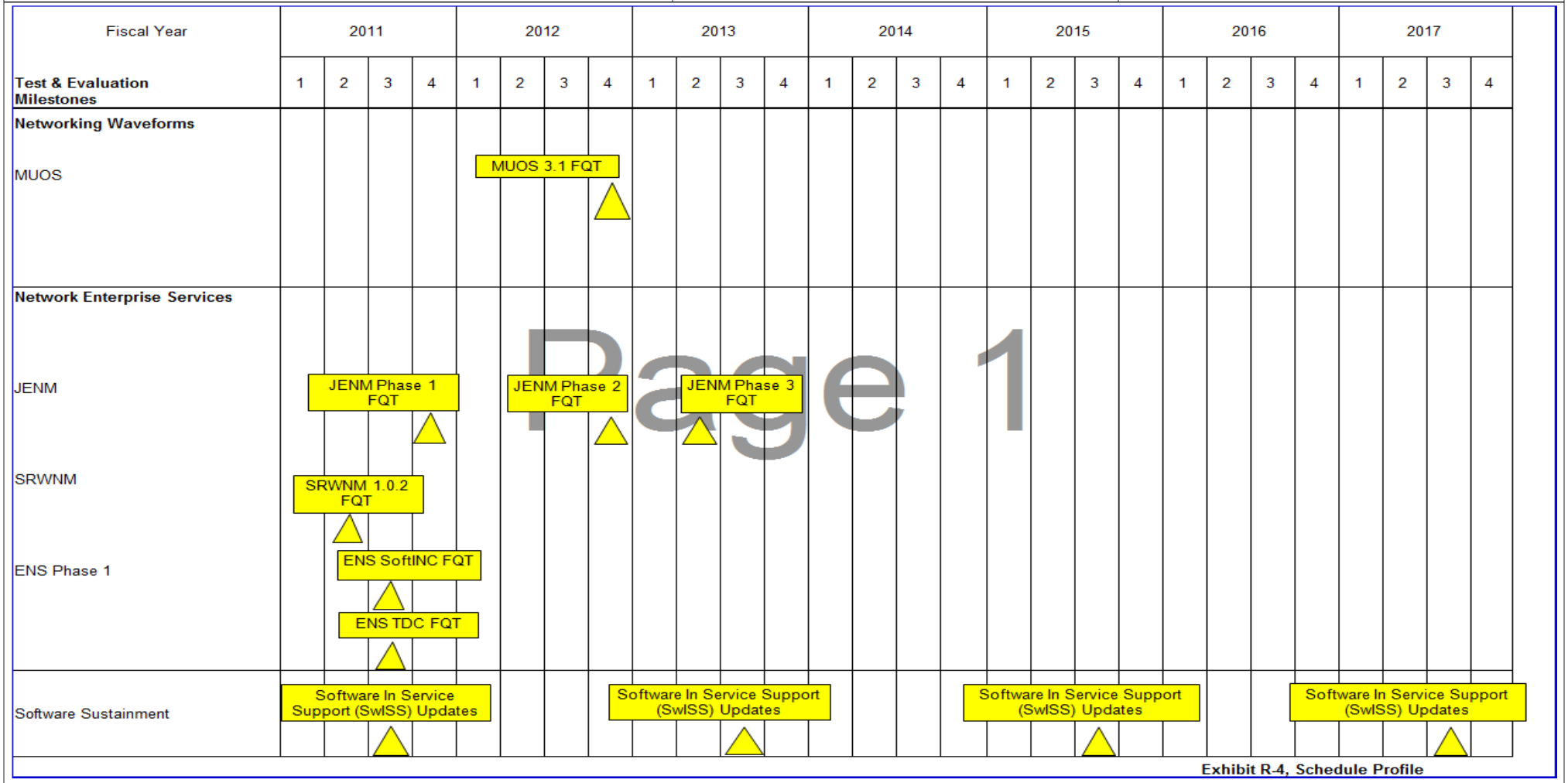
Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Remarks: PYs column only reflects prior year Navy JNED costs for FY07-FY11. Prior to FY07, funding for JNED resided in Army PE 0604280A, Project 162. In FY12 & FY13, Project No. 3076 represents the total JTRS NED RDT&E budget. In FY14-17, Project No. 3076 represents the Navy share of the total JTRS NED RDT&E budget. As part of the JTRS joint program acquisition strategy, each Military Department (MILDEP) budgets for a portion of the total program, therefore in FY14-17 a portion of JTRS development is represented in this PE, in Army PE 0604280A, and in Air Force PE 0604280F. Software Sustainment funds to be transferred from RDT&E to O&M,N in fiscal year of execution as part of the JTRS joint program acquisition strategy.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3076: *JTRS Network Enterprise Domain (JNED)*



Page 1

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3076: *JTRS Network Enterprise Domain (JNED)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3076				
MUOS 3.1	4	2012	4	2012
JENM Phase I	4	2011	4	2011
JENM Phase II	4	2012	4	2012
JENM Phase III	2	2013	2	2013
SRWNM 1.0.2	2	2011	2	2011
ENS Phase 1 SoftINC	3	2011	3	2011
ENS Phase 1 TDC	3	2011	3	2011
Software In Service Support (SwISS) Update I	3	2011	3	2011
Software In Service Support (SwISS) Update II	3	2013	3	2013
Software In Service Support (SwISS) Update III	3	2015	3	2015
Software In Service Support (SwISS) Update IIII	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3078: *Digital Modular Radio*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3078: *Digital Modular Radio*	-	4.500	3.767	-	3.767	-	-	-	-	0.000	8.267
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Digital Modular Radio previously funded under Project 3073.

A. Mission Description and Budget Item Justification

The Digital Modular Radio (DMR), AN/USC-61(C), is the first software defined radio to have become a communications system standard for the U.S. Military. The compact, multi-channel DMR provides multiple waveforms and multi-level information security for voice and data communications. Digital Modular Radios currently operate aboard U.S. Navy surface and subsurface vessels, fixed-sites and other Department of Defense communication platforms using frequencies ranging from 2 MHz to 2 GHz. Certified to pass secure voice and data at Multiple Independent Levels of Security (MILS) over High Frequency (HF), Very High Frequecy (VHF), Ultra High Frequency (UHF), and Satellite Communications (SATCOM) channels, the DMR system was developed to the U.S. Navy's specifications and meets all the stringent environmental, Electromagnetic Interference (EMI) and performance requirements for use in the U.S. Fleet.

This task is to develop Integrated Waveform (IW) capability for the Digital Modular Radio (DMR) in accordance with Military Standards 188-181,2,3. IW uses a Time Division Multiple Access (TDMA) communication system in an attempt to improve satellite bandwidth utilization over legacy SATCOM waveforms. This enables demand assigned services on UHF SATCOM networks to support new applications that require better performance and higher channel throughput.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: DMR	-	4.500	3.767
Articles:		0	0
FY 2012 Plans: FY12 funding is for DMR Integrated Waveform (IW) capability development and testing of software version 6.5.1.			
FY 2013 Plans: FY13 funding is to complete DMR Integrated Waveform (IW) capability development and testing for software version 6.5.1.			
Accomplishments/Planned Programs Subtotals	-	4.500	3.767

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/3010: *Ship Tactical Communications*	0.000	0.000	0.000	0.000	0.000	4.018	3.988	6.065	6.222	0.000	20.293

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3078: *Digital Modular Radio*

D. Acquisition Strategy

As per DMR's Acquisition Strategy / Acquisition Plan, Section 1.2:
The evolutionary acquisition strategy for the DMR program commenced in November 1996 with a Sources Sought Synopses being released in the Commerce Business Daily (CBD) that resulted in the Government receiving responses from industry indicating that sufficient technology and competition existed to satisfy the U.S. Navy's requirements.

After the evaluation of industry proposals by the Space and Naval Warfare Systems Command (SPAWAR) Technical Evaluation Board (TEB), two multiple award FFP/IDIQ contracts were awarded. One contract was awarded to Raytheon E-Systems Incorporated and the other to Motorola Wireless Information Transfer Systems (now General Dynamics C4 Systems (GDC4S)).

Two delivery orders, one to each vendor, were issued to deliver four Service Test Models (STMs) from each vendor. The vendor with the superior design, to be determined after down select testing, would be issued an order for production DMRs. Extensive Government laboratory Developmental Testing (DT) was conducted on the STMs to determine which vendor proposed the superior DMR product. The Government concluded that, based on the results from the DT, the Motorola DMR was the best value for the Navy and an order for LRIP I DMR production quantities was issued to Motorola.

Due to the fact that GDC4S owns the technical data rights to the DMR, they are the only contractor with the unique capabilities and technical knowhow to perform the required IW upgrade work. This scope will be issued to GDC4S as an option under the sole source contract, N00039-10-C-0069, as authorized by SPAWAR J&A No. 16,351, signed 5 January 2010 by the Assistant Secretary of the Navy (ASN), Research, Development and Acquisition (RD&A).

E. Performance Metrics

The dollar threshold for Earned Value Management (EVM) has not been reached. Therefore, contractor performance will be managed through monthly program review meetings and contract milestones.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3078: *Digital Modular Radio*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
IW Developement	C/CPIF	GDC4S:Scottsdale, AZ	-	4.500	Nov 2011	3.767	Nov 2012	-		3.767	0.000	8.267	
		Subtotal	-	4.500		3.767		-		3.767	0.000	8.267	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	4.500		3.767		-		3.767	0.000	8.267	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 3078: *Digital Modular Radio*

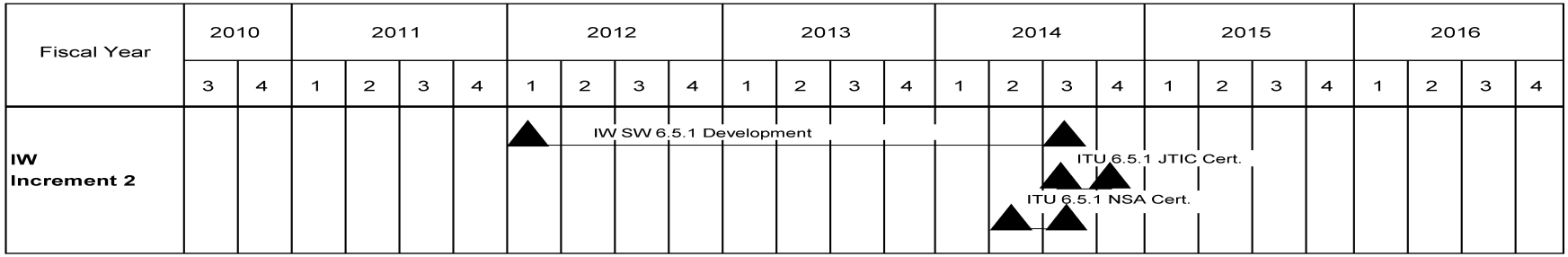


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604280N: *JT Tact Radio Sys (JTRS)*	**PROJECT** 3078: *Digital Modular Radio*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3078				
IW SW 6.5.1 Development	1	2012	3	2014
ITU 6.5.1 JTIC Cert	3	2014	4	2014
ITU 6.5.1 NSA Cert	2	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	51.000	-	-	-	-	-	-	-	0.000	51.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

JTRS is the Department of Defense (DoD) family of common software-defined programmable radios that will form the foundation of information radio frequency transmission for Joint Vision 2020. The JTRS family of products will be multifunctional, multiband, multimode, network capable, capable of providing communications through a range of low probability of intercept, low probability of detection and anti-jam waveforms. JTRS products will provide transformational communication capabilities for the warfighter. JTRS is intended to support communications readiness and mission success, in the 2 Megahertz (MHz) to 2 Gigahertz (GHz) operating frequency range, by providing military commanders with the ability to command, control and communicate with their forces via secure voice/video/data media forms. JTRS products are hardware-configurable and software-programmable radio systems that provide increased interoperability, flexibility and adaptability to support varied mission requirements.

Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: GMR JTRS (Cong)	-	51.000
FY 2012 Plans: $13.268M is to conduct close out of the Software Design and Development (SDD) contract. Activities include: identifying critical deliverables such as hardware, design specifications, instrumentation, modeling tools, simulators, etc. for delivery to the Government. Continue support to the GMR PMO (travel, training, payroll, etc.). Per USD(AT&L) memo dated 14 October 2011, $37.732M will be used to execute a Non-Developmental Item (NDI) strategy for a mid-tier networking capability.		
Congressional Adds Subtotals	-	51.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

This is Congressional transfer funding associated with Project 3074, GMR JTRS. Acquisition strategy is same as that project. Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*

cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

E. Performance Metrics

This is Congressional transfer funding associated with Project 3074, GMR JTRS. Performane metrics are the same as that project. Following a Critical Nunn McCurdy breach the USD AT&L conducted a reassessment of the GMR program. Conclusions of the reassessment did not support certification of the program, thereby cancelling the program. In accordance with the ADM dated 14 October 2011, the GMR program office is directed to conduct an orderly shutdown of the existing GMR System Development and Demonstration contract which expires on 30 March 2012.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JTRS GMR SDD	C/CPAF	BOEING:Huntington Beach, CA	-	13.268	Mar 2012	-		-		-	0.000	13.268	13.268
		Subtotal	-	13.268		-		-		-	0.000	13.268	13.268

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	MIPR	PEO C3T:Aberdeen, MD	-	37.732	Mar 2012	-		-		-	0.000	37.732	37.732
		Subtotal	-	37.732		-		-		-	0.000	37.732	37.732

Remarks

Per USD(AT&L) memo dated 14 October 2011, $37.732M will be used to execute a Non-Developmental Item (NDI) strategy for a mid-tier networking capability.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	51.000		-		-		-	0.000	51.000	51.000

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*

Fiscal Year	2011				2012				2013				2014				2015				2016				2017			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Ground Mobile Radio Acquisition Milestones																												
Milestone (MS) C																												
Initial Operational Capability (IOC)																												
Full Rate Production (FRP)																												
In Process Review (IPR)																												
Contract Closeout							▲ Contract Closeout																					
Test and Evaluation Milestones																												
Production Qualification Test (PQT)																												
System Integration Test (SIT)																												
Comparative Limited User Test (CLUT)																												
Multi-service Operational Test and Evaluation (MOT&E)																												

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604280N: *JT Tact Radio Sys (JTRS)*	PROJECT 9999: *Congressional Adds*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 9999				
Contract Closeout	2	2012	2	2012

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	195.569	223.217	260.616	-	260.616	253.166	226.221	263.670	142.545	Continuing	Continuing
1447: *Surf Combatant Combat System Imp*	195.569	223.217	260.616	-	260.616	253.166	226.221	263.670	142.545	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project provides Cruiser and Destroyer Aegis Combat System (ACS) upgrades and integrates new equipment and systems to pace the threat and capture advances in technology. Examples of captured advanced technologies are: fiber optics, distributed architecture, and high performance computing, all of which require corresponding Aegis Weapon System (AWS) and ACS changes.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	193.933	223.283	224.116	-	224.116
Current President's Budget	195.569	223.217	260.616	-	260.616
Total Adjustments	1.636	-0.066	36.500	-	36.500
• Congressional General Reductions	-	-0.066			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	7.263	-			
• SBIR/STTR Transfer	-4.552	-			
• Program Adjustments	-	-	37.177	-	37.177
• Rate/Misc Adjustments	-	-	-0.677	-	-0.677
• Congressional General Reductions Adjustments	-1.075	-	-	-	-

Change Summary Explanation

Increased funding primarily associated ACB12 upgrades to Combat Systems Engineering Development site (CSEDS).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1447: *Surf Combatant Combat System Imp*	195.569	223.217	260.616	-	260.616	253.166	226.221	263.670	142.545	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides Cruiser & Destroyer ACS upgrades and integrates new equipment and systems to pace the threat and capture advances in technology. Examples of captured advanced technologies are: fiber optics, distributed architecture, and high performance computing, all of which require corresponding AWS and ACS changes. The ACS capabilities have continually evolved. Baseline (B/L) 2 (CG 52-58) introduced the Vertical Launch System (VLS), Tomahawk Weapon System, and ASW upgrades. B/L 3 (CG 59-64) introduced the AN/SPY-1B Radar, AN/UYQ-21 consoles, and AN/UYK-43 computers. B/L 4 (CG 65-73) introduced the production of AN/UYK-43/44 computers with superset computer programs developed for the DDG 51. B/L 5 was introduced in FY1992 DDGs and included the Joint Tactical Information Distribution System (JTIDS), Tactical Data Information Link (TADIL)-16, C2P, Combat Direction Finding, Tactical Data Information Exchange System, AN/SLQ-32 (V)3 Active Electronic Counter Countermeasures, and Aegis ER Missile. B/L 5 was developed in two steps (Phase 1 and Phase 3): Phase 1 integrated AEGIS ER and supported the Missile Initial Operating capability; Phase 3 integrated system upgrades including Defensive Electronic Attack, Track Load Control Algorithms, and Track Initiation Processor (integrated on B/L 5 Phase 3, DDGs 68+); JTIDS and the OJ-663 color display Tactical Graphics capability into the ACS. B/L 5 Phase 3 is now resident on baseline 3 and 4 CGs and DDG 51-78. B/L 6 Phase 1 introduced Commercial Off-The-Shelf (COTS), Fiber Data Distribution System (FDDI) Local Area Network (LAN), UYQ-70 consoles, Cooperative Engagement Capability (CEC) for CGs, and an adjunct COTS computer for Aegis Display System (ADS). It supported OPEVAL of CEC in CGs 66 and 69 and was introduced in the DDG 51 class beginning with DDG 79. B/L 6 Phase 1 is now resident on CGs 59, 65, 66, 68, 69, and 71. B/L 6 Phase 3 was introduced on DDGs 85-90 and was back-fitted onto DDGs 79-84. B/L 6 Phase 3 upgrades included embarked helicopters, Fiber Optic Data Multiplexing System (FODMS), implementation of affordability initiatives, adjunct computers for all AWS elements, CEC for DDGs and Battle Force Tactical Trainer (BFTT), ADS, Evolved Sea Sparrow Missile (ESSM) upgrades Phase 1, Advanced Tomahawk Weapon Control System (ATWCS) Phase II, Fire Control System Upgrades, and Joint Maritime Command Information System (JMCIS). B/L 7 Phase 1 is installed in the DDG 51 class beginning with DDG 91-102. Major B/L 7 upgrades include but are not limited to introduction and integration of new radar (AN/SPY-1D(V) upgrade), replacement of all UYK-43 and adjunct computers with a COTS-based advanced computing infrastructure, AN/SQQ-89(V)15, and the Remote Mine Hunting System. B/L 7P1R (DDG 103-112) upgraded the computing infrastructure, Close-in Weapon System (CIWS), Air Control, and introduced Open Architecture (OA) developed products into the baseline.

The Modernization Baselines will provide new technology to replace aging military equipment, extend service life, and maintain viability of AEGIS combatants into the future. These baselines reduce combat system maintenance life cycle costs and streamline the development of capabilities. ACB08/TI08 (Cruiser Modernization) consists of an upgraded computing infrastructure and AEGIS B/L 8 computer program enhancements to existing warfighting capabilities on CG 52-58. ACB12/TI12 (Aegis Modernization) consists of an upgraded computing infrastructure and AEGIS B/L 9A/C computer program enhancements to provide increased warfighting capabilities which will modernize CG 59-73 and DDG 51-78. AEGIS B/L 9A/C Destroyer upgrades will consist of Naval Integrated Fire Control-Counter Air (NIFC-CA), Standard Missile Block 6 (SM-6), Common Display System (CDS), Common Processing System (CPS), Multi-Mission Signal Processor (MMSP), and Ballistic Missile Defense (BMD). AEGIS B/L 9A Cruiser Upgrades will consist of NIFC-CA, SM-6, CDS, and CPS. AEGIS B/L 7.2 will develop a computer program that will port into the B/L 7.1.3 and B/L 7.1R hardware configurations to address fleet-reported deficiencies related to sustainability, maintainability, interoperability, and stability on DDGs

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

91-112. Accelerated Mid-Term Interoperability Improvement Plan (AMIIP) provides computer program updates to address design issues specific to interoperability in Shipboard Gridlock System/Auto-correlator (SGS/AC) and Aegis B/L 6.3, 7.1.3, 7.1R, 8.1 and 9A/C/D.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AEGIS DEVELOPMENT SUPPORT	28.289	43.533	36.668
Articles:	0	0	0

FY 2011 Accomplishments:
Providing AEGIS development support for the following: Combat System Engineering Development Site (CSEDS), Program Generation Center, and Computer Program Test Site (CPTS) in support of AEGIS computer program development, testing, and integration for all AWS products. Continuing to provide systems engineering for labs and field activities (to include support services) and providing program management support, modeling & simulation, requirements management, warfighting capability integration impacts, and conceptual studies. Providing computer program license funding to support land-based test site installation, development and test efforts. Providing COTS issue resolution to support in-service AEGIS Ships and address computer program modification to enable integration of replacement parts. AEGIS development support in FY11 is primarily for AEGIS B/L 9A/B/C/D, AEGIS B/L 6.3, AEGIS B/L 7.1.3 upgrade, AEGIS B/L 8.1.1 upgrade, and future combat system development efforts.

FY 2012 Plans:
Plan to provide AEGIS development support for the following: CSEDS, Program Generation Center, and CPTS in support of AEGIS computer program development, testing, and integration for all AWS products. Continue to provide systems engineering for labs and field activities (to include support services) and provide program management support, modeling & simulation, requirements management, warfighting capability integration impacts, and conceptual studies. Provide computer program license funding to support land-based test site installation, development, and test efforts. Provide COTS issue resolution to support in-service AEGIS Ships and address computer program modification to enable integration of replacements parts. AEGIS development support in FY12 is primarily for AEGIS B/L 9A/C/D, AEGIS B/L 6.3, AEGIS B/L 7.2, and future combat system development efforts. Provide system engineering efforts to review and award AEGIS competitive contract to support future development efforts.

FY 2013 Plans:
Plan to provide AEGIS development support for the following: CSEDS, Program Generation Center, and CPTS in support of Aegis computer program development, testing, and integration for all AWS products. Continue to provide systems engineering for labs and field activities (to include support services) and provide program management support, modeling & simulation, requirements management, warfighting capability integration impacts, and conceptual studies. Provide computer program license funding to support land-based test site installation, development and test efforts. Provide COTS issue resolution to support in-service AEGIS

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Ships and address computer program modification to enable integration of replacements parts. AEGIS development support in FY13 is primarily for AEGIS B/L 9A/C/D, AEGIS B/L 6.3, AEGIS B/L 7.2, and future combat system development efforts.			
Title: ADVANCED CAPABILITY BUILD 08	1.600	0.700	-
Articles:	0	0	
FY 2011 Accomplishments: Addressing critical computer program discrepancies related to upgraded capabilities integrated within the AEGIS B/L 8 combat system configuration, and deliver upgraded computer program (8.1.1.1).			
FY 2012 Plans: Address critical computer program discrepancies related to upgraded capabilities integrated within the AEGIS B/L 8 combat system configuration.			
Title: TECHNOLOGY INSERTION 12	3.175	1.721	1.473
Articles:	0	0	0
FY 2011 Accomplishments: Providing system engineering required for integration of COTS technology including CDS, CPS, and other COTS hardware associated with the AEGIS Weapon System. Successfully conducted IPR #5. Continuing to support Advanced Capability Build 12 (ACB-12) system engineering to develop and integrate increased capabilities. Continuing computer program development efforts related to AEGIS ACB12. Continue to test and integrate AEGIS ACB12 capabilities identified.			
FY 2012 Plans: Continue to provide system engineering required for integration of COTS technology including CDS, CPS, and other COTS hardware associated with the AEGIS Weapon System. Continue to support system engineering review Test Readiness Review (TRR), System Functional Test (SFT), and Mission Readiness Assessment (MRA). Continue to support ACB12 system engineering to developed and integrated increased capabilities. Continue computer program development efforts related to AEGIS ACB12. Continue testing and integration of AEGIS ACB12 capabilities identified. Execute AEGIS Weapon System demonstration to support system level testing.			
FY 2013 Plans: Continue systems engineering support to ACB12 developed and integrated capabilities. Continue computer program development efforts related to AEGIS ACB12. Continue testing and integration of AEGIS ACB12 capabilities identified. Execute AEGIS Weapon System demonstration to support system level testing.			
Title: ADVANCED CAPABILITY BUILD 12	72.405	73.724	125.010
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Successfully conducted IPR #5, IRD CG62, and AAW radar demonstrations. Continuing to support ACB 12 system engineering to develop and integrate increased capabilities. Continuing computer program development efforts related to AEGIS B/L 9A/C. Continuing testing and integration of AEGIS ACB 12 identified capabilities. ***FY 2012 Plans:*** Continue to provide system engineering to support B/L 9A/C Aegis Light-Off/System Functional Test (ALO/SFT), IRD DDG53, and MRA. Continue to support ACB 12 system engineering to develop and integrate capabilities. Continue computer program development efforts related to AEGIS B/L 9A/C. Continue testing and integration of AEGIS ACB 12 identified capabilities. Execute AEGIS Weapon System evaluations to support system level testing. ***FY 2013 Plans:*** Continue to provide system engineering to support MRA No. 2, B/L 9A/C Demonstration, Combat System Ship Qualification Test (CSSQT), and Computer Program Acceptance Panel/Combat System Certification Panel (CPAP/CSCP). Continue to support ACB 12 system engineering to develop and integrate increased capabilities. Continue computer program development efforts related to AEGIS B/L 9A/C. Continue testing and integration of AEGIS ACB 12 identified capabilities. Provide additional Post-availability Underway testing events to evaluate and correct B/L 9A/C Computer Program. Provide additional Combat System suite procurement to support AEGIS ACB 12 development and integration efforts. Equipment suite include MMSP, CDS, CPS, Mission Critical Enclosure (MCE), and other network switches to support development testing.			
Title: ADVANCED CAPABILITY BUILD 12 DELTA CONFIGURATION (DDG 113)	34.200	29.110	34.440
Articles:	0	0	0
FY 2011 Accomplishments: Completing system engineering related to the specific design review and completing CDR changes required to support the configuration changes. Commencing computer program capture from Aegis B/L 9A/C to 9D. Conducted Computer Program Incremental Review (CPIR) No. 1 in March and CPIR No. 2 July 2011 to monitor the development and integration of DDG 113 combat system design configuration. Supporting development and integration of the SPY-1D(V) Radar with MMSP. ***FY 2012 Plans:*** Continue code capture and commence computer program development, commence system test to evaluate DDG 113 unique configuration. Conduct In-Process Reviews (IPRs) No. 6 in 0ct 2011, No. 7 in Feb 2012, and No. 8 in July 2012 to monitor the development and integration of DDG 113 combat system configuration. Support Production Readiness Review (PRR) related to the DDG 113 Combat System. Continue to develop SPY-1D (V) Radar interface to the MMSP. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue computer program development and system test as required to evaluate DDG 113 unique configuration. Continue to develop SPY-1D (V) Radar interface to the MMSP. Execute any actions from IPR and PRR related to the DDG 113 Combat System.			
Title: ADVANCED CAPABILITY BUILD 14 (B/L 4 CGs with MMSP) ***Articles:*** ***FY 2011 Accomplishments:*** Completed system engineering efforts to complete System Requirements Review (SRR) and SFR to develop and integrate the AEGIS SPY-1B(V) with MMSP. Complete system engineering efforts to define and modify the AEGIS ACB12 specification to develop and integrate future capabilities. Effort terminated. Funding moved to support critical AMIIP efforts for Fleet Exercise Trident Warrior in FY12.	27.140 0	-	-
Title: NAVAL INTEGRATED FIRE CONTROL-COUNTER AIR ***Articles:*** ***FY 2011 Accomplishments:*** Continue to support NIFC-CA development and integration within the AEGIS ACB12 combat system configuration. Maintain White Sands Missile Range (WSMR) site to support NIFC-CA and SM6 integration within the AEGIS ACB12 combat system. Conduct IPR to monitor the development and integration of the NIFC-CA capability. ***FY 2012 Plans:*** Continue to support NIFC-CA development and integration within the AEGIS ACB12 combat system configuration. Maintain WSMR site to support NIFC-CA and SM6 integration within the AEGIS ACB12 combat system. Conduct Joint Land-Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS) Demonstration and WSMR Testing to evaluate the development and integration of the NIFC-CA capability. ***FY 2013 Plans:*** Continue to support NIFC-CA development and integration within the AEGIS ACB12 combat system configuration. Maintain WSMR site to support NIFC-CA and SM6 integration within the AEGIS ACB12 combat system. Evaluate results of WSMR testing. Conduct at-sea test.	21.497 0	11.994 0	8.826 0
Title: AEGIS BASELINE 7.2 ***Articles:*** ***FY 2012 Plans:*** Conduct IPRs Nos. 1, 2, and 3. Provide engineering effort to develop work package definition, identify specification changes, and define design information to port the AEGIS B/L 7.2 Computer Program into the AEGIS B/L 7.1.3 and B/L 7.1R Hardware	-	19.500 0	18.500 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
configurations and address fleet reported deficiencies related to sustainability, maintainability, interoperability, and stability. Initiate development of production engineering change proposals. Provide New Jersey site upgrades and initiate Virginia site upgrades to support development and test efforts related to AEGIS B/L 7.2. Initiate computer program development. ***FY 2013 Plans:*** Complete Virginia site upgrades to support development and test efforts, complete development of production engineering change proposals, conduct Collaborative Navy Certification testing, conduct at-sea testing aboard a selected DDG 91-102 ship, and complete computer program development.			
Title: FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION ***Articles:*** ***FY 2012 Plans:*** Conduct Advanced Missile Defense Radar (AMDR) Combat System critical studies; complete AMDR CS Integration In-Process Review (IPR) #1 of Combat System architectures, requirements and interfaces required for AMDR MS B; evaluate early Combat System Integration and Test requirements for AMDR MS C; develop a Land-Based Test Site (LBTS) Engineering Development Plan. ***FY 2013 Plans:*** Conduct AMDR CS Integration IPR #2; develop draft Combat System Interface Requirement Specifications (IRSs); continue refinement of Combat System requirements and architecture; begin concept development of combat system simulation capability to support early Combat System Integration and Test required for AMDR MS C.	- 	19.975 0	29.399 0
Title: ACCELERATED MID-TERM INTEROPERABILITY IMPROVEMENT PLAN (AMIIP) ***Articles:*** ***FY 2011 Accomplishments:*** Completed In-Progress Reviews (IPR) Nos. 1 and 2. Completed Flag Reviews Nos. 1 and 2, prototype testing of Attribute Enhanced Correlation, defined a Work Breakdown Structure dictionary and preliminary metrics definition. Categorized existing Trouble Reports, drafted preliminary test plan, defined preliminary scenario requirements, defined preliminary test cases, and conducted Fleet review. Continue to support development of AMIIP components for AEGIS B/L 7.1R, 8.1, 6.3.2 and SGS/AC, and Engineering Assessment No. 1. ***FY 2012 Plans:*** Conduct Engineering Assessments No. 2 and No. 3, define Specification Changes, develop scenarios, and report metrics. Capture AMIIP builds into B/Ls 7.2 and 9A/C/D, verify and validate CPCRs, conduct (mini) IPR#3, conduct Test Readiness Review, and conduct Flag Review #3. Conduct Multi-Site Test events #1, #2, and data analysis; conduct IPR No. 4, Flag Review	7.263 0	22.960 0	6.300 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
#4, Mission Readiness Assessment. AMIIP efforts to date will culminate with final testing and demonstration during the Trident Warrior Fleet exercise. ***FY 2013 Plans:*** Conduct Engineering Assessment No. 4. Identify and make corrections in AEGIS and SGS/AC computer programs based on Trident Warrior test results, conduct Multi-Site test event No. 3 with analysis, and certify for fielding the Aegis Combat Systems computer programs 6.3.3.0, 7.1R.1.0, and 8.1.2.0.			
Accomplishments/Planned Programs Subtotals	195.569	223.217	260.616

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• R&D 0604501N: *Multi Mission Signal Processor*	31.624	32.361	14.708	0.000	14.708	14.989	15.984	16.438	16.772	Continuing	Continuing
• SCN 2122: *DDG 51*	2,900.331	2,081.432	3,514.941	0.000	3,514.941	2,014.297	3,002.049	3,508.440	4,048.090	Continuing	Continuing
• OPN 0960: *CG Modernization*	348.934	573.349	101.000	0.000	101.000	22.000	79.000	0.000	0.000	Continuing	Continuing
• OPN 5246: *AEGIS Support Equipment*	81.860	43.148	81.164	0.000	81.164	83.341	50.655	57.500	58.611	Continuing	Continuing
• OPN 0900: *DDG Modernization*	288.118	117.522	452.371	0.000	452.371	288.134	516.408	469.812	529.385	Continuing	Continuing
• R&D 0604378N PU 3159: *NIFC-CA*	29.569	24.898	39.974	0.000	39.974	15.821	4.614	4.701	4.787	Continuing	Continuing
• OPN 2980: *Multi Mission Signal Processor*	18.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Combat system improvements are implemented in baselines as described in the project mission statement. After the combat system is completed and tested, the computer program and associated equipment are delivered to the new construction shipbuilders and modernization shipyards where the program and equipment are installed and tested along with all other elements of the shipboard combat system and associated combat support systems. The computer program is a Government Furnished Equipment (GFE) deliverable to the Production Test Center for equipment test and check out. Future Combat System delivery will be provided in ACBs and Technical Insertions (TIs) using a contract to provide Combat System Engineering Agent (CSEA) services. Additional contracts will be awarded to address B/L 9A/C/D completion, Sites Management, and Future Combat System engineering efforts related to AMDR Integration.

E. Performance Metrics

Combat system development efforts will complete major development milestones.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

Major Milestones for ACB12 (B/L 9A/C):
Completion of IPR #5 in first quarter of FY11.
Completed Installation Readiness Decision #1 fourth quarter of FY11.
Installation Readiness Decision #2 second quarter of FY12.
9A System Functional Test/Aegis Light-off second quarter of FY12.
9C system Functional Test/Aegis Light-off fourth quarter of FY12.
9A/C Demonstration 1st quarter of FY13.
9A Computer Program Acceptance Panel/Combat System Certification Panel fourth quarter of FY13.
9C Computer Program Acceptance Panel/Combat System Certification Panel fourth quarter of FY14.
Advanced Capability Build 12 Combat System Ships Qualification Trial third quarter of FY13.
9A Warfare Certification first quarter of FY14.
9C Warfare Certification fourth quarter of FY14.

Major Milestones for B/L 9D (DDG 113):
Completed IPR No. 6 (CPIR No. 3) in first quarter of FY12.
Completed Test Program Review (TPR) in first quarter of FY12
IPR No. 7 (CPIR No. 4) in second quarter of FY12.
IPR No. 8 in third quarter of FY12.
TRR in second quarter of FY14.
DDG 113 Aegis Light-Off in third quarter of FY15.
Sea Trials in third quarter of FY16.
CSSQT in first quarter of FY17.
CSCP certification in first quarter FY18.

Major Milestones for ACB14 (B/L 9B; formerly B/L 4 CGs with MMSP):
Completed System Requirements Review (SRR) in third quarter of FY11.

Major Milestones for Aegis Baseline 7.2 (formerly 7.1R Backfit):
IPR No. 1 PDR/CDR in first quarter of FY12.
IPR No. 2 Status Check in third quarter of FY12.
IPR No. 3 Status Check in fourth quarter of FY12.
IPR No. 4 Rvw Readiness for At-Sea Test in third quarter of FY13.
At-Sea Test in fourth quarter of FY13.
Final Certification in first quarter of FY14.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

Major Milestones for AMIIP:
Completed IPR No. 1 in third quarter FY11.
Completed Flag Review (FR) No. 1 in third quarter of FY11.
Completed IPR No. 2 in fourth quarter of FY11.
Completed FR No. 2 in fourth quarter of FY11.
Completed mini-IPR in first quarter of FY12.
Multi-Site Test (MST) No. 1 in second quarter of FY12.
IPR No. 3 in second quarter of FY12.
MST No. 2 and Flag Demonstration in third quarter of FY12.
IPR No. 4 in fourth quarter of FY12.
Trident Warrior in fourth quarter of FY12.
MST No. 3 in second quarter of FY13.
Final Certification in third quarter of FY13.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/CPAF	Lockheed Martin:Moorestown, NJ	1,653.123	132.249	Oct 2011	154.985	Oct 2012	-		154.985	0.000	1,940.357	
Systems Engineering	SS/CPFF	APL:Baltimore, MD	44.953	6.700	Oct 2011	10.705	Oct 2012	-		10.705	0.000	62.358	
Systems Engineering	WR	NSWC:Dahlgren, VA	274.152	36.477	Oct 2011	43.865	Oct 2012	-		43.865	0.000	354.494	
Systems Engineering	SS/CPAF	BAE Systems:Rockville, MD	36.411	3.984	Oct 2011	4.683	Oct 2012	-		4.683	0.000	45.078	
Systems Engineering	WR	NSWC:Port Hueneme, CA	51.214	6.054	Oct 2011	7.149	Oct 2012	-		7.149	0.000	64.417	
Systems Engineering	WR	NWAS:Corona, CA	26.651	1.200	Oct 2011	1.253	Oct 2012	-		1.253	0.000	29.104	
Systems Engineering	WR	SPAWAR:San Diego, CA	9.399	0.390	Oct 2011	0.890	Oct 2012	-		0.890	0.000	10.679	
Systems Engineering	WR	Various:Various	95.370	18.975	Oct 2011	19.323	Oct 2012	-		19.323	0.000	133.668	
Award fees	SS/CPAF	Lockheed Martin:Moorestown, NJ	200.149	9.414	Oct 2011	9.306	Oct 2012	-		9.306	0.000	218.869	
Award fees	SS/CPAF	BAE Systems:Rockville, MD	2.051	0.110	Oct 2011	0.180	Oct 2012	-		0.180	0.000	2.341	
Award fees	SS/CPAF	Alion Science:Washington DC	1.830	0.320	Oct 2011	-	Oct 2012	-		-	0.000	2.150	
Award fees	WR	Various:Various	6.878	0.830	Oct 2011	0.627	Oct 2012	-		0.627	0.000	8.335	
		Subtotal	2,402.181	216.703		252.966		-		252.966	0.000	2,871.850	

Remarks

Various Performing Activities consist of multiple performing activities with funding for each no greater than $1 million per year. These larger performing activities include CECOM, National Research Lab (NRL), CDSA Dam Neck, NSWC/Crane, NSWC/Indian Head, and NAWC China Lake.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	Department of Interior:Boise, Idaho	37.690	0.900	Oct 2011	1.200	Oct 2012	-		1.200	0.000	39.790	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NAVAIR:Pax River, MD	11.624	0.650	Oct 2011	0.850	Oct 2012	-		0.850	0.000	13.124	
		Subtotal	49.314	1.550		2.050		-		2.050	0.000	52.914	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	SS/CPAF	Alion Science:Washington DC	22.199	1.845	Oct 2011	2.100	Oct 2012	-		2.100	0.000	26.144	
Program Management Support	SS/CPAF	SAIC:Mclean, VA	5.836	3.119	Oct 2011	3.500	Oct 2012	-		3.500	0.000	12.455	
DAWDF	Various	Various:Various	0.907	-		-		-		-	0.000	0.907	
		Subtotal	28.942	4.964		5.600		-		5.600	0.000	39.506	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,480.437	223.217		260.616		-		260.616	0.000	2,964.270	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604307N: *Surface Combatant Cmbt Sys Eng*	**PROJECT** 1447: *Surf Combatant Combat System Imp*

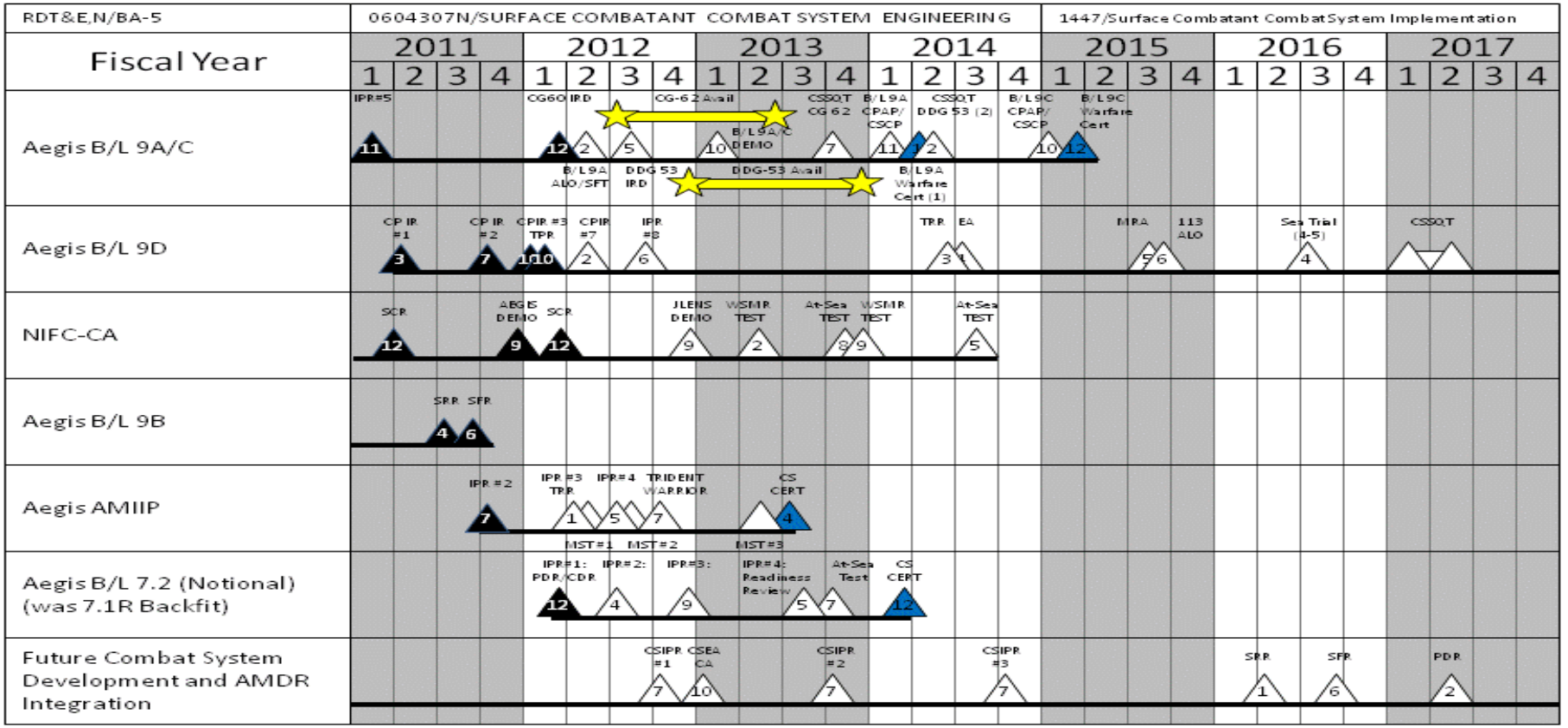


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604307N: *Surface Combatant Cmbt Sys Eng*	**PROJECT** 1447: *Surf Combatant Combat System Imp*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1447				
ADVANCED CAPABILITY BUILD 12 IN-PROGRESS REVIEW #5	1	2011	1	2011
ADVANCED CAPABILITY BUILD 12 INSTALLATION READINESS DECISION #1	1	2012	1	2012
ADVANCED CAPABILITY BUILD 12 INSTALLATION READINESS DECISION #2	3	2012	3	2012
ADVANCED CAPABILITY BUILD 12 9A SYSTEM FUNCTIONAL TEST / AEGIS LIGHT OFF	2	2012	2	2012
ADVANCED CAPABILITY BUILD 12 9C SYSTEM FUNCTIONAL TEST / AEGIS LIGHT OFF	4	2012	4	2012
ADVANCED CAPABILITY BUILD 12 9 A/C DEMONSTRATION	1	2013	1	2013
ADVANCED CAPABILITY BUILD 12 9A COMPUTER PROGRAM ACCEPTANCE PANEL/COMBAT SYSTEMS CERTIFICATION PANEL	1	2014	1	2014
ADVANCED CAPABILITY BUILD 12 9C COMPUTER PROGRAM ACCEPTANCE PANEL/COMBAT SYSTEMS CERTIFICATION PANEL	1	2015	1	2015
ADVANCED CAPABILITY BUILD 12 COMBAT SYSTEM SHIPS QUALIFICATION TRIAL (CG 62)	4	2013	4	2013
ADVANCED CAPABILITY BUILD 12 9A WARFARE CERTIFICATION	2	2014	2	2014
ADVANCED CAPABILITY BUILD 12 9C WARFARE CERTIFICATION	1	2015	1	2015
ADVANCED CAPABILITY BUILD 12 B/L 9D IPR#6 (COMPUTER PROGRAM INCREMENT REVIEW #3)	1	2012	1	2012
ADVANCED CAPABILITY BUILD 12 B/L 9D TEST PROGRAM REVIEW	1	2012	1	2012
ADVANCED CAPABILITY BUILD 12 B/L 9D IPR #7 (COMPUTER PROGRAM INCREMENT REVIEW #4)	2	2012	2	2012
ADVANCED CAPABILITY BUILD 12 B/L 9D IN-PROGRESS REVIEW #8	3	2012	3	2012
ADVANCED CAPABILITY BUILD 12 B/L 9D TEST READINESS REVIEW	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADVANCED CAPABILITY BUILD 12 B/L 9D AEGIS LIGHT OFF	3	2015	3	2015
ADVANCED CAPABILITY BUILD 12 B/L 9D SEA TRIALS	3	2016	3	2016
ADVANCED CAPABILITY BUILD 12 B/L 9D COMBAT SYSTEM SHIPS QUALIFICATION TRIAL	1	2017	2	2017
ADVANCED CAPABILITY BUILD 14 SYSTEM REQUIREMENTS REVIEW	3	2011	3	2011
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM IN-PROGRESS REVIEW #2	4	2011	4	2011
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM MULTI-SITE TEST #1	2	2012	2	2012
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM IN-PROGRESS REVIEW #3	2	2012	2	2012
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM MULTI-SITE TEST #2	3	2012	3	2012
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM IN-PROGRESS REVIEW #4	4	2012	4	2012
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM TRIDENT WARRIOR	4	2012	4	2012
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM MULTI-SITE TEST #3	2	2013	2	2013
ACCELLERATED MID-TERM INTEROPERABILITY IMPROVEMENT PROGRAM COMBAT SYSTEM CERTIFICATION	3	2013	3	2013
AEGIS 7.2 BACKFIT IN-PROGRESS REVIEW #1 (PRELIMINARY DESIGN REVIEW/ CRITICAL DESIGN REVIEW)	1	2012	1	2012
AEGIS 7.2 BACKFIT IN-PROGRESS REVIEW #2 (STATUS CHECK)	3	2012	3	2012
AEGIS 7.2 BACKFIT IN-PROGRESS REVIEW #3 (STATUS CHECK)	4	2012	4	2012
AEGIS 7.2 BACKFIT IN-PROGRESS REVIEW #4 (READINESS REVIEW FOR AT-SEA TEST)	3	2013	3	2013
AT-SEA TEST	4	2013	4	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604307N: *Surface Combatant Cmbt Sys Eng*	PROJECT 1447: *Surf Combatant Combat System Imp*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AEGIS 7.2 BACKFIT COMBAT SYSTEM CERTIFICATION	1	2014	1	2014
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION IN-PROGRESS REVIEW #1	4	2012	4	2012
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION SYSTEM COMBAT SYSTEM ENGINEERING AGENT CONTRACT AWARD	1	2013	1	2013
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION SYSTEM IN-PROGRESS REVIEW #2	4	2013	4	2013
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION SYSTEM IN-PROGRESS REVIEW #3	4	2014	4	2014
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION SYSTEM REQUIREMENTS REVIEW	2	2016	2	2016
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION SYSTEM FUNCTIONAL REVIEW	3	2016	3	2016
FUTURE COMBAT SYSTEM DEVELOPMENT AND INTEGRATION PRELIMINARY DESIGN REVIEW	2	2017	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604311N: *LPD-17 Class Systems Integration*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	1.636	0.884	0.824	-	0.824	0.840	0.856	0.881	0.897	Continuing	Continuing
2283: *LPD-17 Class System Integration*	1.636	0.884	0.824	-	0.824	0.840	0.856	0.881	0.897	Continuing	Continuing

A. Mission Description and Budget Item Justification

The LPD 17 Class ships are functional replacements for 41 ships of four classes of amphibious ships. These new ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles. Tactics, techniques, and tools for naval expeditionary warfare continue to evolve. The LPD 17 Class configuration must continue to adapt to this evolutionary process as theses ships are expected to be in service until almost 2050. The LPD 17 design includes system configurations that reduce operating and support costs and facilitate operational performance improvements. The RDT&E,N funding will be used for system engineering and integration efforts to resolve obsolescence issues facing the LPD 17 class components, as well as develop further reductions in life cycle costs, and will integrate performance upgrades in a rapid, affordable manner. These efforts will result in well-defined specifications and drawings in system integration design packages that provide technical baselines for follow-on ship procurements. This program is funded under Engineering and Manufacturing Development because it encompasses engineering and manufacturing development of new end-items prior to production approval decision. LSD(X) moved to RDTEN PE 0603564N Project 2474 starting in FY12 and out.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	1.373	0.884	0.897	-	0.897
Current President's Budget	1.636	0.884	0.824	-	0.824
Total Adjustments	0.263	-	-0.073	-	-0.073
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.273	-			
• SBIR/STTR Transfer	-0.003	-			
• Program Adjustments	-	-	-0.073	-	-0.073
• Congressional General Reductions Adjustments	-0.007	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604311N: *LPD-17 Class Systems Integration*

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604311N: *LPD-17 Class Systems Integration*	PROJECT 2283: *LPD-17 Class System Integration*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2283: *LPD-17 Class System Integration*	1.636	0.884	0.824	-	0.824	0.840	0.856	0.881	0.897	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The LPD 17 Class ships are functional replacements for 41 ships of four classes of amphibious ships. These new ships embark, transport, and land elements of Marine landing forces in an amphibious assault by helicopters, landing craft, and amphibious vehicles. Tactics, techniques, and tools for naval expeditionary warfare continue to evolve. The LPD 17 Class configuration must continue to adapt to this evolutionary process, because these ships are expected to be in service until almost 2050. The LPD 17 design includes system configurations that reduce operating and support costs and facilitate operational performance improvements. System engineering and integration efforts that began in FY 1997 will develop further reductions in life cycle costs and will integrate performance upgrades in a rapid, affordable manner. Possible improvements include advanced sensors, advanced computers, advanced command and control software, advanced information systems technologies, and ship based logistics concepts. Cost reduction and improved performance will be accomplished through sustained modeling and simulation efforts, continued personnel reductions efforts, system performance tradeoff evaluation, and naval expeditionary warfare systems engineering. Feedback from the operational forces for integrating system configurations will be accomplished through the Naval Expeditionary Warfare Centers in Quantico, Dahlgren, China Lake, Naval Research Lab, and Little Creek, Virginia. These efforts will result in well-defined specifications and drawings in system integration design packages that provide technical baselines for follow-on ship procurements. LSD(X) moved to RDTEN PE 0603564N Project 2474 starting in FY2012 and out years.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: LSD(X) Systems Integration	0.694	-	-
Articles:	0		
Description: LSD(X) Systems Integration. LSD(X) is a replacement for the retiring LSD 41 and LSD 49 Classes (that may be based in the LPD 17 hull form). RDTEN profile supports necessary preliminary efforts.			
FY 2011 Accomplishments: Continued development of documentation for Gate Process and Defense Acquisition Board (DAB).			
Title: Systems Engineering/Integration	0.942	0.884	0.824
Articles:	0	0	0
Description: Continuing Naval Expeditionary Warfare Systems Engineering efforts and integration efforts for unique LPD 17 Class systems, including efforts to resolve obsolescence issues impacting the class.			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604311N: *LPD-17 Class Systems Integration*	PROJECT 2283: *LPD-17 Class System Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued conducting the Bipolar Power Amplifier Unit (BPAU) Degaussing Controller Unit Reliability Study, SMART/SAN Antonio Study, Probability of Raid Annihilation (PRA) Testbed Development, and Ship Control System (SCS) Electronic Data Recorder (EDR) Analysis. Continued the training system process and GAP Analysis to identify and validate manpower and training, Operational Test Plan Development, Demonstration and Procedures Plan (DPP) Support, USMC Communication Exercise Support, LPD 17 Joint Interoperability Test Command (JITC) Certification/OPEVAL Support, Follow-on Operational Test and Evaluation (FOT&E) MARCORSYSCOM Support, Advanced Enclosed Mast/Sensor (AEM/S) Access Study, and Radar Cross-Section Reduction (RCSR) Testing of Motor Gasoline (MOGAS) Rack. ***FY 2012 Plans:*** Continue the BPAU Degaussing Controller Unit Reliability Study, SMART/San Antonio Study, Probability of Raid Annihilation (PRA) Testbed Development, and SCS EDR Analysis. Continue the training system process and GAP Analysis to identify and validate manpower and training, USMC Communication Exercise Support, LPD 17 JITC Certification/OPEVAL Support, FOT&E MARCORSYSCOM Support, AEM/S Access Study, and RCSR Testing of MOGAS Rack. ***FY 2013 Plans:*** Continue the Reliability and Obsolescence studies for shipboard network/electronics/machinery systems, and Environmental Qualification Testing for obsolescence replacements. Start the Windows 7/ Operating System Migration feasibility study, and MK 46 Gun Weapon System (GWS) Reliability and Interoperability study.			
Accomplishments/Planned Programs Subtotals	1.636	0.884	0.824

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/3036: *LPD 17*	0.000	1,837.444	0.000	0.000	0.000	53.685	37.705	24.442	0.000	0.000	12,566.376
• SCN/5300: *Completion of Prior Year Shipbuilding Programs*	0.000	73.992	80.888	0.000	80.888	0.000	0.000	0.000	0.000	0.000	1,890.680

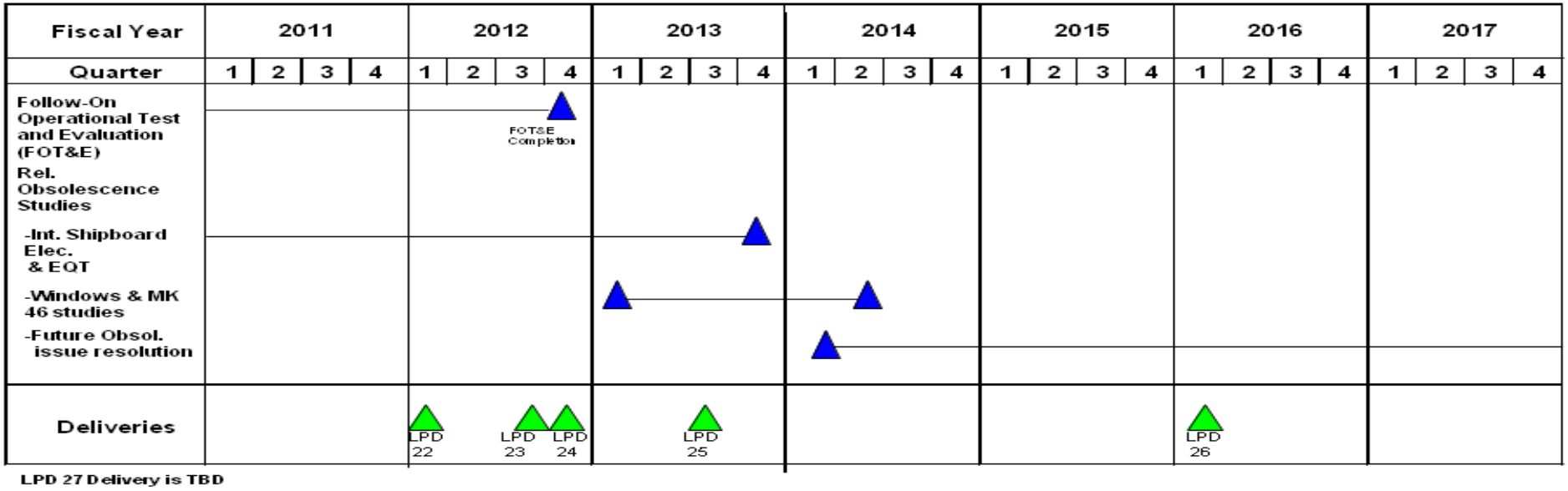
D. Acquisition Strategy

FY12 and out: continue developmental sole source efforts

E. Performance Metrics

LPD17 Class ships will conduct Follow On Test and Evaluation as outlined in the test and evaluation Master Plan. LSD(X) Systems Integration efforts begin the preparation of documentation for Analysis of Alternative and Milestone (MS) A documentation.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604311N: *LPD-17 Class Systems Integration*	**PROJECT** 2283: *LPD-17 Class System Integration*



LPD 27 Delivery is TBD

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604311N: *LPD-17 Class Systems Integration*	**PROJECT** 2283: *LPD-17 Class System Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2283				
Delivery (LPD 22)	1	2012	1	2012
Delivery (LPD 23)	3	2012	3	2012
Delivery (LPD 24)	4	2012	4	2012
Delivery (LPD 25)	3	2013	3	2013
Delivery (LPD 26)	1	2016	1	2016
Follow-On Operational Test and Evaluation (FOT&E) Completion	1	2011	4	2012
Rel. Obsolescence Studies: Int. Shipboard Elec. & EQT	1	2011	4	2013
Rel. Obsolescence Studies: Windows & MK 46 Studies	1	2013	2	2014
Rel. Obsolescence Studies: Future Obsol. Issue Resolution	1	2014	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	15.732	29.635	31.064	-	31.064	48.434	52.080	57.501	72.860	Continuing	Continuing
3072: *Small Diameter Bomb (SDB)*	13.396	19.555	17.792	-	17.792	30.573	32.612	45.249	64.428	Continuing	Continuing
3082: *JMM BRU*	2.336	10.080	13.272	-	13.272	17.861	19.468	12.252	8.432	Continuing	Continuing

Note

In FY 2011, Project Unit (PU) 3082 was established for Joint Miniature Munitions Bomb Rack Unit (JMM BRU) development. Funding for this PU was transferred from PU 3072 for FY11 through FY17.

A. Mission Description and Budget Item Justification

Small Diameter Bomb Increment II (SDB II) is a joint program, with the Air Force (AF) as the lead service, which provides the warfighter a capability to attack mobile targets in all weather from Stand-Off range. SDB II addresses the following warfighter requirements: attack mobile targets, adverse weather operations, multiple kills per pass, multiple ordnance carriage, precision munitions capability, capability against fixed targets, reduced munitions footprint, increased weapons effectiveness, minimized potential for collateral damage, reduced susceptibility of munitions to countermeasures and provides a net-centric operations capability. The threshold aircraft for the AF is the F-15E and the threshold aircraft for the Department of Navy (DoN) are the F-35B and F-35C. SDB II will be compatible with the JMM BRU (BRU-61A/A).

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	44.091	47.635	45.883	-	45.883
Current President's Budget	15.732	29.635	31.064	-	31.064
Total Adjustments	-28.359	-18.000	-14.819	-	-14.819
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-18.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-4.582	-			
• SBIR/STTR Transfer	-1.054	-			
• Program Adjustments	-	-	-14.870	-	-14.870
• Rate/Misc Adjustments	-	-	0.051	-	0.051
• Congressional Recision Adjustments	-2.600	-	-	-	-
• Congressional General Reductions Adjustments	-0.123	-	-	-	-
• Congressional Directed Reductions Adjustments	-20.000	-	-	-	-

Change Summary Explanation

Technical:

Schedule: SDB II - LRIP contract awards I through V moved forward from 4Q to 2Q of each year to accurately depict the current award dates.

As a result of the Joint Strike Fighter (F-35) program's restructure, SDB II and JMM BRU integration programs were moved from JSF OFP Block 3 to OFP Block 4. New IOC for Department of Navy is FY2020.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3072: *Small Diameter Bomb (SDB)*	13.396	19.555	17.792	-	17.792	30.573	32.612	45.249	64.428	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

SDB II is an ACAT ID program providing the warfighter a capability to attack mobile targets in all weather from Stand-Off range. The Air Force is the lead service, Raytheon in Tucson, AZ is the prime contractor. SDB II addresses the following warfighter requirements: attack mobile targets; multiple kills per pass; multiple ordnance carriage; all weather operations; near-precision munitions capability; capability against fixed targets; reduced munitions footprint; increased weapons effectiveness; minimized potential for collateral damage; reduced susceptibility of munitions to countermeasures; and a migration path to net centric ops capability. Threshold aircraft is the F-15E for the Air Force and F-35B and F-35C for the Department of the Navy. Objective aircraft include the F/A-22, B-1, B-2, F-117, F-16, B-52, Predator B, and F/A-18E/F.

As a result of the Joint Strike Fighter (F-35) program's restructure, SDB II integration was moved from the JSF OFP Block 3 to Block 4. New IOC is FY2020.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SDB II Weapon Support	8.986	10.187	10.821
Articles:	13	80	0
Description: Funding provides for SDB II Engineering Manufacturing and Development (EMD) efforts including weapon vendor support, test assets, and government support.			
FY 2011 Accomplishments: Continue support of EMD; integration of SDB II with F-35B and F-35C.			
FY 2012 Plans: Continue support of EMD; integration of SDB II with F-35B and F-35C.			
FY 2013 Plans: Continue support of EMD; integration of SDB II with F-35B and F-35C.			
Title: JSF Integration	4.410	9.368	6.971
Articles:	0	0	0
Description: Funding provided for integration of SDB II on F-35B and F-35C, specifically for Lockheed Martin to develop F-35 Operational Flight Program (OFP) software, flight missions, and support and analysis of missions.			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue F-35 OFP development and coding and support fit checks with SDB II Weapon Vendor (Raytheon). ***FY 2012 Plans:*** Continue F-35 OFP development and coding and support fit checks with SDB II Weapon Vendor (Raytheon). ***FY 2013 Plans:*** Continue F-35 OFP development and coding and support fit checks with SDB II Weapon Vendor (Raytheon).			
Accomplishments/Planned Programs Subtotals	13.396	19.555	17.792

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN/223800: *Small Diameter Bomb II*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.543	653.590	679.133
• RDTE,AF/0604329F: *Small Diameter Bomb*	99.992	132.881	143.000	0.000	143.000	115.000	54.000	18.000	64.000	39.681	1,159.664
• MPAF/0207327F: *Small Diameter Bomb*	0.000	0.000	42.000	0.000	42.000	62.000	88.000	87.000	81.000	1,529.637	1,889.637

D. Acquisition Strategy

The SDB Increment II acquisition strategy is to conduct a full and open competition to select up to two contractors to compete during a planned 42-month risk reduction phase prior to entering Engineering, Manufacturing and Development (EMD). This competition began April 17, 2006 with the signature of contracts to the competing contractors: 1) Raytheon and 2) the team of Boeing and Lockheed Martin. A Fixed Price Incentive Firm type contract for EMD, including Firm Fixed Price procurement options for Lots 1-3 was awarded to Raytheon August 9, 2010. Lots 4 & 5 are included in the contract, but are Not-To-Exceed options.

The Navy funding will support Navy-unique efforts for SDB Increment II, such as aircraft integration, ship suitability, studies and analysis, and program management and government in-house support. These efforts will be performed on several cost-type contracts or through cost reimbursable work requests to government activities and contractors.

E. Performance Metrics

Earned Value Management has been implemented on the EMD contract with Raytheon.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development - (JSuW/HTVSF/ SDB II Risk Reduction)	C/CPFF	Various:Various	11.238	-		-		-		-	0.000	11.238	11.238
Aircraft Integration - JSF	C/CPFF	Lockheed Martin:Fort Worth, TX	18.359	3.165	Jan 2012	5.112	Jan 2013	-		5.112	56.970	83.606	83.606
Primary Hardware Development - SDB II EMD	C/FPIF	Raytheon:Tucson, AZ	6.181	0.792	Jan 2012	1.094	Jan 2013	-		1.094	45.820	53.887	53.887
BRU-61	C/CPFF	McDonnell Douglas Corp:St Charles, MO	4.259	-		-		-		-	0.000	4.259	4.259
		Subtotal	40.037	3.957		6.206		-		6.206	102.790	152.990	152.990

Remarks

Primary Hardware Development Prior Years includes McDonnell Douglas Corp and Raytheon Missile Systems Primary H/W Development for the SDB II 42-month risk reduction phase, $4.393M for Boeing/Lockheed Martin team and $4.393M for Raytheon and $2.6M for Joint Surface Warfare (JSuW) efforts with Raytheon. Primary H/W and Aircraft Integration to Raytheon in Tucson, AZ reflects the winning SDB II contractor. Funding for Lockheed Martin F-35 does not include OFP nor Test missions which are represented in Support and Test sections. Beginning FY11, funding for JMM BRU (BRU-61A/A) is included in PU3082.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development - JSuW/WDLN/HTVSF	Various	Various:Various	14.715	-		-		-		-	0.000	14.715	14.715
Software Development - JSF	C/CPFF	Lockheed Martin:Ft. Worth, TX	-	3.550	Jun 2012	1.505	Jun 2013	-		1.505	32.152	37.207	37.207
Studies & Analyses	C/CPFF	Johns Hopkins University:Baltimore, MD	2.695	-		-		-		-	0.000	2.695	2.695
		Subtotal	17.410	3.550		1.505		-		1.505	32.152	54.617	54.617

Remarks

Studies and Analyses include Navy activities to define CONOPS and better define Navy-specific and interoperability requirements, such as Weapon Data Link Advanced Concept Technology Demonstration, Seeker Trade Studies, and Data Link Trade Studies. Prior year Software Development efforts are in support of JSuW Joint Capability Technology

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Demonstrations (JCTD) incorporation of J.11 Message Set into Strike Weapons and Weapon Data Link Network efforts. Software Development for JSF is the Universal Armament Interface (UAI), Operational Flight Plan (OFP) and mission planning which supports the SDB II program.													

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation - JSuW/WDLN	Various	Various:Various	2.864	-		-		-		-	4.007	6.871	
Operational Test & Evaluation - SDB II	WR	COMOPTEVFOR:China Lake, CA	1.010	-		-		-		-	15.701	16.711	
Developmental Test & Evaluation - SDB II	C/CPFF	Lockheed Martin:Ft. Worth, TX	-	-		1.322	Jan 2013	-		1.322	64.897	66.219	66.219
SDB II Weapon Test Assets	C/FFP	Raytheon:Tucson, AZ	2.060	5.989	Jan 2012	2.962	Jan 2013	-		2.962	15.239	26.250	26.250
		Subtotal	5.934	5.989		4.284		-		4.284	99.844	116.051	

Remarks

Developmental T&E Lockheed Martin in FY 2013 supports wind tunnel testing. Test assets include weapon assets required for Development Test and Operational Test.

Management Services ($ in Millions)

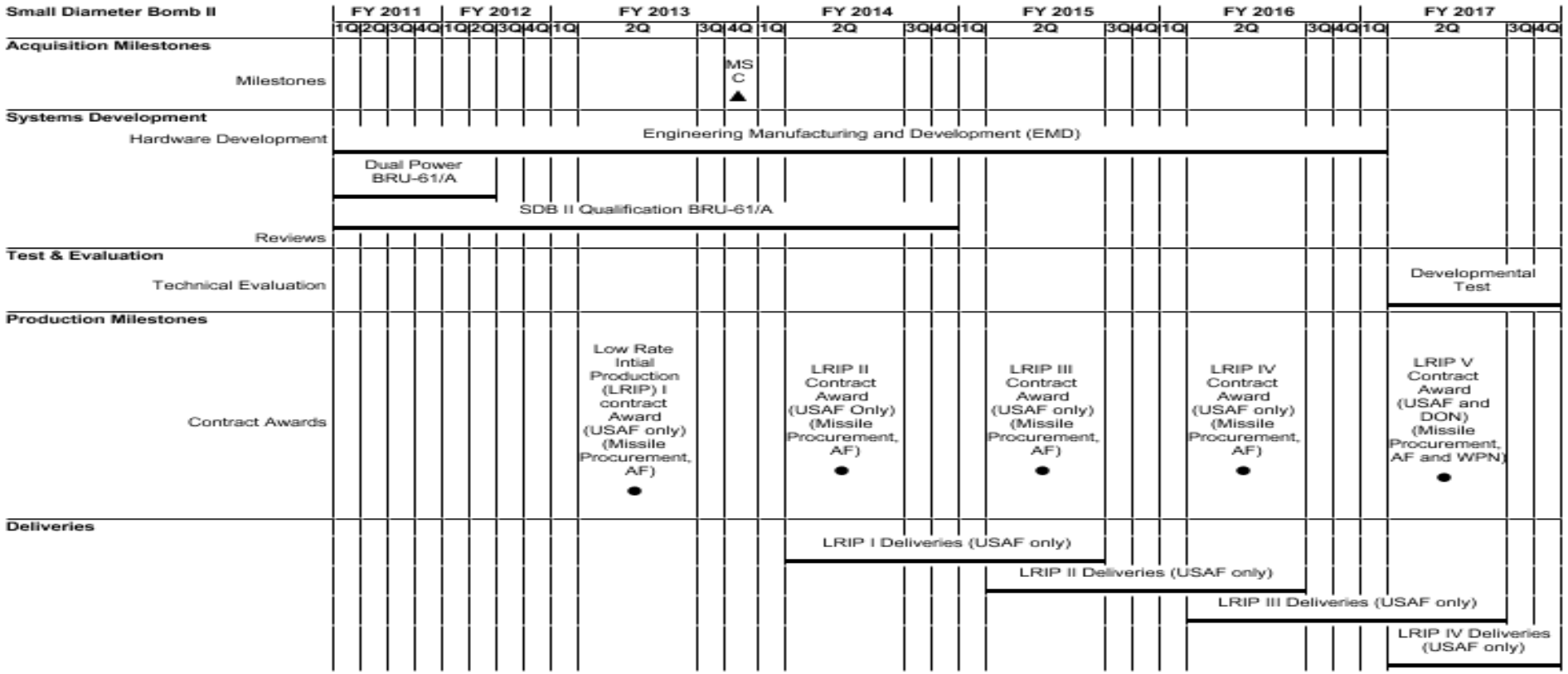
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Services	Various	Various:Various	2.099	0.297	Nov 2011	0.312	Nov 2012	-		0.312	2.252	4.960	4.960
Government Support	WR	NAWC WD:China Lake	19.706	2.646	Nov 2011	2.761	Nov 2012	-		2.761	19.298	44.411	
Government Support	WR	Various:Various	8.729	0.569	Nov 2011	0.170	Nov 2012	-		0.170	3.593	13.061	
Program Management Support	WR	Various:Various	3.674	2.347	Nov 2011	2.374	Nov 2012	-		2.374	13.385	21.780	
Travel	MIPR	ASC20OG:Eglin AFB, FL	1.606	0.200	Oct 2011	0.180	Oct 2012	-		0.180	1.400	3.386	
		Subtotal	35.814	6.059		5.797		-		5.797	39.928	87.598	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	99.195	19.555		17.792		-		17.792	274.714	411.256	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3072: *Small Diameter Bomb (SDB)*



2013PB - 0604329N - 3072

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604329N: *Small Diameter Bomb (SDB)*	**PROJECT** 3072: *Small Diameter Bomb (SDB)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Small Diameter Bomb II				
Acquisition Milestones: Milestones: MS C	4	2013	4	2013
Systems Development: Hardware Development: Engineering Manufacturing and Development (EMD)	1	2011	1	2017
Systems Development: Hardware Development: Dual Power BRU-61/A	1	2011	2	2012
Systems Development: Hardware Development: SDB II Qualification BRU-61/A	1	2011	4	2014
Test & Evaluation: Technical Evaluation: Developmental Test	2	2017	4	2017
Production Milestones: Contract Awards: Low Rate Initial Production (LRIP) I Contract Award (USAF Only) (Missile Procurement, AF)	2	2013	2	2013
Production Milestones: Contract Awards: LRIP II Contract Award (USAF Only) (Missile Procurement, AF)	2	2014	2	2014
Production Milestones: Contract Awards: LRIP III Contract Award (USAF Only) (Missile Procurement, AF)	2	2015	2	2015
Production Milestones: Contract Awards: LRIP IV Contract Award (USAF Only) (Missile Procurement, AF)	2	2016	2	2016
Production Milestones: Contract Awards: LRIP V Contract Award (USAF and DoN) (Missile Procurement, AF and WPN)	2	2017	2	2017
Deliveries: LRIP I Deliveries (USAF only)	2	2014	2	2015
Deliveries: LRIP II Deliveries (USAF only)	2	2015	2	2016
Deliveries: LRIP III Deliveries (USAF only)	2	2016	2	2017
Deliveries: LRIP IV Deliveries (USAF only)	2	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3082: *JMM BRU*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3082: *JMM BRU*	2.336	10.080	13.272	-	13.272	17.861	19.468	12.252	8.432	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY 2011, a second project unit 3082 was established for Joint Miniature Munitions Bomb Rack Unit (JMM BRU). Funding was realigned from project unit 3072 Small Diameter Bomb to provide better tracking of the JMM BRU.

A. Mission Description and Budget Item Justification

The Joint Miniature Munitions Bomb Rack Unit (JMM BRU) is an Air Force led ACAT III program. It is required for the DoN carriage of the SDB II weapon in the internal bay of the F-35B and F-35C and operation in the Department of Navy environment. The SDB II Capability Development Document states that it must be operable on the Miniature Munitions Smart Rack BRU-61/A. The BRU-61/A, currently in production in the USAF, does not meet the needs to operate with SDB II within the F-35 internal bay in the DoN environment. The JMM BRU, designated BRU-61A/A, fills the capability gap required by the DoN. Efforts include development of a dual poower capability to meet the SDB II operating environment on the F-35.

SDB II and the JMM BRU integration were moved from F-35 Block 3 to Block 4. Budgets and schedules have been modified to meet the F-35 Block 4 schedule.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Joint Miniature Munitions Bomb Rack Unit (JMM BRU) Government Support	2.336	2.912	3.422
Articles:	0	0	0
Description: Funding provided for the SDB II Carriage System support and integration into Navy environments. ***FY 2011 Accomplishments:*** Acquisition Strategy development and Request for Proposal development. ***FY 2012 Plans:*** Support prime contractor contract and initiate Technology Development (TD) Phase. Complete Dual Power development. ***FY 2013 Plans:*** Continue with TD Phase.			
Title: Joint Miniature Munitions Bomb Rack (JMM BRU) Prime Contractor	-	7.168	9.850
Articles:		3	2
Description: Prime Contractor Support of JMM BRU (BRU-61A/A) Technology Development (TD)/Engineering & Manufacturing Development (EMD) contract.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3082: *JMM BRU*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2012 Plans: Select Prime Contractor and award TD/EMD contract. ***FY 2013 Plans:*** Continue TD/EMD contract.			
Accomplishments/Planned Programs Subtotals	2.336	10.080	13.272

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/072000: *Aircraft Equipment and Facilities*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	294.100	294.100

D. Acquisition Strategy

The JMM BRU is an Air Force led ACAT III program. Industry day was held 4Q FY 2010, Acquisition Strategy approved 1Q FY2011 and Material Development Decision 2Q FY2011.

E. Performance Metrics

Earned Value Management will be implemented on the TD/EMD contract with the successful offeror for the technology demonstration contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3082: *JMM BRU*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Miniature Munitions Bomb Rack Unit (JMM BRU)	C/CPIF	TBD:TBD	5.130	6.456	Apr 2012	8.912	Apr 2013	-		8.912	28.637	49.135	49.135
		Subtotal	5.130	6.456		8.912		-		8.912	28.637	49.135	49.135

Remarks

Funding provided to the successful offerer for development of a JMM BRU SDB II carriage system which satisfies DoN environments. JMM BRU will carry four SDB II's and will be capable of being used both internally and externally.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
JMM BRU Test Assets	C/CPFF	TBD:TBD	-	0.711	Apr 2012	0.885	Apr 2013	-		0.885	6.675	8.271	8.271
		Subtotal	-	0.711		0.885		-		0.885	6.675	8.271	8.271

Remarks

Funding provided to purchase JMM BRU test assets required for DT and OT.

Management Services ($ in Millions)

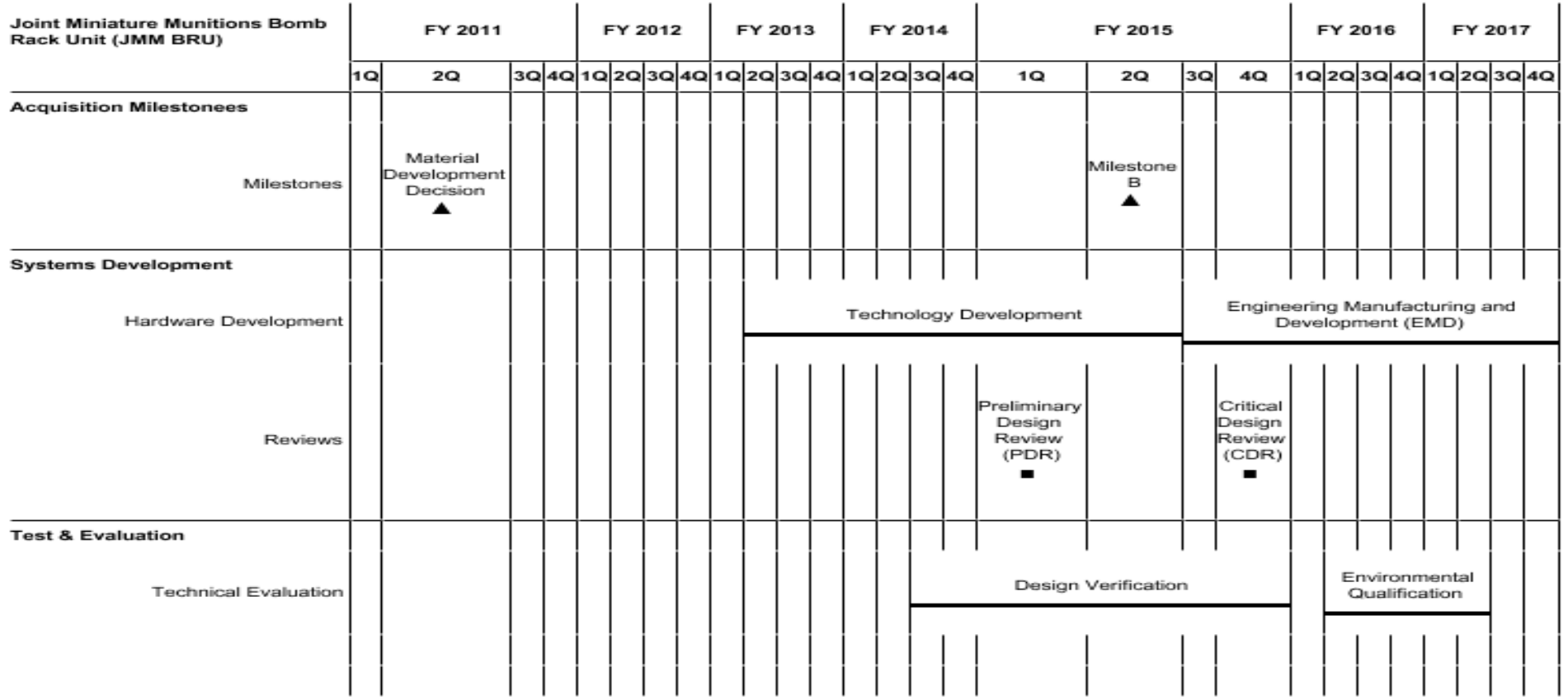
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Support	WR	NAWC WD:China Lake, CA	0.140	0.636	Nov 2011	1.129	Nov 2012	-		1.129	6.930	8.835	
Government Support	WR	Various:Various	1.930	2.227	Nov 2011	2.301	Nov 2012	-		2.301	11.880	18.338	
Travel	MIPR	ASC20OG:Eglin AFB, FL	0.050	0.050	Oct 2011	0.045	Nov 2012	-		0.045	0.250	0.395	
		Subtotal	2.120	2.913		3.475		-		3.475	19.060	27.568	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3082: *JMM BRU*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.250	10.080		13.272		-		13.272	54.372	84.974	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604329N: *Small Diameter Bomb (SDB)*	PROJECT 3082: *JMM BRU*



2013PB - 0604329N - 3082

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604329N: *Small Diameter Bomb (SDB)*	**PROJECT** 3082: *JMM BRU*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint Miniature Munitions Bomb Rack Unit (JMM BRU)				
Acquisition Milestonees: Milestones: Material Development Decision	2	2011	2	2011
Acquisition Milestonees: Milestones: Milestone B	2	2015	2	2015
Systems Development: Hardware Development: Technology Development	2	2013	2	2015
Systems Development: Hardware Development: Engineering Manufacturing and Development (EMD)	3	2015	4	2017
Systems Development: Reviews: Preliminary Design Review (PDR)	1	2015	1	2015
Systems Development: Reviews: Critical Design Review (CDR)	4	2015	4	2015
Test & Evaluation: Technical Evaluation: Design Verification	3	2014	4	2015
Test & Evaluation: Technical Evaluation: Environmental Qualification	2	2016	2	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	93.410	46.705	63.891	-	63.891	57.660	41.850	25.749	20.133	Continuing	Continuing
0439: *Standard Missile Improvement*	25.175	17.348	24.579	-	24.579	28.738	15.770	21.843	16.157	Continuing	Continuing
3092: *Standard Missile 6 Program*	68.235	29.357	39.312	-	39.312	28.922	26.080	3.906	3.976	Continuing	Continuing

A. Mission Description and Budget Item Justification

Standard Missile (SM) is the Navy's premier Anti-Air Warfare (AAW) missile, providing both area air defense for the fleet and self defense for individual AEGIS CGs and DDGs, as required by the Joint Theater Air Missile Defense (TAMD), Mission Need Statement (MNS), Defense Planning Guidance (DPG), Quadrennial Defense Review (QDR), and Ship Class AAW Self Defense Capstone Requirements Document. Agility, fuzing, and computer modifications to SM are in development to restore performance in the near term against a specific existing proliferating Anti-Ship Cruise Missile (ASCM) threat. Continuous analysis of missile capabilities vs. ever-evolving and proliferating aircraft and ASCM threats and long-range
planning are required to keep pace with the threat.

In FY04 the Standard Missile 6 (SM-6) program was started to develop an advanced surface missile system with an active seeker and an extended range. The SM-6 missile system will leverage the Navy investment in the AEGIS Weapon System (AWS), Cooperative Engagement Capability (CEC), and airborne early warning systems, which will be upgraded in concert with missile development to support a fully integrated extended range detect-to-engage naval and joint integrated fire control capability. SM-6 is the enabler for Integrated Fire Control (IFC). Funding to support those upgrades are also included in this line. SM-6 has completed the ground based and at-sea DT flight test phase of the System Development & Demonstration (SD&D) effort. SDD at-sea OT phase completed July 2011. Together, this family of systems will provide the air superiority and the umbrella of protection against the full spectrum of projected future cruise missile (anti-ship and land attack) and manned aircraft threats discussed in the Joint TAMD MNS, DPG, QDR, IAMD Roadmap, IAMD Joint Integrating Concept, AIAMD Joint Operating Concept and TAMD Capstone Requirements Document.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	96.186	46.705	21.406	-	21.406
Current President's Budget	93.410	46.705	63.891	-	63.891
Total Adjustments	-2.776	-	42.485	-	42.485
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-2.286	-			
• Program Adjustments	-	-	42.515	-	42.515
• Rate/Misc Adjustments	-	-	-0.030	-	-0.030
• Congressional General Reductions Adjustments	-0.490	-	-	-	-

Change Summary Explanation

Technical: Program funding increased as a result of continued critical development and integration efforts necessary to meet delivery time-lines for DDG 1000 and AMDR. Additionally, funding was increased for DoD directed missile safety and testing, near term obsolescence replacement issues, and vital technology improvements to pace the threat.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 0439: *Standard Missile Improvement*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0439: *Standard Missile Improvement*	25.175	17.348	24.579	-	24.579	28.738	15.770	21.843	16.157	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Modifications to SM-2 BLK IIIB are required for use on DDG-1000 class destroyers. The Joint Universal Waveform Link (JUWL) will be integrated with the Evolved Seasparrow Missile (ESSM) and Standard Missile to communicate with the DDG-1000 SPY-3 radar. SM-2 missile software will be updated with interrupted continuous wave illumination (ICWI) in order to allow operation with
DDG-1000.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Standard Missile Improvement	25.175	17.348	21.779
Articles:	0	0	0

Description: DDG-1000 Pre Plan Product Improvement (P3I)Link Integration/ICWI

FY 2011 Accomplishments:
- A revised integrated master schedule has been built to redirect project tasking and rephrase FY11
material/parts orders for ESSM production representative models (PRMs) and SM-2 proof of design (PODs) assets.
- ESSM JUWL program is performing the design verification test (DVT) at the X-Band Transceiver (XBT) configuration.
- Engineering efforts to support ESSM Critical Design Review (CDR) and SM-2 Preliminary Design Review (PDR) for JUWL will be initiated.
- ESSM Zumwalt Inert Operational Missile (IOM) is ready for sell off. To complete this task, DCMA requires an XBT. Plan to use 3rd Proof Of Design (POD-3), to complete the sell-off.

FY 2012 Plans:
- Continue FY11 engineering efforts in support of ESSM Critical Design Review (CDR) planned for November 2011.
- Assembly of ESSM Production Representative Models (PRMs) and conduct of associated qualification testing, including EMI/E3 testing.
- Continued SM-2 engineering efforts in support of Preliminary Design Review (PDR) for JUWL.
- Assembly of SM-2 PODs, and design verification testing (DVT).

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 0439: *Standard Missile Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
ESSM delivers an Inert Operational Missile (IOM) to support ship integration, conducts a Test Readiness Review and Production Readiness Review and delivers its first flight test rounds. SM-2 conducts Critical Design Review (CDR), assembles PRMs and conducts qualification testing.			
Title: DDG 1000 Rephase ***Articles:*** ***FY 2013 Plans:*** DDG 1000 Rephase: Procure test round modification kits to upgrade Block IIIBs to Zumwalt IIIBs, test, and deliver Zumwalt IIIB rounds (including canisters) for developmental testing (DT).	- 	- 	2.800 0
Accomplishments/Planned Programs Subtotals	25.175	17.348	24.579

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

-Production representative missiles will be built for ESSM between FY12 and 14 and for SM-2 FY14 and FY17.
-Engineering and Integration Testing for ESSM in FY14- FY15 and SM-2 in FY15. 67 ESSM missiles and 34 SM missiles are required to support Developmental Test & Operational Test (DT & OT) FY16-FY17 and continue follow-on ship integration and design update effort in FY18.
-(ESSM) Procurement under PEO IWS3D production contract of 35 ESSM JUWL mod kits to convert 35 ESSM rounds from fleet inventory for SDTS testing in late FY14. Mod kits funded by PMS 500. Other 32 rounds, of 67 total, to be funded by PMS 500.
-(SM) Development is expected to conclude by FY17 for the X-band JUWL and ICWI.

E. Performance Metrics

- ESSM initial engineering design for X-Band JUWL capability was completed and Engineering Development Models (EDMs) were built and tested.
- ESSM will order material/parts and assemble Proof of Design units to conduct design verification tests.
- ESSM will conduct its Critical Design Review in first Quarter FY12.
- In October 2010 SM-2 began full scale engineering development of X-Band JUWL capability and limited implementation of interrupted continuous wave illumination (ICWI) functionality.
- SM-2 PDR for JUWL is planned for first quarter FY12.
- Integration Testing and datalink qualification for JUWL testing 2013

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 0439: *Standard Missile Improvement*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design and Analysis1	SS/CPAF	RAYTHEON:Tucson, AZ	220.476	16.276	Nov 2011	22.296	Nov 2012	-		22.296	Continuing	Continuing	Continuing
Design and Analysis2	C/CPFF	JHU/APL:Laurel, MD	3.750	0.136	Nov 2011	1.531	Nov 2012	-		1.531	0.000	5.417	
Design and Analysis3	MIPR	MIT/Lin Lab:Lexington, MA	0.050	-		-		-		-	0.000	0.050	
Design and Analysis4	WR	NSWC:Dahlgren	787.314	0.100	Nov 2011	0.111	Nov 2012	-		0.111	0.000	787.525	
Design and Analysis5	WR	NSWC:Indian Head	0.940	-		-		-		-	0.000	0.940	
Design and Analysis6	WR	NAWC:China Lake	3.030	-		-		-		-	0.000	3.030	
Design and Analysis7	Various	LOCKHEED MARTIN:Moorestown, NJ	17.775	-		-		-		-	0.000	17.775	
Design and Analysis8	WR	CNO:Washington, DC	0.010	-		-		-		-	0.000	0.010	
Design and Analysis9	WR	CMDP:Phoenix, AZ	4.795	-		-		-		-	0.000	4.795	
Design and Analysis11	WR	NSWC:Crane	0.257	-		-		-		-	0.000	0.257	
Design and Analysis12	WR	DOI&CNAP:Washington, DC	0.487	-		-		-		-	0.000	0.487	
Design and Analysis13	WR	COMPTEVFOR:Norfolk, VA	0.100	-		-		-		-	0.000	0.100	
Design and Analysis14	C/CPFF	LOCKHEED MARTIN:Moorestown, NJ	2.000	-		-		-		-	0.000	2.000	
Design and Analysis15	WR	CARDEROCK:Bethesda, MD	0.050	-		-		-		-	0.000	0.050	
Design and Analysis16	WR	NWAS:Corona	0.325	-		-		-		-	0.000	0.325	
Design and Analysis17	C/CPFF	CORVID:Mooresville, NC	0.100	-		-		-		-	0.000	0.100	
Design and Analysis18	C/CPFF	BAE:Rockville, MD	0.101	-		-		-		-	0.000	0.101	
Design and Analysis19	MIPR	MDA:Dahlgren,VA	1.257	-		-		-		-	0.000	1.257	
Design and Analysis20	WR	IWS3D:ARLINGTON, VA	1.000	0.826	Nov 2011	0.631	Nov 2012	-		0.631	0.000	2.457	
		Subtotal	1,043.817	17.338		24.569		-		24.569			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 0439: *Standard Missile Improvement*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DEVELOPMENTAL TEST & EVALUATION1	WR	NSWC:Port Hueneme	0.185	-		-		-		-	0.000	0.185	
DEVELOPMENTAL TEST & EVALUATION2	WR	WSMR:New Mexico	1.600	-		-		-		-	0.000	1.600	
DEVELOPMENTAL TEST & EVALUATION3	WR	NAWC:Pt Mugu	0.098	-		-		-		-	0.000	0.098	
DEVELOPMENTAL TEST & EVALUATION4	WR	PMRF:Hawaii	0.338	-		-		-		-	0.000	0.338	
DEVELOPMENTAL TEST & EVALUATION5	WR	NSWC:PHD/Techrep	0.567	-		-		-		-	0.000	0.567	
		Subtotal	2.788	-		-		-		-	0.000	2.788	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CONTRACTOR ENGINEERING SUPPORT	C/CPAF	VARIOUS:VARIOUS	1.993	-		-		-		-	0.000	1.993	
PROGRAM MANAGEMENT SUPPORT	C/CPAF	VARIOUS:VARIOUS	2.294	-		-		-		-	0.000	2.294	
TRAVEL	Allot	IWS3:Arlington, VA	0.066	0.010	Nov 2011	0.010	Nov 2012	-		0.010	0.000	0.086	
		Subtotal	4.353	0.010		0.010		-		0.010	0.000	4.373	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,050.958	17.348		24.579		-		24.579			

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3092: *Standard Missile 6 Program*	68.235	29.357	39.312	-	39.312	28.922	26.080	3.906	3.976	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program leverages existing missile technology and advanced missile technology. It aligns missile technology roadmaps across the Services (NAVSEA, NAVAIR, USAF, USMC and USA) and missile variants within the Services, taking advantage of the Navy's investment in the AWS, CEC, and airborne early warning systems. This
missile will provide an extended range engagement capability to provide the air superiority and the umbrella of protection for joint U.S. forces and allies against the full spectrum of manned-fixed and rotary-wing aircraft, unmanned aerial vehicles, and land attack and anti-ship cruise missiles in flight, thereby contributing to the continuous protection of forward deployed ground maneuver forces as well as theater rear assets as discussed in the Joint TAMD MNS, DPG, QDR, TAMD Capstone Requirements Document, Forward From the Sea, Joint Vision 2010/2020, the 2002/2003 Naval Transformational Roadmap and the Operational Requirements Document for SM-6 BLK 1.

This project addresses the Navy's requirement for an extended range area air defense missile with engage-on-remote and over-the-horizon capability as the enabler for USN and Joint integrated fire control. The SM-6 BLK 1 is the Navy's transformational enabler for the Sea Shield Operational Concept and enables the opportunity for Sea Basing and Sea Strike. This effort includes risk reduction, System Development and Demonstration (SD&D) design, insensitive munitions improvement, transition to production and operational test of the latest STANDARD Missile with the kinematic performance to defeat current and projected threats that possess low altitude, high altitude, and high velocity and maneuver characteristics at the max kinematic range of the missile. SM-6 completed OT flight test phase of the SD&D effort.

The Joint Integrated Fire Enhancement funding is JROC directed for the demonstration of the Joint Land Attack Elevated Netted Sensor (JLENS) into the Naval Integrated Fire Control-Counter Air (NIFC-CA) kill chain; specifically, SM-6 integration with the JLENS and the AWS. The funding identified in this budget is part of an integrated funding package that also includes funding for PEO IWS 1.0, PEO IWS 6.0, PEO IWS 7.0 and the Army's Cruise Missile Defense Systems JLENS Product Office. Additional funding is to support the integration, test, and analysis of the NIFC-CA test and evaluation strategy. Funds are also included for the transition of technology associated with the Missile Defense/Sea Shield Naval Interceptor Improvements (NII) Future Naval Capability (FNC) as formally signed in the NII Technology Transition Agreement (TTA) by PEO IWS 3, OPNAV N86, and the Office of Naval Research (PMR-51).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Joint Integrated Fire Enhancement	4.579	2.862	-
Articles:	0	0	
Description: Joint Integrated Fire Enhancement			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Scenario and test planning development and integration and test activities and end-to-end scenario test predictions. ***FY 2012 Plans:*** Support Pair-wise testing between SM-6 and JLENS, conduct Captive Flight Test (CFT) with JLENS in Integrated Fire Control (IFC) Kill Chain, support SM-6: 6 degrees of freedom (DoF) accreditation, pre-flight analysis for JLENS IFC Live Fire Event and post-flight analysis for JLENS IFC Live Fire Event.			
Title: SM 6 Missile Development ***Articles:*** ***Description:*** Missile Development ***FY 2011 Accomplishments:*** DT completion (3 flight tests) and 12 OT Flight Tests completed and analysis on-going; Runs For Record M&S; DT/OT-IIIA FOT&E preparation. Advanced Capability Build 12 (ACB 12) and Combat Systems Engineering Development Site (CSEDS) integration and test; Captive Carry Flight Test. ***FY 2012 Plans:*** Continue (ACB 12) and (CSEDS) integration and test; Continue Captive Carry Flight Test; Integrated Fire Control (IFC) integration and test; Complete DT/OT-IIIA. ***FY 2013 Plans:*** Plan to support follow on test and evaluation (FOT&E), ACB 12 B/L 9 integration and flight test, Processor Replacement Program (PRP) flight test and NIFC-CA flight test	48.420 0	14.189 0	17.012 0
Title: Insensitive Munitions (IM) ***Articles:*** ***Description:*** Insensitive Munitions ***FY 2011 Accomplishments:*** - Ballistic Barrier testing, down-select decision & initiation of a Technical Data Package - Initiation of a System Safety Program Plan development & Threat Hazard Assessment (THA) review & update - Active Mitigation IM Technology (inhibitors, sensors, etc.) ***FY 2012 Plans:*** - Completion of a Ballistic Barrier Technical Data Package and integration into a SM logistics plan - Completion of a System Safety Program Plan & THA review/update	2.700 0	1.000 0	15.300 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- IM Technology testing in full-scale rocket motors ***FY 2013 Plans:*** Maintain the IM Technical team support, Electronic Arm & Fire Device (EAFD) & Active Mitigation (AM) technology transition & integration into DPRM, develop 30 rocket motors (RM) of dual pulse configuration, prime contractor & subs integration & procurement support, develop & maintain systems safety program plan per WSESRB recommendation and develop RM qualification test plan(s) and procedures			
Title: SM6 OT&E Support ***Articles:*** ***FY 2011 Accomplishments:*** This effort will complete activities related to the SM-6 OT Flight Testing and analyzing test results to support COMPTEVFOR. Preparation for DT/OT-IIIA. ***FY 2012 Plans:*** This effort will complete activities related to SM-6 FOT&E (DT/OT-IIIA) testing and analysis.	8.431 0	7.746 0	-
Title: SM6/AWS & VLS Integration ***Articles:*** ***Description:*** SM6/AWS & VLS Integration ***FY 2011 Accomplishments:*** AEGIS Weapons System and MK 41 Vertical Launch Integration of SM-6 IFC mode to ACB12. ***FY 2012 Plans:*** AEGIS Weapons System and MK 41 Vertical Launch Integration of SM-6 IFC mode to ACB12.	4.105 0	3.560 0	-
Title: Portable All-Up Round Bit Tester (PABT) ***Articles:*** ***FY 2013 Plans:*** Detailed design, System Functional Review (SFR)/System Requirements review (SRR), and Integrated Baseline Review (IBR).	-	-	7.000 0
Accomplishments/Planned Programs Subtotals	68.235	29.357	39.312

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN 2234: *Standard Missile*	236.762	356.878	399.482	0.000	399.482	493.400	672.770	729.731	866.268	1,327.105	5,291.601
• Standard Missile: *QTY*	59.000	89.000	94.000	0.000	94.000	115.000	157.000	168.000	204.000	284.000	1,200.000

D. Acquisition Strategy

The Navy awarded a contract for SM-6 development, design, testing, production and support (including spares) to Raytheon using other than full and open competition pursuant to the authority of 10 U.S.C. 2304(c)(1).

The active seeker guidance section for the SM-6 will be built in a joint production facility with the Advance Medium Range Air to Air Missile (AMRAAM).

The remainder of the SM-6 AUR components will be produced in existing production facilities that are currently producing other variants of the SM.

No new facilities will be required for SM-6 production, and existing equipment will be used whenever possible.

No source other than Raytheon is capable of producing a shipboard BLK 1 missile within the Navy's schedule.

SM-6 Acquisition Strategy signed by OSD AT&L 3 March 2004.

E. Performance Metrics

Accomplishments
- DT Flight Tests at PMRF - Jan 11
- OT TRR - May 11
- OT Flight Tests at PMRF - Jul 11
- LRIP III Option II Contract Award - Jul 11

SM-6 SD&D Contract SPI is currently at 1.00 and CPI is at 1.00

Upcoming Milestones
- OT IIIA - Apr 12 - Dec 13
- Integrated Fire Control (IFC) Apr 12 - Mar 14

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design & Analysis	C/CPIF	RAYTHEON:Tucson, AZ	648.230	15.120	Nov 2011	28.916	Nov 2012	-		28.916	0.000	692.266	
Design & Analysis	C/CPFF	JHU/APL:Laurel MD	42.108	1.758	Nov 2011	1.389	Nov 2012	-		1.389	0.000	45.255	
Design & Analysis	MIPR	MIT/Lin Lab:Lexington, MA	0.550	-		-		-		-	0.000	0.550	
Design & Analysis	WR	NAWC:China Lake	3.285	-		0.500	Nov 2012	-		0.500	0.000	3.785	
Design & Analysis	WR	NSWC:Dahlgren	9.845	0.075	Nov 2011	1.500	Nov 2012	-		1.500	0.000	11.420	
Design & Analysis	WR	NSWC:Indian Head	3.291	-		0.250	Nov 2012	-		0.250	0.000	3.541	
Design & Analysis	WR	NSWC:PHD	9.012	0.810	Nov 2011	-		-		-	0.000	9.822	
Design & Analysis	WR	NSWC:Crane	1.191	-		-		-		-	0.000	1.191	
Design & Analysis	MIPR	JSPO:Eglin AFB	23.722	-		-		-		-	0.000	23.722	
Design & Analysis	C/CPFF	LOCKHEED Martin:Moorestown, NJ	5.794	-		-		-		-	0.000	5.794	
Design & Analysis	WR	NSWC:Corona	16.559	-		-		-		-	0.000	16.559	
Design & Analysis	Reqn	ONR:Arlington, VA	5.150	-		-		-		-	0.000	5.150	
Design & Analysis	Reqn	NRL:Washington, DC	0.090	-		-		-		-	0.000	0.090	
Design & Analysis	WR	COMPTEVFOR:Norfolk, VA	2.155	-		-		-		-	0.000	2.155	
Design & Analysis	WR	CARDEROCK:Philadelphia, PA	2.549	-		-		-		-	0.000	2.549	
Design & Analysis	WR	NSWC:Pt Mugu	0.613	-		-		-		-	0.000	0.613	
Design & Analysis	C/CPFF	BAE:Rockville, MD	6.446	0.075	Nov 2011	0.080	Nov 2012	-		0.080	0.000	6.601	
Design & Analysis	MIPR	ARMY:Redstone	0.050	-		-		-		-	0.000	0.050	
Design & Analysis	WR	NAWCAD:Pax River, MD	0.392	-		-		-		-	0.000	0.392	
Design & Analysis	C/CPFF	CORVID:Mooresville, NC	2.750	0.225	Nov 2011	0.500	Nov 2012	-		0.500	0.000	3.475	
Design & Analysis	C/CPFF	RNB:Arlington, VA	0.010	-		-		-		-	0.000	0.010	
Design & Analysis	WR	SPAWAR:Arlington, VA	0.007	-		-		-		-	0.000	0.007	
Design & Analysis	WR	ARMY:Cecom	0.066	-		-		-		-	0.000	0.066	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Design & Analysis	C/FP	GENERAL DYNAMICS:Falls Church, VA	1.660	-		-		-		-	0.000	1.660	
Design & Analysis	WR	VARIOUS:(IWS 1A)	59.773	-		-		-		-	0.000	59.773	
Design & Analysis	WR	VARIOUS:(VLS)	24.772	-		-		-		-	0.000	24.772	
		Subtotal	870.070	18.063		33.135		-		33.135	0.000	921.268	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Develpomental Test & Evaluation	WR	NSWC:Port Hueneme	0.400	0.549	Nov 2011	0.842	Nov 2012	-		0.842	0.000	1.791	
Develpomental Test & Evaluation	WR	NSWC:WSMR	19.321	2.573	Nov 2011	1.750	Nov 2012	-		1.750	0.000	23.644	
Develpomental Test & Evaluation	WR	PMRF:Hawaii	38.089	-		-		-		-	0.000	38.089	
Develpomental Test & Evaluation	WR	NAWC:Pt Mugu	0.769	-		-		-		-	0.000	0.769	
Develpomental Test & Evaluation	C/CPAF	RAYTHEON:Tucson, AZ	14.242	-		-		-		-	0.000	14.242	
Develpomental Test & Evaluation	C/CPFF	JHU/APL:Laurel, MD	1.250	2.006	Nov 2011	0.897	Nov 2012	-		0.897	0.000	4.153	
Develpomental Test & Evaluation	WR	NSWC:Corona	1.750	1.381	Nov 2011	0.960	Nov 2012	-		0.960	0.000	4.091	
Develpomental Test & Evaluation	WR	COMPTEVFOR:Norfolk	0.250	-		-		-		-	0.000	0.250	
Develpomental Test & Evaluation	WR	NSWC:Dahlgren	0.500	0.774	Nov 2011	0.153	Nov 2012	-		0.153	0.000	1.427	
Developmental Test & Evaluation	WR	VLS:Arlington, VA	0.750	0.474	Nov 2011	-		-		-	0.000	1.224	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	COMPTEVFOR:Norfolk, Va	-	0.250	Nov 2011	-		-		-	0.000	0.250	
Developmental Test & Evaluation	WR	VARIOUS:(IWS 1A)	-	0.750	Nov 2011	-		-		-	0.000	0.750	
		Subtotal	77.321	8.757		4.602		-		4.602	0.000	90.680	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Services	C/CPAF	VARIOUS:Various	22.405	2.437	Nov 2011	1.500	Nov 2012	-		1.500	0.000	26.342	
Travel	Various	IWS3:Arlington, VA	1.028	0.100	Nov 2011	0.075	Nov 2012	-		0.075	0.000	1.203	
DAWDF	C/FP	Not Specified:Not Specified	1.130	-		-		-		-	0.000	1.130	
		Subtotal	24.563	2.537		1.575		-		1.575	0.000	28.675	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	971.954	29.357		39.312		-		39.312	0.000	1,040.623	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604366N: *Standard Missile Improvements*	**PROJECT** 3092: *Standard Missile 6 Program*

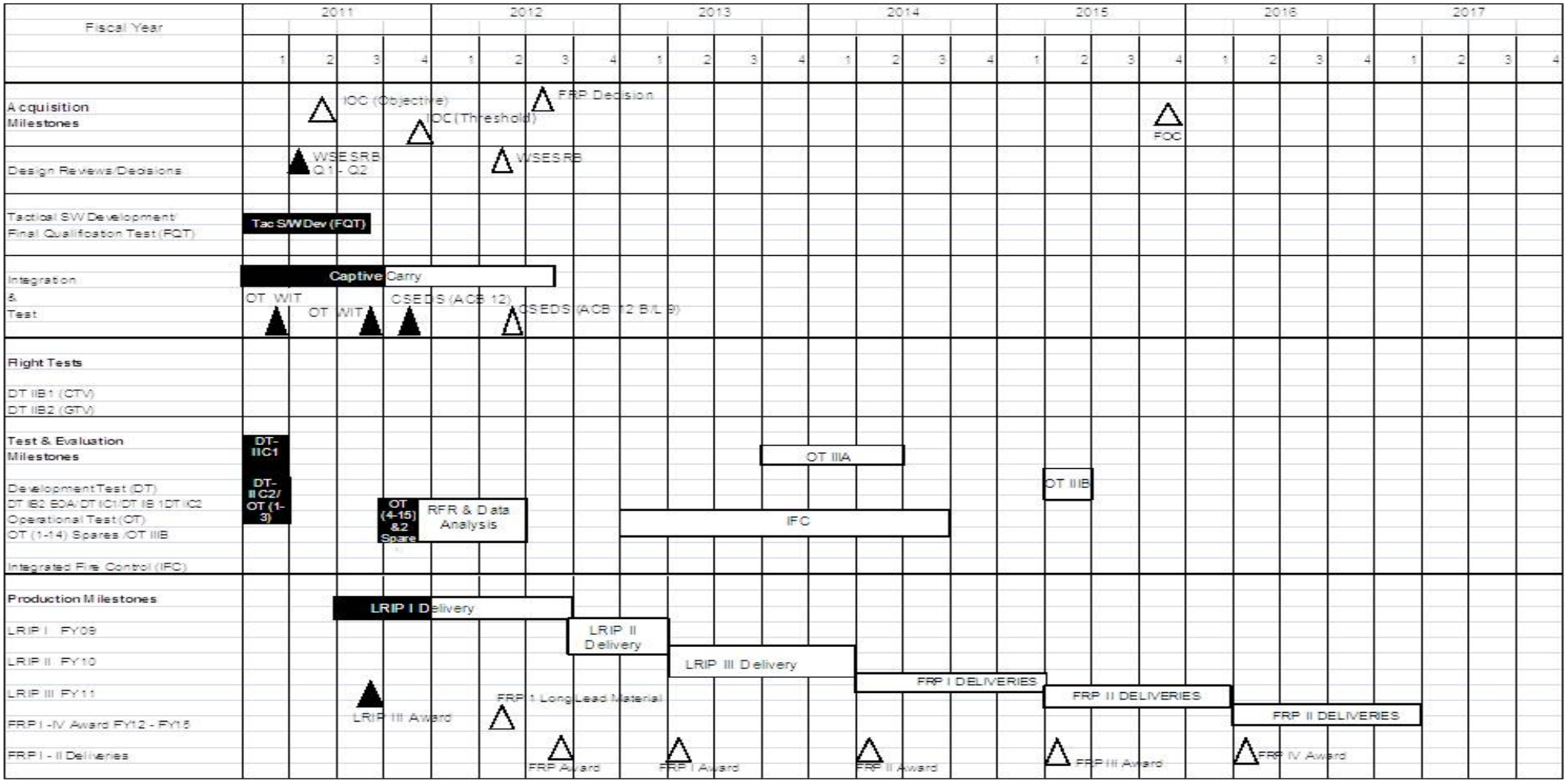


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604366N: *Standard Missile Improvements*	**PROJECT** 3092: *Standard Missile 6 Program*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3092				
IOC (OBJECTIVE)	2	2011	2	2011
IOC (THRESHOLD)	4	2012	4	2012
Full-Rate Production (FRP) Decision	3	2012	3	2012
Full Operational Capability (FOC)	4	2015	4	2015
WSESRB	2	2011	2	2012
Software Design/Final Qualification Test (FQT)	1	2011	3	2011
Captive Carry	1	2011	3	2012
CSEDS (ACB 12) (ACB 12 B/L 9)	4	2011	2	2012
OT WIT	1	2011	3	2011
Developmental Testing (DT-IIC1)	1	2011	1	2011
Developmental Testing (DT-IIC2/OT-[1-3])	1	2011	1	2011
Operational Testing (OT-[4-15 & 2 Spares])	3	2011	4	2011
OT IIIA	4	2013	2	2014
OT IIIB	2	2015	2	2015
Runs for the Record (RFR) & Data Analysis	4	2011	2	2012
Integrated Fire Control (IFC)	1	2013	3	2014
Low-Rate Initial Production III (LRIP III Award)	3	2011	3	2011
Low-Rate Initial Production I Delivery	2	2011	3	2012
Low-Rate Initial Production II Delivery	3	2012	1	2013
Low-Rate Initial Production III Delivery	2	2013	1	2014
Full Rate Production (FRP) I-IV Award	3	2012	2	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604366N: *Standard Missile Improvements*	PROJECT 3092: *Standard Missile 6 Program*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Full Rate Production (FRP) I Long Lead Material	2	2012	2	2012
Full Rate Production I (FRP) Deliveries	2	2014	1	2015
Full Rate Production II (FRP) Deliveries	2	2015	1	2016
Full Rate Production III (FRP) Deliveries	2	2016	1	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	42.519	41.142	73.246	-	73.246	60.584	58.186	50.545	41.186	Continuing	Continuing
0529: *ABN Mine Hunt System*	6.586	3.798	4.513	-	4.513	9.895	9.168	10.523	10.695	Continuing	Continuing
2047: *ALMDS*	12.689	11.379	14.371	-	14.371	21.684	26.005	17.512	17.800	Continuing	Continuing
2427: *OASIS*	5.593	8.160	13.028	-	13.028	4.227	2.478	-	-	0.000	33.486
2473: *Airborne Mine Neutralization System*	15.044	15.153	36.864	-	36.864	18.619	11.695	14.194	2.349	Continuing	Continuing
4026: *Strat Into Medal, Tactics & Trng Organic Force*	1.734	1.757	3.573	-	3.573	5.250	7.914	7.381	9.392	Continuing	Continuing
9179: *Surf Navy Integ Undersea Tactical Tech*	0.873	0.895	0.897	-	0.897	0.909	0.926	0.935	0.950	Continuing	Continuing

A. Mission Description and Budget Item Justification

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION: The Airborne Mine Countermeasures (AMCM) programs will deploy to the fleet as sensors integrated into the MH-60S platform in order to provide Mine-Like Object Detection/classification/localization, Mine Identification, mine reacquisition and neutralization, and influence clearance capabilities. The "Next Generation" AMCM systems will provide this set of capabilities to the Littoral Combat Ship (LCS) Mine Warfare Mission Module. This capability will be of critical importance in littoral zones, confined straits, choke points, near surface and the Amphibious Objective Area (AOA). Some interest in the following areas has been expressed: search and rescue; surface fire support; ASW operations; protection/offense against small craft/vehicles; air to air operations; very shallow water MCM; swimmer defense and torpedo defense. Surface Navy Integrated Undersea Tactical Technology (SNIUTT) will be used to develop an AN/SQQ-32, AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training modules and future Organic Airborne Mine Countermeasures (OAMCM) Sensor Training Modules.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	45.885	41.142	42.731	-	42.731
Current President's Budget	42.519	41.142	73.246	-	73.246
Total Adjustments	-3.366	-	30.515	-	30.515
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.600	-			
• SBIR/STTR Transfer	-2.533	-			
• Program Adjustments	-	-	30.606	-	30.606
• Rate/Misc Adjustments	-	-	-0.091	-	-0.091
• Congressional General Reductions Adjustments	-0.233	-	-	-	-

Change Summary Explanation

Program Adjustments: FY13 +$30,515 in Total Adjustments: for OASIS +$10,000K, for AMNS Near Surface +$8,900K, ALMDS False Alarm +$800K, Airborne Mine Neutralization (MH-53E) +$11,100K, Tow Cables +$2,400 and -$2,685K Misc adjustments.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 0529: *ABN Mine Hunt System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0529: *ABN Mine Hunt System*	6.586	3.798	4.513	-	4.513	9.895	9.168	10.523	10.695	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project includes a sonar for mine detection, classification and identification. The Navy does not possess a capability to conduct minefield reconnaissance (mine density and location) at high area search rates. The AN/AQS-20A is being developed to address the emergent requirements for mine identification and to integrate AMCM systems with a MH-60S platform. The AN/AQS-20A will also be the mine hunting sonar component for the Remote Minehunting System (RMS). The AN/AQS-20A will be developed to meet the requirements of the Littoral Combat Ship (LCS) Mine Warfare Mission Module.

The AQS-20A P3I program will focus on upgrading the Forward Looking, Volume Search, and Side-Look sonars to improve Probability Of Classifying a Minelike object as a Mine, False Classification, and Depth Localization performance. The Forward Looking Sonar will be replaced with a new High Frequency Wideband based design. The Volume Search sonar will be upgraded to improve signal processing. The Side Looking Sonar will be upgraded to improve signal processing and Signal to Noise Ratio. The program began in FY11 and will complete in FY17.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Product Development:	2.253	2.845	3.000
Articles:	0	0	0
FY 2011 Accomplishments: - Continued Environmental Data Collection analysis			
FY 2012 Plans: - Evaluate Forward Look Sonar (FLS) to improve detection and localization of volume and close-tethered mines. - Review obsolescence issues that are candidates for P3I. Conduct technical performance analysis and real time performance evaluation.			
FY 2013 Plans: - Initiate Forward Look, Volume Search, and Side Look Sonar upgrades to improve Probability of Classifying a Mine as Mine-like, False Classification, and Localization performance.			
Title: Support:	0.429	0.237	0.494
Articles:	0	0	0
Description: RDT&E Articles Quantity			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 0529: *ABN Mine Hunt System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continued to develop ILS and supportability product and training materials - Operational Assessment (OA) Shallow and deep minefield establishment ***FY 2012 Plans:*** -Provide ongoing technical engineering support to AN/AQS-20A. ***FY 2013 Plans:*** -Provide ongoing technical engineering support to AN/AQS-20A.			
Title: Test and Evaluation: ***Articles:*** ***Description:*** RDT&E Articles Quantity ***FY 2011 Accomplishments:*** - Conducted Shore-based AN/AQS-20A Operational Assessment (OA) from the MH-60S. ***FY 2012 Plans:*** - Complete AN/AQS-20A support of Littoral Combat Ship (LCS) 2 Mine Countermeasures Mission Package Developmental Testing. ***FY 2013 Plans:*** - Conduct Littoral Combat Ship (LCS) based AN/AQS-20A Operational Assessment (OA) from the MH-60S.	3.549 0	0.552 0	0.886 0
Title: Management Services: ***Articles:*** ***Description:*** RDT&E Articles Quantity ***FY 2011 Accomplishments:*** - Continued to provide planning and management for the AN/AQS-20A program ***FY 2012 Plans:*** - Commence documentation development in support of Full Rate Production Decision Review (FRPDR) - Continue to provide planning and management for the AN/AQS-20A program ***FY 2013 Plans:*** - Continue to provide planning and management for the AN/AQS-20A program - Complete documentation development in support of Full Rate Production Decision Review (FRPDR)	0.355 0	0.164 0	0.133 0
Accomplishments/Planned Programs Subtotals	6.586	3.798	4.513

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 0529: *ABN Mine Hunt System*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248: *Airborne Mine Countermeasure*	0.000	2.017	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPN 1600: *LCS Mission Modules*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPN 1601: *LCS MCM Mission Modules*	0.000	0.000	7.900	0.000	7.900	8.098	49.800	50.647	51.507	Continuing	Continuing

D. Acquisition Strategy

AN/AQS-20A achieved Milestone C on 10 May 2005. Delay in IOTE caused revision to Acquisition Strategy prior to Full Rate Production. Sole Source to Raytheon for MH-60S systems. Low Rate Initial Production (LRIP) procurement began in FY05, FY06, FY07, FY10, and FY13. Full Rate Production Decision Review (FRPDR) is expected in 3rd quarter 2014.

E. Performance Metrics

Successfully complete Operational Assessment.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 0529: *ABN Mine Hunt System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development Q-20 on the H-53	SS/CPIF	Raytheon:Portsmouth, RI	31.120	-		-		-		-	0.000	31.120	
Hardware/Software Development Q-20A on the H-60	C/CPFF	Raytheon:Portsmouth, RI	60.150	-		-		-		-	0.000	60.150	
Hardware/Software Development	WR	NSWC, PC:Panama City FL	14.578	-		-		-		-	0.000	14.578	
Hardware/Software Development	C/FP	Northrop Grumman:Melbourne, FL	4.572	-		-		-		-	0.000	4.572	
P3I	C/CPFF	Raytheon:Portsmouth, RI	-	0.988	Oct 2011	2.000	Oct 2012	-		2.000	Continuing	Continuing	Continuing
P3I	C/CPFF	ARL/UT:Austin, TX	-	1.857	Oct 2011	1.000	Oct 2012	-		1.000	Continuing	Continuing	Continuing
		Subtotal	110.420	2.845		3.000		-		3.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	NSWC, PC:Panama City, FL	31.018	0.208	Oct 2011	0.494	Oct 2012	-		0.494	Continuing	Continuing	Continuing
Engineering Services	C/CPFF	Raytheon:Portsmouth, RI	3.686	-		-		-		-	Continuing	Continuing	Continuing
Engineering Services	Various	Various:Various	54.018	-		-		-		-	0.000	54.018	
Engineering Services 2	SS/CPIF	Raytheon:Portsmouth, RI	3.464	-		-		-		-	0.000	3.464	
ILS Function	WR	NSWC, PC:Panama City FL	6.339	0.029	Oct 2011	-		-		-	Continuing	Continuing	Continuing
ILS Function	SS/CPIF	Raytheon:Portsmouth, RI	1.546	-		-		-		-	Continuing	Continuing	Continuing
ILS Function	Various	Various:Various	0.981	-		-		-		-	0.000	0.981	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 0529: *ABN Mine Hunt System*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	101.052	0.237		0.494		-		0.494			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T&E Functions	WR	NSWC, PC:Panama City FL	17.413	0.552	Oct 2011	0.886	Oct 2012	-		0.886	Continuing	Continuing	Continuing
T&E Functions	C/CPFF	Raytheon:Portsmouth, RI	4.134	-		-		-		-	Continuing	Continuing	Continuing
T&E Functions	Various	Various:Various	1.583	-		-		-		-	0.000	1.583	
		Subtotal	23.130	0.552		0.886		-		0.886			

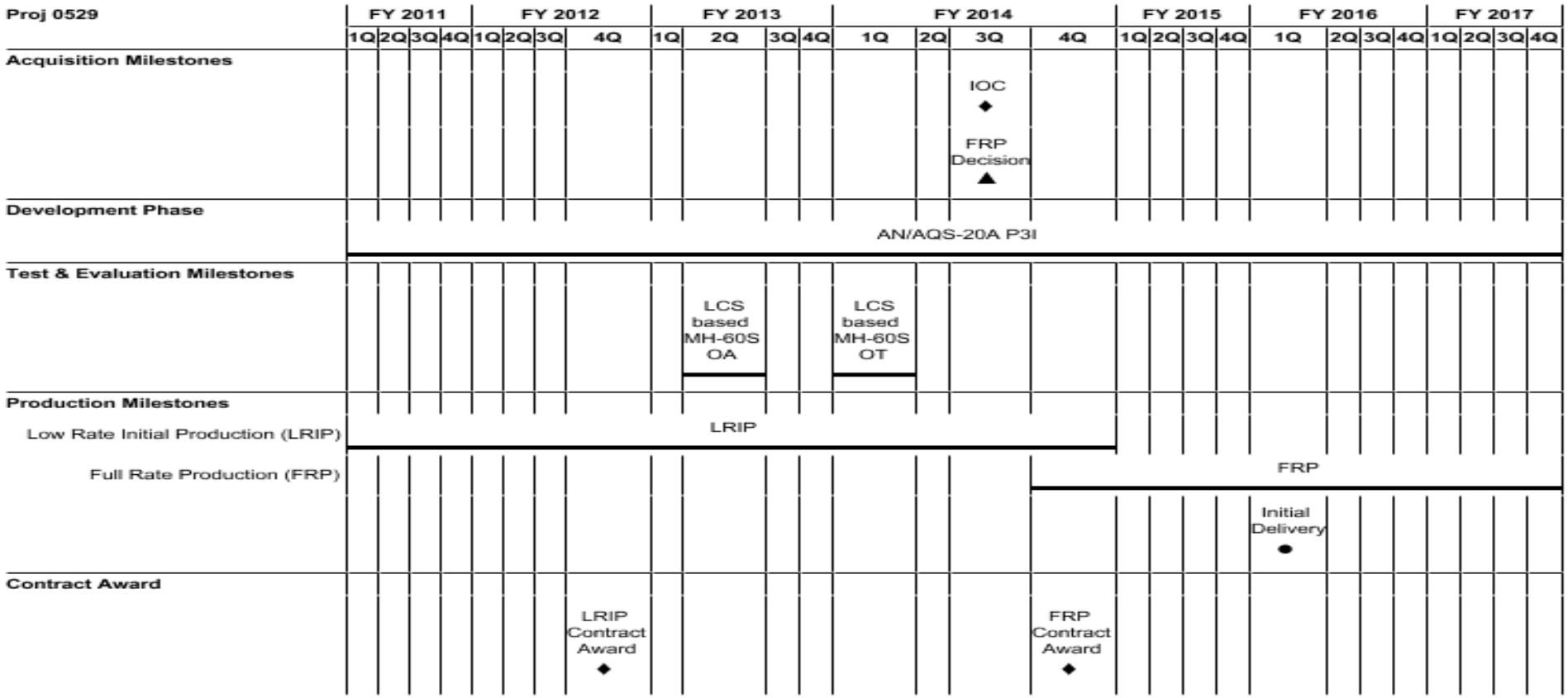
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	TBD	Various:Various	4.795	0.156	Oct 2011	0.133	Oct 2012	-		0.133	Continuing	Continuing	Continuing
Travel	TBD	Various:Various	0.579	0.008	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Acquisition Workforce Fund	Various	Various:Various	0.012	-		-		-		-	0.000	0.012	
		Subtotal	5.386	0.164		0.133		-		0.133			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	239.988	3.798		4.513		-		4.513			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 0529: *ABN Mine Hunt System*



2013PB - 0604373N - 0529

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 0529: *ABN Mine Hunt System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0529				
Acquisition Milestones: IOC	3	2014	3	2014
Acquisition Milestones: Full Rate Production (FRP) Decision	3	2014	3	2014
Development Phase: AN/AQS-20A P3I	1	2011	4	2017
Test & Evaluation Milestones: Littoral Combat Ship based AN/AQS-20A/MH-60S Phase IIB OA	2	2013	2	2013
Test & Evaluation Milestones: Littoral Combat Ship Based AN/AQS-20A/MH-60S OT	1	2014	1	2014
Production Milestones: Low Rate Initial Production (LRIP): Low Rate Initial Production (LRIP)	1	2011	4	2014
Production Milestones: Full Rate Production (FRP): AN/AQS-20A Full Rate Production	4	2014	4	2017
Production Milestones: Full Rate Production (FRP): Initial Delivery	1	2016	1	2016
Contract Award: FRP Contract Award	4	2014	4	2014
Contract Award: LRIP Contract Award	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2047: *ALMDS*	12.689	11.379	14.371	-	14.371	21.684	26.005	17.512	17.800	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Airborne Laser Mine Detection System (ALMDS), designation AN/AES-1, is a light detection and ranging (LIDAR) Airborne Mine Countermeasures (AMCM) high area coverage system that detects, classifies, and localizes floating and near-surface , moored sea mines. The system is deployed from the MH-60S helicopter and will provide Organic Airborne Mine Countermeasures (OAMCM) defense to the battle force. The system represents a capability that does not exist in the current Mine Countermeasures (MCM) inventory.

ALMDS first spiral development phase, very shallow water capability, begins in FY2016.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Hardware and Software technology development and demonstration/Engineering Services:	2.106	4.455	10.327
Articles:	0	0	0
Description: TDA Engineering/oversight/support of engineering efforts to meet baseline performance and full performance. ***FY 2011 Accomplishments:*** FY11 SW Development, Fleet Integration and MEDAL Splinter Builds. ***FY 2012 Plans:*** FY12 Provide Engineering, software, financial and project support to LRIP Units. ***FY 2013 Plans:*** FY13 Provide new computer, VSW Algorithm and false alarm reduction algorithm P3I trade studies.			
Title: Integrated Logistics Support:	0.673	2.566	2.500
Articles:	0	0	0
FY 2011 Accomplishments: Upgrades to all training and logistics documentation. ***FY 2012 Plans:*** FY12 Provide Logistics, maintenance and depot support analysis to LRIP Units. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY13 Provide Logistics, maintenance and depot support analysis to LRIP Units.			
Title: Testing and Evaluation:	8.292	2.308	-
Articles:	0	0	
FY 2011 Accomplishments: Completion of DT-IIE and DT/TI.			
FY 2012 Plans: Conduct Operational Assessment on MH-60.			
Title: Project Management:	1.618	2.050	1.544
Articles:	0	0	0
FY 2011 Accomplishments: TDA Program Management, Financial Management and Contractor support.			
FY 2012 Plans: TDA Program Management, Financial Management and Contractor support.			
FY 2013 Plans: TDA Program Management, Financial Management and Contractor support.			
Accomplishments/Planned Programs Subtotals	12.689	11.379	14.371

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248: *Airborne MCM*	14.800	0.000	31.976	0.000	31.976	9.951	4.300	0.000	0.000	0.000	110.379
• OPN 1600: *LCS Mission Modules*	7.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	19.867
• OPN 1601: *LCS MCM Mission Modules*	0.000	0.000	7.819	0.000	7.819	7.951	16.173	16.448	16.728	105.764	170.883

D. Acquisition Strategy

The first LRIP lot of two units was awarded as a new sole-source contract to the SD&D contractor in FY05. This is a Fixed-Price Incentive (FPI) contract with cost and schedule incentives. The March 2006 Program Review decision memorandum approved the ALMDS Program for LRIP 2 procurement of two units for FY07 pending successful demonstration of Engineering Change Proposal (ECP) I performance during DT-IID; DT-IID Phase B was conducted on an SH-60F helicopter and DT-IID phase C will be conducted on an MH-60S helicopter.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*

E. Performance Metrics

Successfully complete DT-IIE 3 and Operational Test (OT) and receive full rate production decision approval.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	WR	NSWC PC:Panama City FL	0.942	-	Nov 2011	0.862	Nov 2012	-		0.862	0.000	1.804	
Hardware/Software Development	C/CPAF	Northrop Grumman:Melbourne, FL	29.061	-	Nov 2011	2.256	Nov 2012	-		2.256	0.000	31.317	
Hardware/Software Development	MIPR	Metron:VA	1.083	-		-		-		-	0.000	1.083	
Hardware/Software Development	C/CPAF	SAIC:VA	0.200	-		-		-		-	0.000	0.200	
Engineering Services1	WR	NSWC PC:Panama City FL	12.265	1.692	Nov 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	Continuing
Engineering Services2	C/CPAF	Northrop Grumman:Melbourne, Fl	16.298	1.000	Nov 2011	3.503	Nov 2012	-		3.503	0.000	20.801	
Engineering Services3	SS/CPIF	Various:Various	15.118	1.763	Nov 2011	2.200	Nov 2012	-		2.200	Continuing	Continuing	Continuing
Engineering Services4	MIPR	Various:Various	3.922	-	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Engineering Services5	C/CPAF	Metron/Arete:Various	1.024	-	Nov 2011	-		-		-	0.000	1.024	
		Subtotal	79.913	4.455		10.321		-		10.321			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS Functions1	WR	NSWC PC:Panama City FL	3.094	1.000	Nov 2011	1.000	Nov 2012	-		1.000	Continuing	Continuing	Continuing
ILS Functions2	WR	NrothGru:Melbourne FL	5.725	1.566	Nov 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	Continuing
ILS Functions3	C/CPAF	Various/NRL Stennins:Various	1.062	-	Nov 2011	-		-		-	0.000	1.062	
ILS Functions4	WR	NSWC PC:Panama City FL	0.300	-		-		-		-	0.000	0.300	
		Subtotal	10.181	2.566		2.500		-		2.500			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing and Evaluation1	C/CPAF	NorthGru:Melbourne FL	14.567	2.308	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Testing and Evaluation2	WR	NSWC PC:Panama City FL	18.030	-		-		-		-	Continuing	Continuing	Continuing
Testing and Evaluation	C/CPAF	Various:Various	1.894	-		-		-		-	0.000	1.894	
Testing and Evaluation	WR	NAWC AD PAX:Panama City FL	2.110	-		-		-		-	0.000	2.110	
		Subtotal	36.601	2.308		-		-		-			

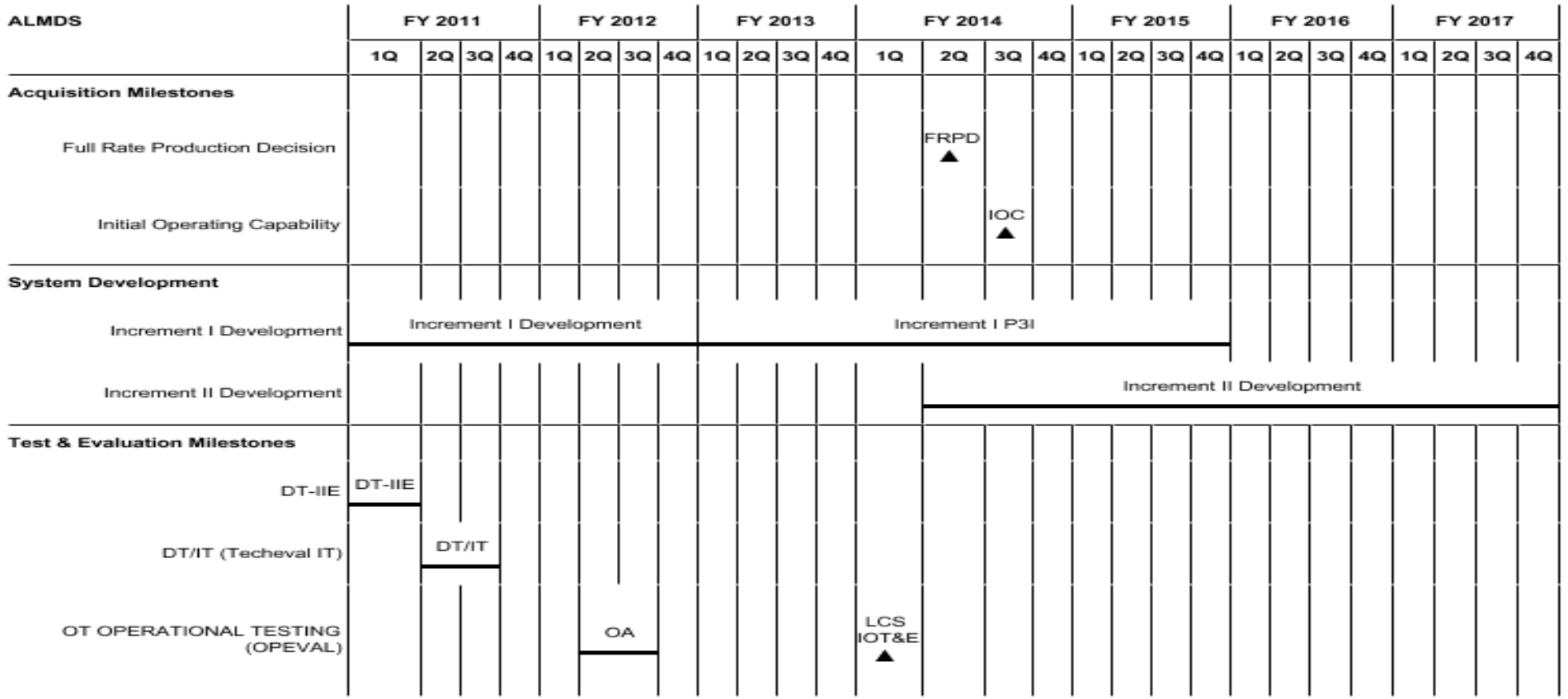
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support1	Various	Various:Various	2.093	-	Nov 2011	0.050	Nov 2012	-		0.050	0.000	2.143	
Management Support2	WR	NSWC PC:Panama City FL	5.267	-	Nov 2011	-		-		-	0.000	5.267	
Management Support3	WR	ARINC:Panama City FL	1.559	2.000	Nov 2011	1.500	Nov 2012	-		1.500	0.000	5.059	
DAWDF	Various	Various:Various	0.030	0.050	Nov 2012	-		-		-	0.000	0.080	
		Subtotal	8.949	2.050		1.550		-		1.550	0.000	12.549	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	135.644	11.379		14.371		-		14.371			

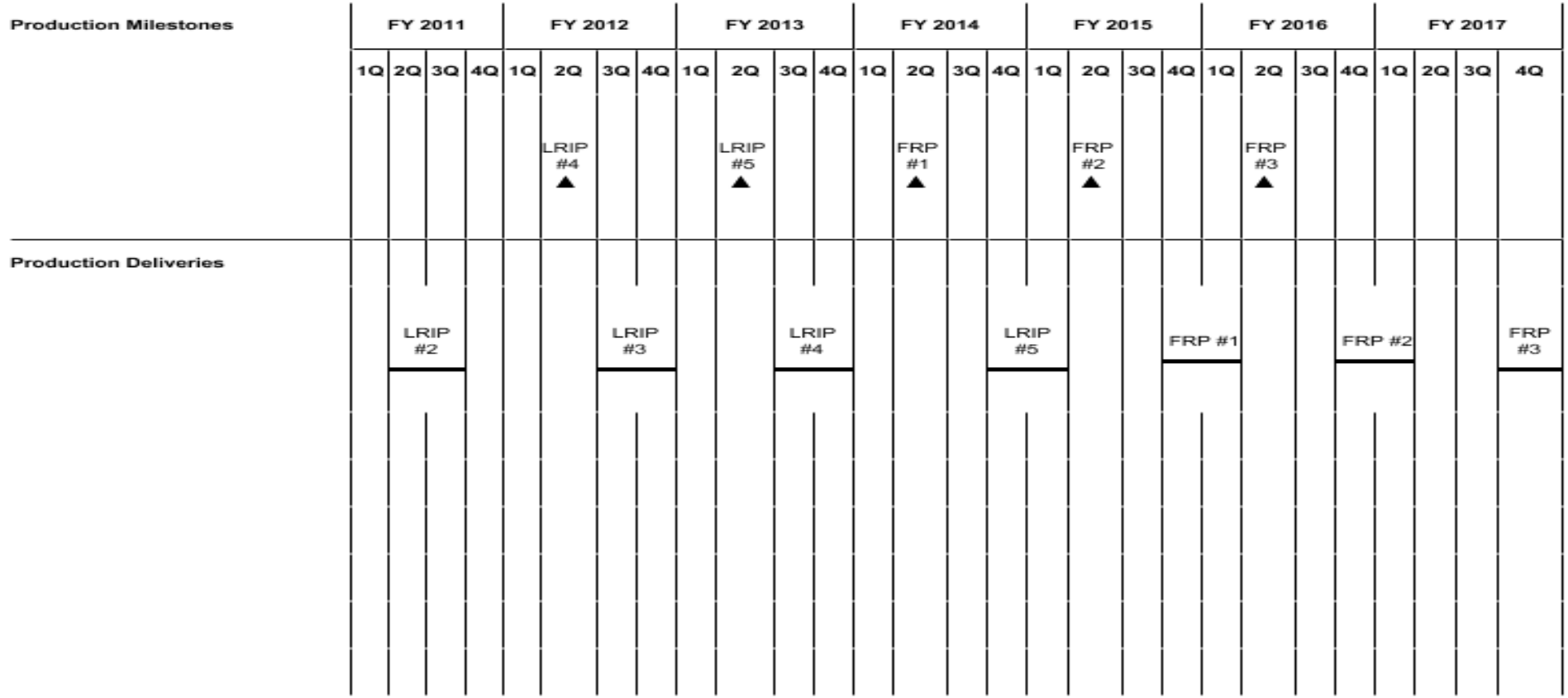
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*



2013PB - 0604373N - 2047

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*



2013PB - 0604373N - 2047

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 2047: *ALMDS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ALMDS				
Acquisition Milestones: Full Rate Production Decision: Full Rate Production Decision	2	2014	2	2014
Acquisition Milestones: Initial Operating Capability: Initial Operating Capability	3	2014	3	2014
System Development: Increment I Development: Increment I Development	1	2011	4	2012
System Development: Increment I Development: Increment I P3I	1	2013	4	2015
System Development: Increment II Development: Increment II Development	2	2014	4	2017
Test & Evaluation Milestones: DT-IIE: DT-IIE	1	2011	1	2011
Test & Evaluation Milestones: DT/IT (Techeval IT): DT/IT	2	2011	3	2011
Test & Evaluation Milestones: OT OPERATIONAL TESTING (OPEVAL): OPERATIONAL ASSESSMENT (OA)	2	2012	3	2012
Test & Evaluation Milestones: OT OPERATIONAL TESTING (OPEVAL): LCS IOT&E	1	2014	1	2014
Production Milestones				
LRIP 4 Units start	2	2012	2	2012
LRIP 5 Units start	2	2013	2	2013
Full Rate Production (FRP) Start (FRP 1)	2	2014	2	2014
Full Rate Production (FRP) Start (FRP 2)	2	2015	2	2015
Full Rate Production (FRP) Start (FRP 3)	2	2016	2	2016
Production Deliveries: LRIP 2 Units Deliveries	2	2011	3	2011
Production Deliveries: LRIP 3 Units Deliveries	3	2012	4	2012
Production Deliveries: LRIP 4 Units Deliveries	3	2013	4	2013
Production Deliveries: LRIP 5 Units Deliveries	4	2014	1	2015
Production Deliveries: Full Rate Production Delivery Start (FRP 1)	4	2015	1	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2047: *ALMDS*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Deliveries: Full Rate Production Delivery Start (FRP 2)	4	2016	1	2017
Production Deliveries: Full Rate Production Delivery Start (FRP 3)	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2427: *OASIS*	5.593	8.160	13.028	-	13.028	4.227	2.478	-	-	0.000	33.486
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Organic Airborne and Surface Influence Sweep (OASIS) system is a towed Minesweeping System to be deployed from specially configured MH-60S helicopters. The system provides a rapid response sweeping capability against bottom and moored, buried, acoustic and magnetic, or combination acoustic/magnetic influence mines in support of mine clearance operations where mine hunting is ineffective. The system consists of a towed body, sweep cable system, power inverter, power distribution unit and storage/shipping containers. System interfaces with the MH-60S helicopter via the carriage, stream, tow and recovery system and the common console. The program is currently in the SD&D phase where three Engineering Development Models (EDMs) are being developed for test and evaluation. Areas of interest for program enhancement include but are not limited to the following: A) Real-time Mission Planning B) Threat Emulation Jamming C) Improved Power Inverter D) Light weight winch drive-train E) Improved magnetic performance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Product Development:	0.181	0.600	2.200
Articles:	0	0	0
FY 2011 Accomplishments: Prepare EDMs for Airworthiness, WSIT CT and OA Testing.			
FY 2012 Plans: Investigate and begin FY12 changes to EDM based upon testing results.			
FY 2013 Plans: FY13 Perform Systems Reliability Improvements			
Title: Engineering and ILS:	3.917	3.524	6.222
Articles:	0	0	0
FY 2011 Accomplishments: Office of Naval Research program support Engineering and ILS support for Air Worthiness and Contractor Testing.			
FY 2012 Plans: Conduct PCA, support DT. Prepare for MSC LRIP Decision			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY13 Systems Reliability Improvements, update ILS procedures based upon design changes, Support Operational Testing and prepare for FRP decision.			
Title: Testing:	1.150	3.596	4.200
Articles:	0	0	0
FY 2011 Accomplishments: Conduct software Testing, Airworthiness and contractor testing			
FY 2012 Plans: Conduct CT, and start DT events.			
FY 2013 Plans: Complete DT, and Operational Assessment (OA). Begin DTII Testing on Design Improvements			
Title: Program Management	0.345	0.440	0.406
Articles:	0	0	0
FY 2011 Accomplishments: Monitor contractor progress with regard to schedule, cost, and technical status management Monitor contractor CDRL and other deliverables			
FY 2012 Plans: Monitor contractor progress with regard to schedule, cost, and technical status management and prepare for FRP decision.			
FY 2013 Plans: Monitor contractor progress with regard to schedule, cost, and technical status management and prepare for FRP decision			
Accomplishments/Planned Programs Subtotals	5.593	8.160	13.028

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248: *Airborne MCM - OASIS*	0.000	0.000	10.900	0.000	10.900	11.300	19.400	16.900	8.500	0.000	67.000
• OPN 1601: *LCS MCM Mission Modules*	0.000	0.000	3.533	0.000	3.533	3.544	6.466	6.956	7.093	56.375	83.967

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*

D. Acquisition Strategy

After Milestone B review in FY02, an SD&D contract was awarded. In FY07, the program successfully completed MH-53 CT and Tower Testing. MH-60 CT is planned for FY11. DT in FY12 and OPEVAL in FY13.

E. Performance Metrics

Successfully complete contractor test on the Body Mounted Electrode (BME) design and receive Milestone C approval.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	C/CPFF	ITT Corp.:Panama City Fl	2.279	0.200	Nov 2011	1.750	Nov 2012	-		1.750	0.000	4.229	
Hardware/Software Development for BME	C/CPIF	EDO Corp.:NY	12.689	-		-		-		-	0.000	12.689	
Hardware/Software Development	SS/CPFF	Aeptec Microsystems Inc.:AZ	5.898	-		-		-		-	0.000	5.898	
Hardware/Software Development	WR	NSWC PC:Panama City Fl	1.176	0.400	Nov 2011	0.450	Nov 2012	-		0.450	1.473	3.499	
		Subtotal	22.042	0.600		2.200		-		2.200	1.473	26.315	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	NUWC Keyport:Keyport, WA	0.659	-		-		-		-	0.000	0.659	
Engineering Services	C/CPIF	EDO/ITT Corp.:Panama City Fl	17.275	0.677	Nov 2011	3.200	Nov 2012	-		3.200	0.000	21.152	
Engineering Services	WR	NSWC PC:Panama City Fl	18.910	1.458	Nov 2011	1.389	Nov 2012	-		1.389	0.000	21.757	
Engineering Services	WR	NSWC Carderock MD:Bathesda, MD	0.300	-	Nov 2011	-		-		-	0.000	0.300	
Engineer Services/ILS	WR	Various:Various	0.548	-		-		-		-	0.000	0.548	
Engineering Services	WR	ONR:Wash DC	9.960	0.489	Nov 2011	0.783	Nov 2012	-		0.783	0.499	11.731	
ILS Functions	C/CPIF	EDO Corp.:NY	5.772	0.500	Nov 2011	0.300	Nov 2012	-		0.300	0.195	6.767	
ILS Functions	WR	NSWC, PC:Panama City Fl	3.613	0.400	Nov 2011	0.550	Nov 2012	-		0.550	0.412	4.975	
		Subtotal	57.037	3.524		6.222		-		6.222	1.106	67.889	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T&E Functions	C/CPIF	ITT Corp:Panama City Fl	8.542	1.300	Nov 2011	0.500	Nov 2012	-		0.500	0.000	10.342	
T&E Functions	WR	NSWC PC:Panama City FL	16.515	2.296	Nov 2011	3.700	Nov 2012	-		3.700	0.000	22.511	
T&E Functions	C/CPAF	Various:VAR	0.554	-		-		-		-	0.000	0.554	
		Subtotal	25.611	3.596		4.200		-		4.200	0.000	33.407	

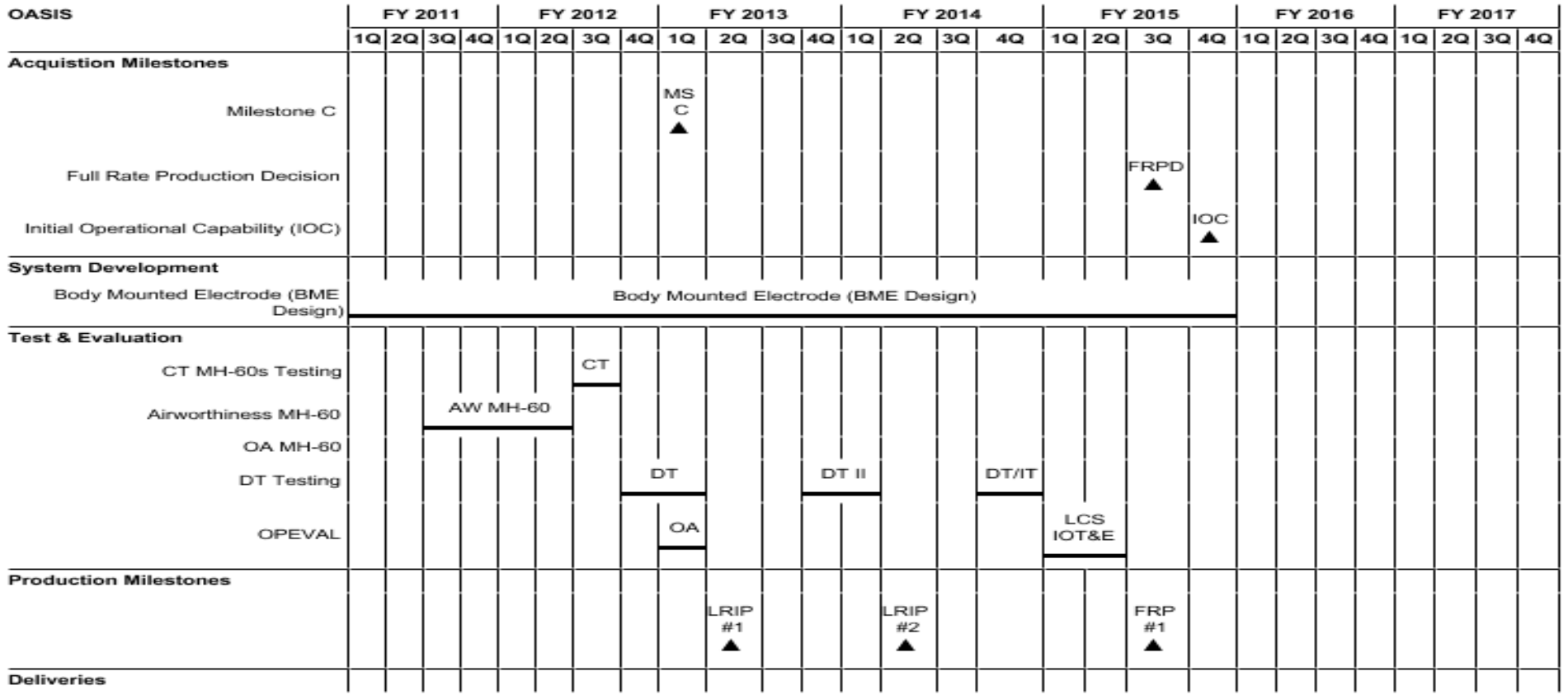
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	C/CPAF	Various:VAR	6.520	0.405	Nov 2011	0.371	Nov 2012	-		0.371	0.000	7.296	
Travel	WR	NAVSEA:Washington, DC	0.375	0.035	Nov 2011	0.035	Nov 2012	-		0.035	0.000	0.445	
Acquisition Workforce Fund	Various	Various:Various	0.034	-		-		-		-	0.000	0.034	
		Subtotal	6.929	0.440		0.406		-		0.406	0.000	7.775	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	111.619	8.160		13.028		-		13.028	2.579	135.386	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*



2013PB - 0604373N - 2427

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2427: *OASIS*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
OASIS				
Acquistion Milestones: Milestone C: Milestone C	1	2013	1	2013
Acquistion Milestones: Full Rate Production Decision: Full Rate Production Decision	3	2015	3	2015
Acquistion Milestones: Initial Operational Capability (IOC): Initial Operational Capability (IOC)	4	2015	4	2015
System Development: Body Mounted Electrode (BME Design): Body Mounted Electrode (BME Design)	1	2011	4	2015
Test & Evaluation: CT MH-60s Testing: CT MH-60s Testing	3	2012	3	2012
Test & Evaluation: Airworthiness MH-60: AW MH-60	3	2011	2	2012
Test & Evaluation: DT Testing: DT	4	2012	1	2013
Test & Evaluation: DT Testing: DT PHASE II	4	2013	1	2014
Test & Evaluation: DT Testing: DT/IT	4	2014	4	2014
Test & Evaluation: OPEVAL: OPEVAL	1	2013	1	2013
Test & Evaluation: OPEVAL: LCS IOT&E	1	2015	2	2015
Production Milestones: LRIP Contract Award	2	2013	2	2013
Production Milestones: LRIP FY14 Contract Award	2	2014	2	2014
Production Milestones: FRP Contract Award	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2473: *Airborne Mine Neutralization System*	15.044	15.153	36.864	-	36.864	18.619	11.695	14.194	2.349	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

AMNS will provide the MH-60S helicopter with the capability to neutralize bottom, near surface and moored mines using an expendable mine neutralization device. The AMNS was tested on the MH-53E helicopter to prove out the neutralization effectiveness. The system will be deployed from the MH-60S helicopter as part of the Littoral Combat Ship (LCS) Mine Countermeasures (MCM) Mission Module. This capability will be of critical importance in littoral zones, confined straits, choke points, near surface and the Amphibious Objective Area (AOA). Development of an Untethered Launch and Handling System (LHS) for AMNS will occur in FY12-FY14.

The system will be deployed from the MH-60S helicopter and will provide organic airborne mine defense as part of Littoral Combat Ship (LCS) Mine Warfare Mission Module. This capability will be of critical importance in littoral zones, confined straits, choke points, and the Amphibious Objective Area (AOA).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AMNS: Support	1.717	2.740	2.442
Articles:	0	0	0
FY 2011 Accomplishments: Develop logistics products, including training materials and interactive technical manual. Provide engineering support, including review for product development and integration.			
FY 2012 Plans: Develop logistics products, including training materials and interactive technical manual. Provide engineering support, including review for product development and integration. Develop Logistics products for untethered Launch and Handling System (LHS). Provide engineering support for untethered LHS.			
FY 2013 Plans: Provide engineering support, including review for product development and integration. Develop Logistics products for untethered Launch and Handling System (LHS) provide engineering support.			
Title: AMNS: Test and Evaluation	4.038	3.095	2.295
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete MH-60s TECHEVAL (DT). ***FY 2012 Plans:*** Conduct MH-60s DT/IT. Support testing on untethered LHS. ***FY 2013 Plans:*** Conduct MH-60s Operational Assessment. Support testing on untethered LHS			
Title: AMNS: Management Services	0.280	0.303	0.229
Articles:	0	0	0
FY 2011 Accomplishments: Provide Program Management support and travel for AMNS. ***FY 2012 Plans:*** Provide program management support and travel for AMNS and untethered LHS. ***FY 2013 Plans:*** Provide program management support and travel for AMNS and untethered LHS.			
Title: AMNS: Product Development	-	2.933	4.185
Articles:		0	0
FY 2012 Plans: Develop hardware and software improvements for the untethered Launch and Handling System (LHS). ***FY 2013 Plans:*** Continue to develop hardware and software improvements for the untethered Launch and Handling System (LHS).			
Title: AMNS NS (AMNS NEAR SURFACE): Hardware/Software Development	7.097	3.078	10.525
Articles:	0	0	0
Description: Hardware and Software technology development and demonstration/Engineering Services. ***FY 2011 Accomplishments:*** AMNS NS Conduct SRR/PDR and hardware/software design for Near Surface. ***FY 2012 Plans:*** AMNS Near Surface Continue engineering and software development associated with Near Surface prototypes. Fabrication of Prototypes #1 and #2. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
AMNS NS Continue engineering and software development associated with Near Surface prototypes. Continue fabrication of Prototypes #1 and #2.			
Title: AMNS NS: ILS ***Articles:*** ***Description:*** AMNS NS Integrated Logistics Support ***FY 2012 Plans:*** Develop ILS training and technical maintenance updates for Near Surface. ***FY 2013 Plans:*** ILS Documentation updates for Near Surface.	- 0	0.676 0	0.676 0
Title: AMNS NS: Test and Evaluation ***Articles:*** ***Description:*** AMNS NS Test and Evaluation Near Surface Capability. ***FY 2011 Accomplishments:*** AMNS NS Conduct Tank Test	1.830 0	-	-
Title: AMNS NS: Program Management ***Articles:*** ***Description:*** AMNS NS Program Management ***FY 2011 Accomplishments:*** TDA (Technical Direction Agent) Program Management, Financial Management, Contract Management. ***FY 2012 Plans:*** TDA Program Management, Financial Management, Contract Management. ***FY 2013 Plans:*** TDA Program Management, Financial Management, Contract Management	0.082 0	2.328 0	3.012 0
Title: AMNS Common Tow Cable ***Articles:*** ***Description:*** OAMCM Common Tow Cable Development	- 0	-	2.400 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2013 Plans: Develop an improved common tow cable for the OAMCM systems			
Title: AMNS MH-53E	-	-	11.100
Articles:			0
FY 2013 Plans: Develop and complete AMNS MH-53E Rapid Development Capability to include engineering, testing, and logistics.			
Accomplishments/Planned Programs Subtotals	15.044	15.153	36.864

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248 : *Airborne MCM - AMNS*	11.100	3.100	2.800	0.000	2.800	22.100	0.000	0.000	0.000	0.000	65.172
• WPN 4225/1: *Airborne MCM - AMNS*	11.136	12.203	10.607	0.000	10.607	24.973	33.641	16.225	17.986	0.000	139.042
• OPN 1600: *LCS Mission Modules*	2.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	7.595
• OPN 1601: *LCS MCM Mission Modules*	0.000	0.000	2.800	0.000	2.800	3.000	6.000	3.051	3.103	45.711	63.665

D. Acquisition Strategy

AMNS: The Navy awarded six (6) LRIP's to Raytheon in September 2010. Following successful completion of Developmental Testing (Inert) on MH-60S, the Navy will award four (4) additional LRIP units to Raytheon.

Following a successful OT on an MH-60S, FRP is planned for FY13. The Navy has awarded a sole source contract to BAE for neutralizer procurements.

E. Performance Metrics

Successfully complete Operational Test (OT) and receive Full Rate Production Decision approval.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	WR	NUWC:Newport RI	-	-		4.615	Nov 2012	-		4.615	0.000	4.615	
Hardware/Software Development1	SS/CPIF	Lockheed Martin:Syracuse, NY	3.331	-		11.100	Nov 2012	-		11.100	0.000	14.431	
Hardware/Software Development2	C/CPAF	Various:Various	3.359	-		-		-		-	0.000	3.359	
Hardware/Software Development3	WR	NSWC PC:Panama City FL	2.275	-	Nov 2011	-		-		-	0.000	2.275	
Hardware/Software Development4	C/CPAF	Raytheon:Portsmouth RI	16.354	-	Nov 2011	-		-		-	0.000	16.354	
Untethered Hardware Development	C/CPAF	TBD:TBD	-	2.463	Apr 2012	3.437	Nov 2012	-		3.437	2.646	8.546	
Untethered Hardware Development	WR	NSWC PC:Panama City FL	-	0.470	Apr 2012	0.748	Nov 2012	-		0.748	6.529	7.747	
Hardware/Software Development6	C/CPIF	Raytheon:Portsmouth, RI	-	-		5.910	Nov 2012	-		5.910	0.000	5.910	
Hardware Develop Tow Cable	C/CPIF	TBD:TBD	-	-		2.400	Dec 2012	-		2.400	0.000	2.400	
		Subtotal	25.319	2.933		28.210		-		28.210	9.175	65.637	

Remarks

BOTH AMNS and AMNS NS

Hardware/Software Development6 with Award Date Nov 2012 is an option on previously awarded contract to Raytheon.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	NSWC:Panama City FL	23.207	0.750	Nov 2011	-		-		-	0.643	24.600	
Engineering Services	C/CPIF	Raytheon:Portsmouth RI	10.783	1.795	Nov 2011	-		-		-	0.000	12.578	
Untethered Engineering Services	C/CPIF	TBD:TBD	-	0.642	Apr 2012	0.374	Nov 2012	-		0.374	0.000	1.016	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Untethered Engineering Services	WR	NSWC PC:Panama City FL	-	0.642	Apr 2012	1.150	Nov 2012	-		1.150	0.699	2.491	
ILS Functions1	WR	NSWC PC:Panama City FL	3.220	0.250	Nov 2011	-		-		-	0.000	3.470	
ILS Functions2	SS/CPFF	Lockheed:Syracuse NY	0.227	-		-		-		-	0.000	0.227	
ILS Functions3	C/CPIF	Raytheon,:Portsmouth RI	2.183	-		-		-		-	0.112	2.295	
Untethered ILS Functions	C/CPIF	TBD:TBD	-	0.182	Apr 2012	-		-		-	0.229	0.411	
Untethered ILS Functions	WR	NSWC PC:Panama City FL	-	0.274	Apr 2012	0.918	Nov 2012	-		0.918	1.052	2.244	
Engineering Services	WR	NUWC:Newport RI	-	1.283	Nov 2011	-		-		-	1.500	2.783	
ILS Functions4	SS/CPIF	Northrop Grumman:Melbourne FL	-	-		-		-		-	0.500	0.500	
ILS Functions5	WR	NSWC PC:Panama City FL	-	0.676	Nov 2011	0.676	Nov 2012	-		0.676	1.000	2.352	
ILS Functions6	C/CPAF	Various:Various	-	-		-		-		-	0.100	0.100	
		Subtotal	39.620	6.494		3.118		-		3.118	5.835	55.067	

Remarks

BOTH AMNS and AMNS NS

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	Various	Various:Various	0.300	-		-		-		-	0.000	0.300	
Development Test & Evaluation	WR	NSWC, PC:Panama City FL	29.633	-		-		-		-	0.000	29.633	
Development Test & Evaluation	SS/CPFF	Lockheed Martin:Syracuse, NY	1.254	-		-		-		-	0.000	1.254	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	C/CPIF	Raytheon:Portsmouth RI	8.419	-		-		-		-	0.000	8.419	
Operational Test & Evaluation	WR	COTF:Norfolk VA	1.888	2.000	Nov 2011	-		-		-	0.000	3.888	
Operational Test & Evaluation	SS/CPFF	Lockheed:Syracuse NY	0.767	-		-		-		-	0.000	0.767	
Test Assets	C/CPIF	Raytheon:Portsmouth RI	3.065	-		-		-		-	0.000	3.065	
Untethered Test and Evaluation	C/CPIF	TBD:TBD	-	0.365	Apr 2012	-	Dec 2012	-		-	0.559	0.924	
Untethered Test and Evaluation	WR	NSWC PC:Panama City FL	-	0.730	Apr 2012	2.295	Nov 2012	-		2.295	1.124	4.149	
		Subtotal	45.326	3.095		2.295		-		2.295	1.683	52.399	

Remarks

BOTH AMNS and AMNS NS

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	Various:VAR	6.289	0.100	Nov 2011	-		-		-	0.158	6.547	
Travel	Various	NAVSEA:PD	0.464	0.020	Nov 2011	-		-		-	0.040	0.524	
Untethered Program Management	C/CPIF	TBD:VAR	-	0.183	Apr 2012	0.229	Nov 2012	-		0.229	0.199	0.611	
Management Support	C/CPIF	Raytheon:Portsmouth RI	-	1.280	Nov 2011	1.280	Nov 2012	-		1.280	4.385	6.945	
Management Support	Various	Various:Various	-	1.048	Nov 2011	1.732	Nov 2012	-		1.732	7.209	9.989	
DAWDF	Various	Various:Various	5.153	-	Nov 2011	-	Nov 2012	-		-	0.000	5.153	
		Subtotal	11.906	2.631		3.241		-		3.241	11.991	29.769	

Remarks

BOTH AMNS and RAMICS

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

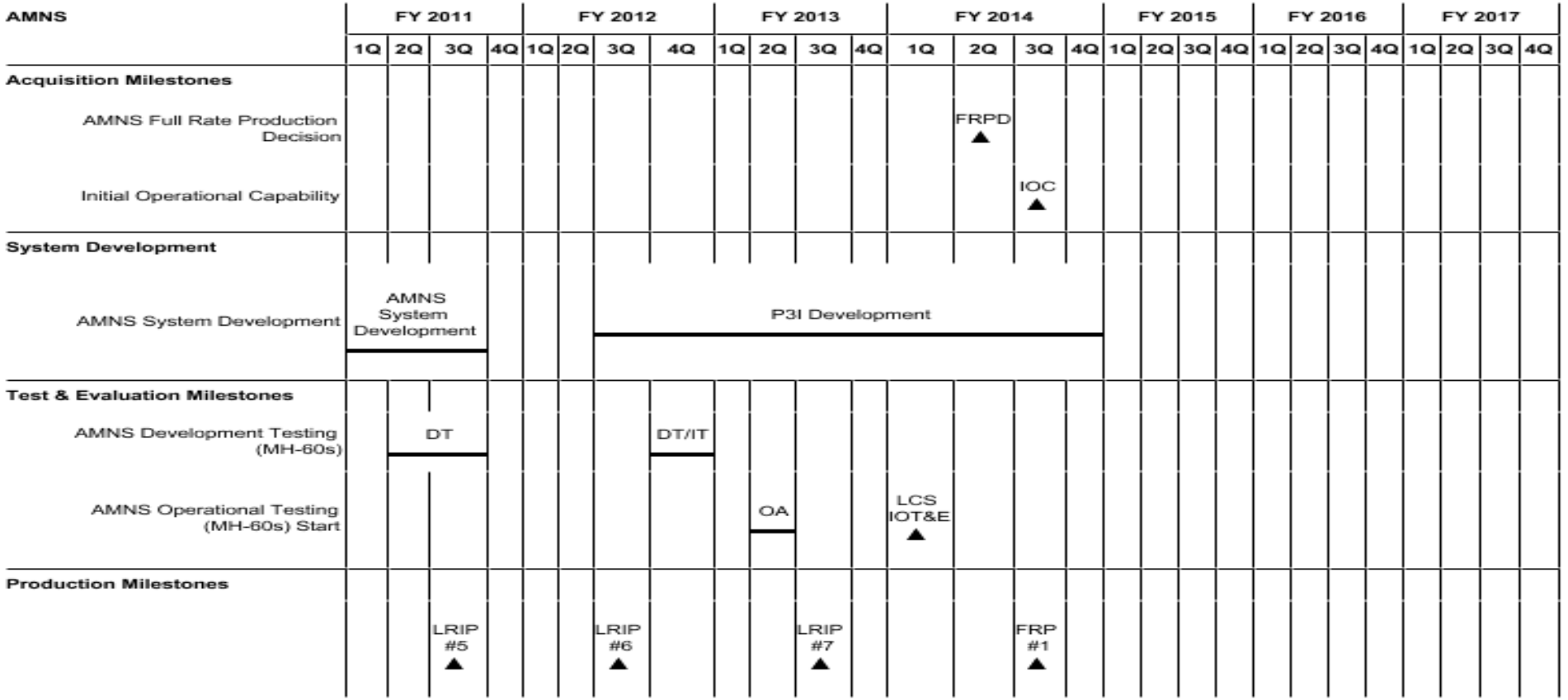
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
			Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	122.171	15.153		36.864		-		36.864	28.684	202.872	

Remarks

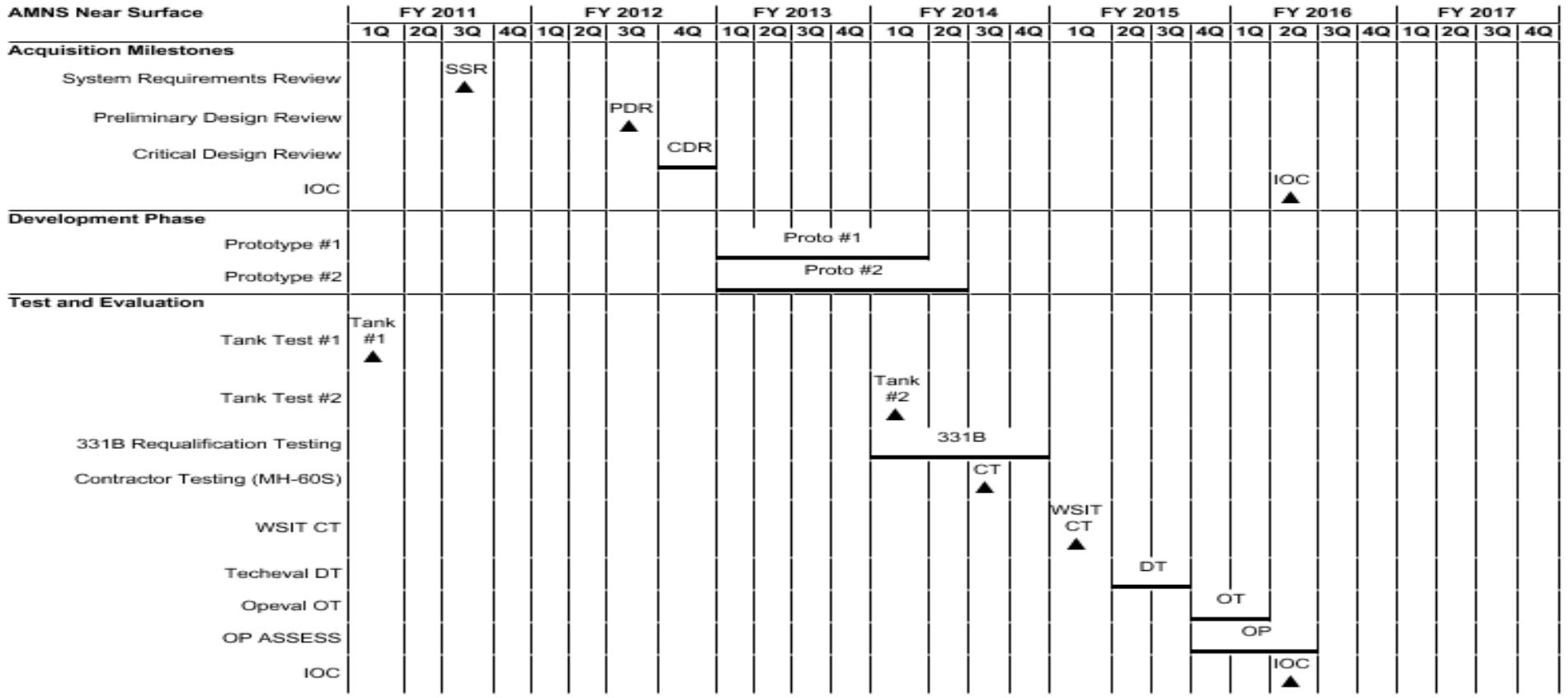
BOTH AMNS and RAMICS

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*



2013PB - 0604373N - 2473

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 2473: *Airborne Mine Neutralization System*



2013PB - 0604373N - 2473

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 2473: *Airborne Mine Neutralization System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
AMNS				
Acquisition Milestones: AMNS Full Rate Production Decision: AMNS FRPD	2	2014	2	2014
Acquisition Milestones: Initial Operational Capability: Initial Operational Capability	3	2014	3	2014
System Development: AMNS System Development: AMNS System Development	1	2011	3	2011
System Development: AMNS System Development: AMNS P3I Development	3	2012	4	2014
Test & Evaluation Milestones: AMNS Development Testing (MH-60s): AMNS Development Testing (MH-60s)	2	2011	3	2011
Test & Evaluation Milestones: AMNS Development Testing (MH-60s): DT/IT	4	2012	4	2012
Test & Evaluation Milestones: AMNS Operational Testing (MH-60s) Start: Operational Assessment	2	2013	2	2013
Test & Evaluation Milestones: AMNS Operational Testing (MH-60s) Start: IOT&E	1	2014	1	2014
Production Milestones: AMNS LRIP (FY11)	3	2011	3	2011
Production Milestones: AMNS LRIP (FY12)	3	2012	3	2012
Production Milestones: AMNS LRIP (FY13)	3	2013	3	2013
Production Milestones: AMNS FRP (FY14)	3	2014	3	2014
AMNS Near Surface				
Acquisition Milestones: System Requirements Review: System Requirements Review	3	2011	3	2011
Acquisition Milestones: Preliminary Design Review: Preliminary Design Review	3	2012	3	2012
Acquisition Milestones: Critical Design Review: Critical Design Review	4	2012	4	2012
Acquisition Milestones: IOC: IOC	2	2016	2	2016
Development Phase: Prototype #1: Prototype #1	1	2013	1	2014
Development Phase: Prototype #2: Prototype #2	1	2013	2	2014
Test and Evaluation: Tank Test #1: Tank Test #1	1	2011	1	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 2473: *Airborne Mine Neutralization System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test and Evaluation: Tank Test #2: Tank Test #2	1	2014	1	2014
Test and Evaluation: 331B Requalification Testing: 331B Requalification Testing	1	2014	4	2014
Test and Evaluation: Contractor Testing (MH-60S): Contractor Testing (MH-60S)	3	2014	3	2014
Test and Evaluation: WSIT CT: WSIT CT	1	2015	1	2015
Test and Evaluation: Techeval DT: Techeval DT	2	2015	3	2015
Test and Evaluation: Opeval OT: Opeval OT	4	2015	1	2016
Test and Evaluation: OP ASSESS: OP Assess	4	2015	2	2016
Test and Evaluation: IOC: IOC	2	2016	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
4026: *Strat Into Medal, Tactics & Trng Organic Force*	1.734	1.757	3.573	-	3.573	5.250	7.914	7.381	9.392	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The C4I, Tactics, Mission Planning (CTMP), and Post-Mission Analysis (PMA) program began in FY97 as an initiative to provide near-real-time data linking of mine sensor data between the MH-53E aircraft and ship- and/or shore-based command centers. Additionally, the program began to develop MEDAL modules for each "Next Generation" system; and plans to develop "Next Generation" tactics; provide threat data and system requirements and capabilities to the MEDAL software development effort; and develop a common post-mission analysis tool for "Next Generation" systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Hardware/Software Development	0.844	0.825	2.074
Articles:	0	0	0
FY 2011 Accomplishments: Code system-specific OPMA Modules			
FY 2012 Plans: Code system-specific OPMA Modules			
FY 2013 Plans: Code system-specific OPMA Modules NSAM (Net-centric Sensor Analysis for Mine Warfare) Open Architecture development			
Title: Engineering Services/ILS:	0.840	0.827	1.278
Articles:	0	0	0
FY 2011 Accomplishments: ILS planning for OPMA			
FY 2012 Plans: ILS planning for OPMA			
FY 2013 Plans: ILS planning for OPMA NSAM Engineering support and Test & Evaluation			
Title: Management Support	0.050	0.105	0.221

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
FY 2011 Accomplishments: MEDAL management support to CTMP			
FY 2012 Plans: MEDAL management support to CTMP			
FY 2013 Plans: MEDAL management support to CTMP NSAM Management Support			
Accomplishments/Planned Programs Subtotals	1.734	1.757	3.573

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248: *Airborne MCM - OPMA*	0.000	0.000	0.000	0.000	0.000	0.900	0.900	0.000	0.000	0.000	2.568

D. Acquisition Strategy

The Organic Post-Mission Analysis (OPMA) capability for the OAMCM systems will be developed by NSWC PC, Panama City, FL. The OPMA project will leverage existing system-specific developmental PMA software, maximize commonality, and host the software on a common shipboard computer. OPN funding will be used to procure ruggedized portable OPMA computers for ship of opportunity deployments, land basing, and training. NSWC-PC will contract for this work on a time and materials basis. The tactics development, tactics training, and tactics algorithms/database efforts are performed by NSWC-PC. These efforts will provide reach back support as the OAMCM systems begin to be fielded; will develop modifications to environmental databases necessary to support OAMCM mission planning; will update the MIW Tactics Continuum to address OAMCM; and will update the gear and mine database for threats addressed by the OAMCM systems.

E. Performance Metrics

Successfully integrate CTMP into the fleet.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	C/CPAF	TBD:VA	1.911	0.825	Nov 2011	1.187	Mar 2013	-		1.187	Continuing	Continuing	Continuing
Hardware/Software Development	WR	NSWC PC:Panama City FL	2.585	-		0.040	Mar 2013	-		0.040	Continuing	Continuing	Continuing
Hardward Softward Development	WR	NSWC PC:Panama City FL	3.652	-		0.847	Nov 2012	-		0.847	0.000	4.499	
		Subtotal	8.148	0.825		2.074		-		2.074			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	SSC-PAC:Various	-	-		0.040	Mar 2013	-		0.040	Continuing	Continuing	Continuing
Engineering Services	C/CPAF	Various:Various	1.181	0.282	Nov 2011	0.150	Mar 2013	-		0.150	Continuing	Continuing	Continuing
Engineering Services	WR	NSWC PC:Panama City FL	3.039	0.456	Nov 2011	0.150	Mar 2013	-		0.150	Continuing	Continuing	Continuing
Engineering Services	WR	NSWC PC:Panama City	-	0.089	Nov 2011	0.846	Nov 2012	-		0.846	Continuing	Continuing	Continuing
ILS	WR	NSWC PC:Panama City FL	0.910	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	5.130	0.827		1.186		-		1.186			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NSWC PC:Panama City FL	0.040	-		0.040	Mar 2013	-		0.040	Continuing	Continuing	Continuing
Test and Evaluation	C/CPAF	TBD:Not Specified	-	-		0.050	Mar 2013	-		0.050	0.000	0.050	
		Subtotal	0.040	-		0.090		-		0.090			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support	WR	NSWC PC:Panama City FL	0.882	0.105	Dec 2011	0.223	Mar 2013	-		0.223	Continuing	Continuing	Continuing
Acquisition Workforce Fund	Various	Various:Various	0.013	-		-	Nov 2012	-		-	0.000	0.013	
		Subtotal	0.895	0.105		0.223		-		0.223			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.213	1.757		3.573		-		3.573			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*

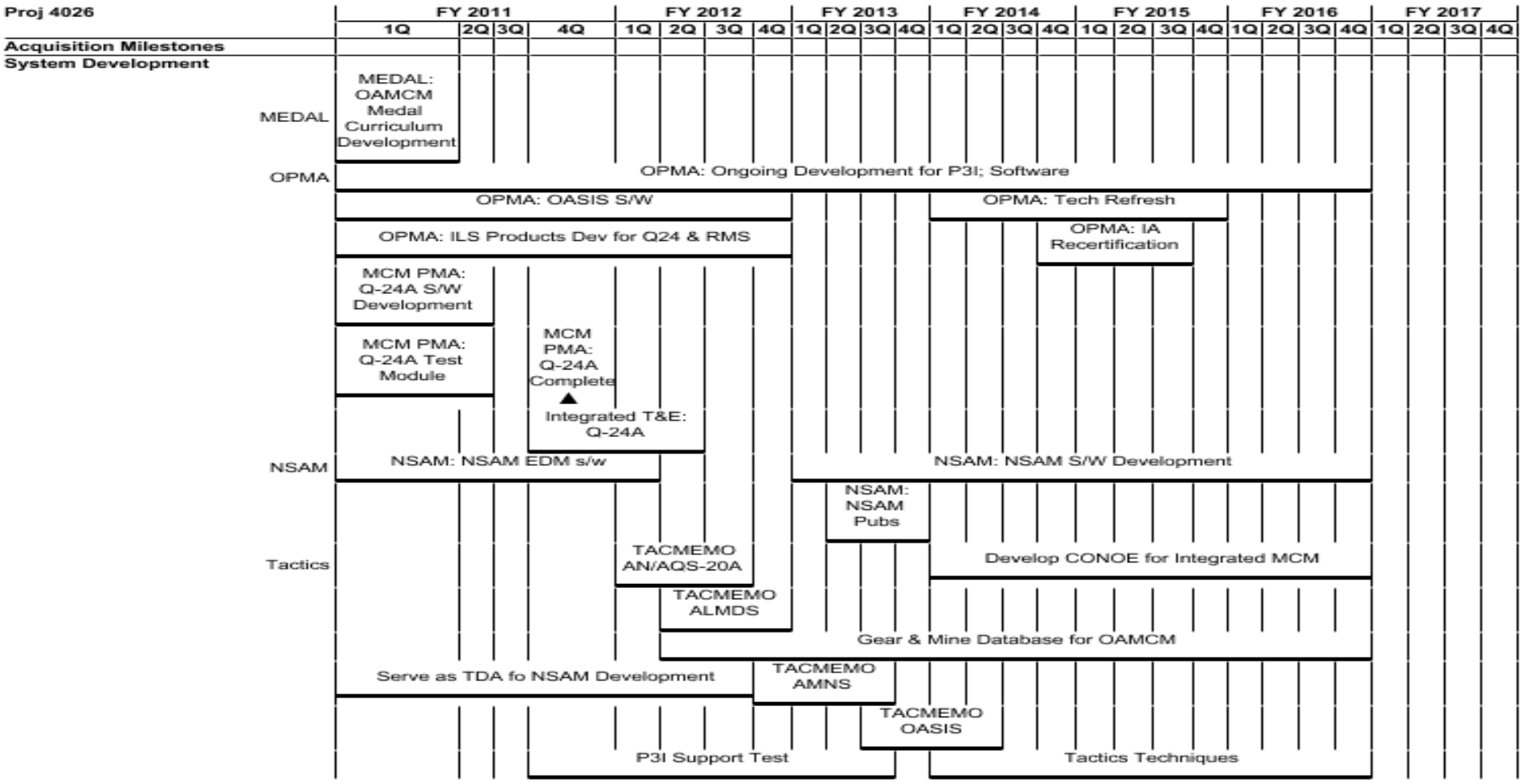


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*

2013OSD - 0604373N - 4026

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	**PROJECT** 4026: *Strat Into Medal, Tactics & Trng Organic Force*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4026				
System Development: MEDAL: MEDAL: OAMCM Medal Curriculum Development	1	2011	1	2011
System Development: OPMA: OPMA: Ongoing Development for P3I; Software	1	2011	4	2016
System Development: OPMA: OPMA: OASIS S/W	1	2011	4	2012
System Development: OPMA: OPMA: Tech Refresh	1	2014	4	2015
System Development: OPMA: OPMA: IA Recertification	4	2014	3	2015
System Development: OPMA: OPMA: ILS Products Dev for Q24 & RMS	1	2011	4	2012
System Development: OPMA: MCM PMA: Q-24A S/W Development	1	2011	2	2011
System Development: OPMA: MCM PMA: Q-24A Develop Module	1	2011	2	2011
System Development: OPMA: MCM PMA: Q-24A Complete	4	2011	4	2011
System Development: OPMA: Integrated T&E: Q-24A	4	2011	2	2012
System Development: NSAM: NSAM: NSAM EDM s/w	1	2011	1	2012
System Development: NSAM: NSAM: NSAM S/W Development	1	2013	4	2016
System Development: NSAM: NSAM: NSAM Pubs	2	2013	4	2013
System Development: Tactics: Develop CONOE for Integrated MCM	1	2014	4	2016
System Development: Tactics: TACMEMO AN/AQS-20A	1	2012	3	2012
System Development: Tactics: TACMEMO ALMDS	2	2012	4	2012
System Development: Tactics: Gear & Mine Database for OAMCM	2	2012	4	2016
System Development: Tactics: TACMEMO AMNS	4	2012	3	2013
System Development: Tactics: Serve as TDA fo NSAM Development	1	2011	3	2012
System Development: Tactics: TACMEMO OASIS	3	2013	2	2014
System Development: Tactics: Tactics Techniques	1	2014	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 4026: *Strat Into Medal, Tactics & Trng Organic Force*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
System Development: Tactics: P3I Support Development	4	2011	3	2013
System Development: Tactics: Reachback Support OAMCM	1	2012	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 9179: *Surf Navy Integ Undersea Tactical Tech*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9179: *Surf Navy Integ Undersea Tactical Tech*	0.873	0.895	0.897	-	0.897	0.909	0.926	0.935	0.950	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Surface Navy Integrated Undersea Tactical Technology (SNIUTT) will be used to develop an AN/SQQ-32, AN/AQS-14, AN/AQS-24, AN/AQS-20A and future OAMCM sensor training modules.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Hardware and Software Development	0.742	0.768	0.770
Articles:	0	0	0
FY 2011 Accomplishments: Development of an AN/AQQ-32, AN/AQS-24, AN/AQS-20A sonar training module. Also development of a Scenario Generator software system for REMUS for mine like contact recognition training and ALMDS training modules.			
FY 2012 Plans: Development of an AN/AQQ-32, AN/AQS-24, AN/AQS-20A sonar training module. Also development of a Scenario Generator software system for REMUS for mine like contact recognition training and ALMDS training modules.			
FY 2013 Plans: Development of an AN/AQQ-32, AN/AQS-24, AN/AQS-20A sonar training module. Also development of a Scenario Generator software system for REMUS for mine like contact recognition training and ALMDS training modules.			
Title: Engineering and ILS Services	0.131	0.127	0.127
Articles:	0	0	0
FY 2011 Accomplishments: SNIUTT In-Service Engineering Agent (ISEA) and development support is provided by Naval Surface Warfare Center, Panama City (NSWC PC).			
FY 2012 Plans: SNIUTT In-Service Engineering Agent (ISEA) and development support is provided by Naval Surface Warfare Center, Panama City (NSWC PC).			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 9179: *Surf Navy Integ Undersea Tactical Tech*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
SNIUTT In-Service Engineering Agent (ISEA) and development support is provided by Naval Surface Warfare Center, Panama City (NSWC PC).			
Accomplishments/Planned Programs Subtotals	0.873	0.895	0.897

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 4248: *Airborne MCM - SNIUTT*	0.120	0.300	0.300	0.000	0.300	0.306	0.312	0.312	0.312	0.000	2.322

D. Acquisition Strategy

Surface Navy Integrated Undersea Tactical Training (SNIUTT) has been used to develop an AN/SQQ-32, AN/AQS-14, AN/AQS-24 and AN/AQS-20A sensor training modules. Funds will continue to support training for these four sonar systems, as well as training for the REMUS sonar systems and other OAMCM systems in the same format as previous training. The SNIUTT sensor training modules will be developed by NSWC PC, Panama City, FL, in association with Advanced Acoustic Concepts (AAC), Ronkonkoma, NY. NSWC PC will contract with AAC for this work under a Cost Plus Fixed-Fee (CPFF) scenario. Funds are being provided for development and delivery of refresher scenario based contact recognition training, and the update and modification of contact recognition training (interactive web based training and proficiency focused stand-alone training) in support of the SNIUTT program.

E. Performance Metrics

Successfully integrate SNIUTT into the school house training facility.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604373N: *Airborne Mine Countermeasures (AMCM)*	PROJECT 9179: *Surf Navy Integ Undersea Tactical Tech*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Software Development	WR	NSWC PC:Panama City Fl	2.152	0.768	Nov 2011	0.770	Nov 2012	-		0.770	Continuing	Continuing	Continuing
		Subtotal	2.152	0.768		0.770		-		0.770			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ISEA	WR	NSWC, PC:Panama City FL	0.375	0.127	Nov 2011	0.127	Nov 2012	-		0.127	0.000	0.629	
		Subtotal	0.375	0.127		0.127		-		0.127	0.000	0.629	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAWDF	Various	Various:Various	0.003	-		-		-		-	0.000	0.003	
		Subtotal	0.003	-		-		-		-	0.000	0.003	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2.530	0.895		0.897		-		0.897			

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	-	-	10.568	-	10.568	12.203	9.218	3.288	3.207	Continuing	Continuing
3327: *MAGTF EW Aviation Development*	-	-	10.568	-	10.568	12.203	9.218	3.288	3.207	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element includes development of Electronic Warfare (EW) systems for the United States Marine Corps (USMC) tactical aircraft, USMC helicopters, unmanned air vehicles, data link vulnerability assessments, precision targeting, USN and USMC radio frequency jammers, and development and testing of EW devices on emerging platforms to combat emerging threats and emergency contingencies.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	10.568	-	10.568
Total Adjustments	-	-	10.568	-	10.568
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	10.674	-	10.674
• Rate/Misc Adjustments	-	-	-0.106	-	-0.106

Change Summary Explanation

* Prior to FY13, this Program Element (PE) and Project Unit (PU) were funded under PE 0604270N, PU 3327.
Electronic Warfare Battle Management Schedule shifted from first quarter FY2013 to first quarter FY2014 due to OCO funding reduction in FY2013.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3327: *MAGTF EW Aviation Development*	-	-	10.568	-	10.568	12.203	9.218	3.288	3.207	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project unit supports the United States Marine Corps development of Marine Air Ground Task Force (MAGTF) Electronic Warfare (EW) and the various elements of its distributed System of Systems (SoS) that support the Commandant of the Marine Corps' Strategy and Vision 2025 and Joint Vision 2025. The SoS will address MAGTF EW sufficiency gaps in the areas of Electronic Attack, EW Support, and Electronic Protection with a multitude of payloads designed for carriage on a variety of organic MAGTF air and ground assets. Payload development plans follow an adaptable, modular and open architecture philosophy to combat the increasing capability gap and enable future growth at a reduced operational and sustainment cost.

Prior to FY11, Intrepid Tiger II efforts were budgeted under Program Element (PE) 0604270N, Project Unit (PU) 0556.
In FY12, Intrepid Tiger II efforts were budgeted under PE 0604270N, PU 3327

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: MAGTF EW Software Reprogrammable Payload (SRP)	-	-	4.633	-	4.633
Articles:			0		0
FY 2013 Base Plans: Continue transition of SRP and associated components; Collaborative EW/EW Battle Management, EW Services Architecture (formerly Collaborative Online Reconnaissance Provider Operationally Responsive Attack Link), and Intrepid Tiger II(v)2 from its Joint Capabilities Technology Demonstration into a viable capability.					
Title: Intrepid Tiger II (v)1 (ALQ-231)	-	-	4.735	-	4.735
Articles:			0		0
FY 2013 Base Plans: Integrate Intrepid Tiger II (v)1 (ALQ-231) on United States Marine Corps rotary wing platforms to include AH-1 and UH-1 Type/Model/Series. Continue to mature hardware technology, update targeting techniques, and correct identified software discrepancies. Implement logistics plans to support and sustain rotary wing requirements.					
Title: EA-6B Multifunctional Information Distribution System Block Upgrade	-	-	1.200	-	1.200
Articles:			0		0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
FY 2013 Base Plans: Development and testing of the Link-16 modification. These data link enhancements will enable the EA-6B Improved Capability III continued participation within Force Net and synthesize electronic attack contributions within Network Centric Warfare to provide greater Electronic Warfare (EW) situational awareness to the warfighter.					
Accomplishments/Planned Programs Subtotals	-	-	10.568	-	10.568

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0587: *MAGTF EW for Aviation*	2.600	0.489	10.527	23.600	34.127	14.446	20.507	8.006	6.095	Continuing	Continuing

D. Acquisition Strategy

This project unit is part of United States Marince Corps led efforts to ensure Marine Corps requirements are included in the budget process for the Future Year Defense Program and beyond. These efforts include Software Reprogrammable Payload, Intrepid Tiger II(v)1 (ALQ-231), Intrepid Tiger II(v)2, Collaborative Electronic Warfare (EW)/EW Battle Management, EW Payload, and EW Service Architecture (formerly Collaborative Online Reconnaissance Provider Operationally Responsive Attack Link). These programs are the Marine Corps' initial steps to create systems to distribute EW capability across the battle space with the intent of replacing EA-6B capabilities for the Marine Air Ground Task Force (MAGTF) by 2019.

E. Performance Metrics

Successful completion of Intrepid Tiger II(v)1 (ALQ-231) Engineering Development Model (EDM) Lot 1 Developmental Testing/Operational Testing.
Delivery of final EDM test articles prior to Full Operational Capability.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NAWC AD:Patuxent River, MD	-	-		0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC:Various	-	-		0.188	Nov 2012	-		0.188	Continuing	Continuing	Continuing
Systems Engineering	WR	Naval Research Lab:Washington, DC	-	-		5.243	Dec 2012	-		5.243	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWC WD:Pt. Mugu, CA	-	-		1.341	Nov 2012	-		1.341	Continuing	Continuing	Continuing
		Subtotal	-	-		6.972		-		6.972			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng & Tech Srvc (Non-FFRDC)	Various	Various:Various	-	-		1.296	Nov 2012	-		1.296	Continuing	Continuing	Continuing
		Subtotal	-	-		1.296		-		1.296			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	WR	NAWC AD:Patuxent River, MD	-	-		1.600	Nov 2012	-		1.600	Continuing	Continuing	Continuing
Flight Testing	WR	NAWC WD:China Lake, CA	-	-		0.700	Nov 2012	-		0.700	Continuing	Continuing	Continuing
		Subtotal	-	-		2.300		-		2.300			

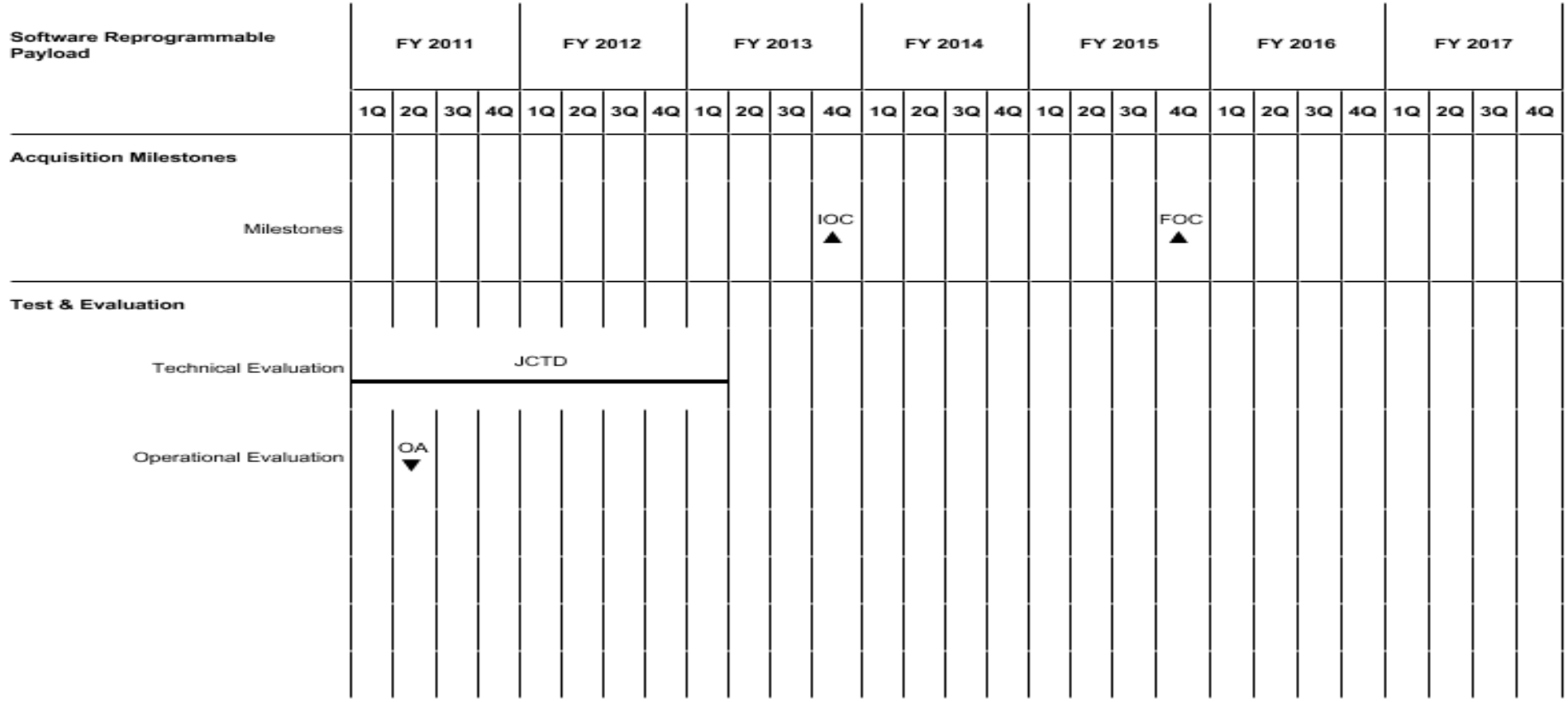
	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		10.568		-		10.568			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

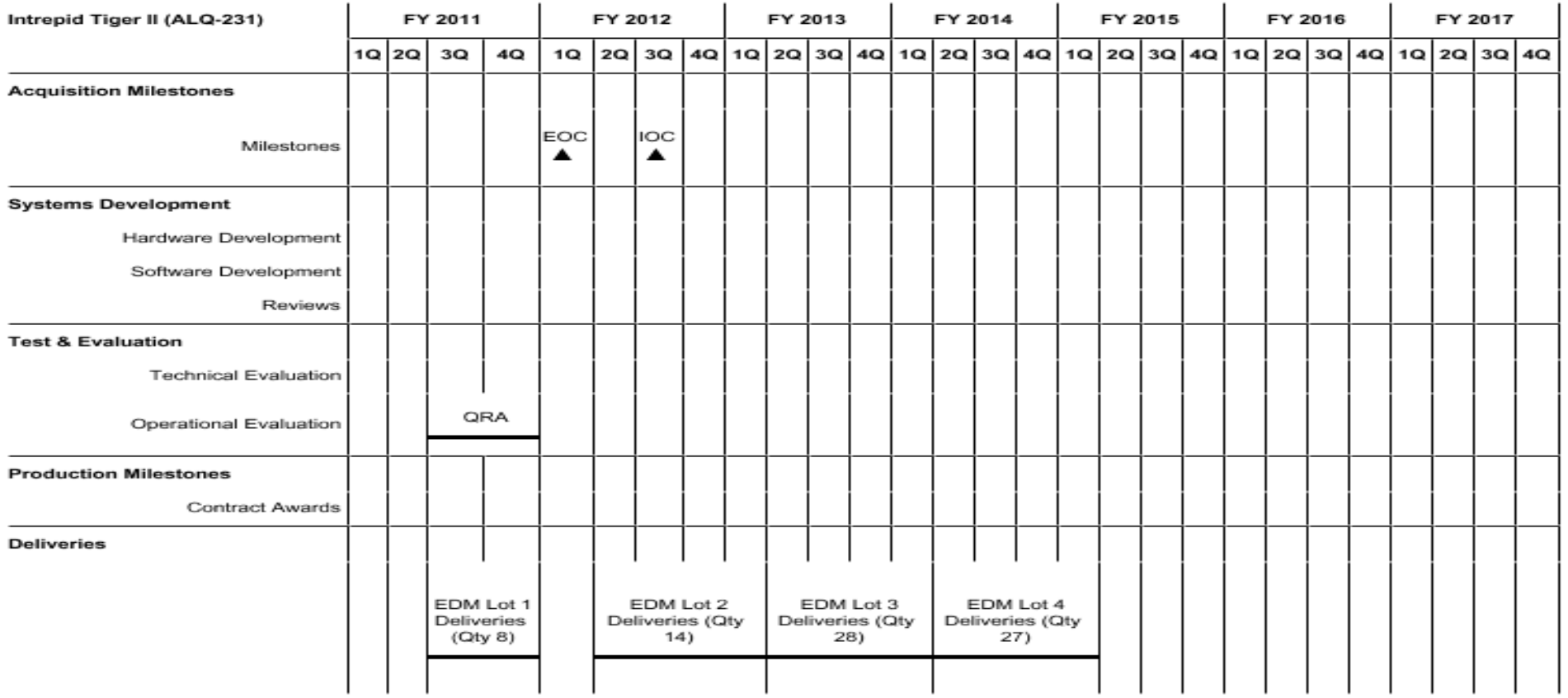
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*



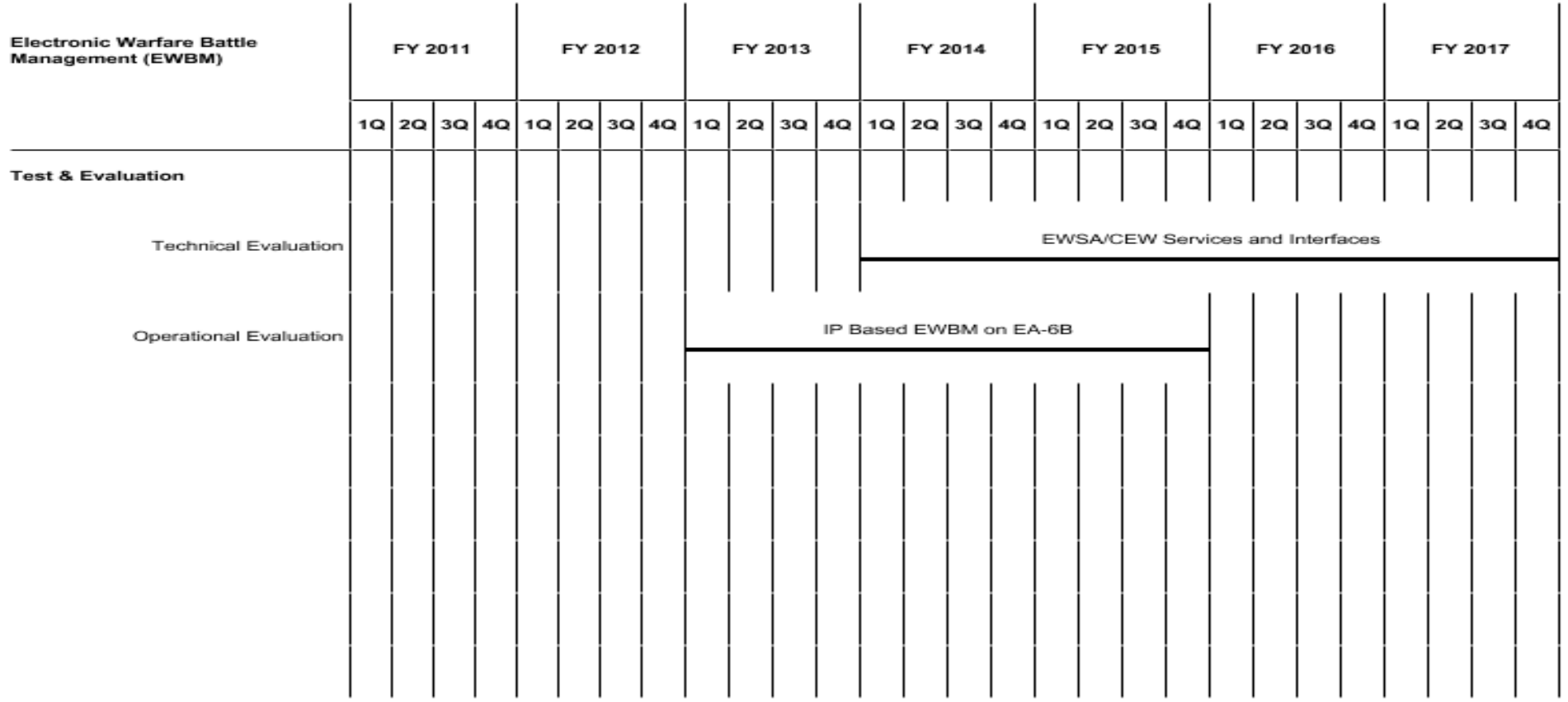
2013PB - 0604376M - 3327

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*



2013PB - 0604376M - 3327

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*



2013PB - 0604376M - 3327

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604376M: *(U)Marine Air Grnd Task Force(MAGTF)EW for Aviatio*	PROJECT 3327: *MAGTF EW Aviation Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Software Reprogrammable Payload				
Acquisition Milestones: Milestones: Initial Operational Capability (IOC)	4	2013	4	2013
Acquisition Milestones: Milestones: Full Operational Capability (FOC)	4	2015	4	2015
Test & Evaluation: Technical Evaluation: Joint Capability Technology Demonstration (JCTD)	1	2011	1	2013
Test & Evaluation: Operational Evaluation: Operational Assessment (OA)	2	2011	2	2011
Intrepid Tiger II (ALQ-231)				
Acquisition Milestones: Milestones: Early Operational Capability (EOC)	1	2012	1	2012
Acquisition Milestones: Milestones: IOC	3	2012	3	2012
Test & Evaluation: Operational Evaluation: Quick Reaction Assessment (QRA)	3	2011	4	2011
Deliveries: Engineering Development Model (EDM) Lot 1 Deliveries (Qty 8)	3	2011	4	2011
Deliveries: EDM Lot 2 Deliveries (Qty 14)	2	2012	1	2013
Deliveries: EDM Lot 3 Deliveries (Qty 28)	2	2013	1	2014
Deliveries: EDM Lot 4 Deliveries (Qty 27)	2	2014	1	2015
Electronic Warfare Battle Management (EWBM)				
Test & Evaluation: Technical Evaluation: Electronic Warfare Services Architecture(EWSA)/ Collaborative Electronic Warfare (CEW) Services and Interfaces	1	2014	4	2017
Test & Evaluation: Operational Evaluation: IP Based EWBM on EA-6B	1	2013	4	2015

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	29.569	24.898	39.974	-	39.974	15.821	4.614	4.701	4.787	Continuing	Continuing
3159: *Naval Integrated Fire Control-Counter Air SE&I*	29.569	24.898	39.974	-	39.974	15.821	4.614	4.701	4.787	Continuing	Continuing

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	21.517	24.898	28.990	-	28.990
Current President's Budget	29.569	24.898	39.974	-	39.974
Total Adjustments	8.052	-	10.984	-	10.984
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	8.750	-			
• SBIR/STTR Transfer	-0.589	-			
• Program Adjustments	-	-	11.000	-	11.000
• Rate/Misc Adjustments	-	-	-0.016	-	-0.016
• Congressional General Reductions Adjustments	-0.109	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3159: *Naval Integrated Fire Control-Counter Air SE&I*	29.569	24.898	39.974	-	39.974	15.821	4.614	4.701	4.787	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

3159 Naval Integrated Fire Control - Counter Air (NIFC-CA) Systems Engineering Integration and Test (SEI&T) project is a systems engineering effort to extend the Naval Theater Air and Missile Defense battlespace out to the maximum kinematic range of our weapons. This includes targets beyond the detection range of the shooter, including Engage On Remote (EoR) and Over the Horizon (OTH) targets. The NIFC-CA project exploits capabilities inherent in existing systems, optimizes current and emerging technologies in component system upgrades, integrates them together, and performs kill chain tests, forming an interoperable System of Systems (SoS) to maximize future air defense capabilities. NIFC-CA consists of three kill chains called From the Air (FTA), From the Sea (FTS), and From the Land (FTL). As directed by OPNAV, the project is focused on SEI&T efforts to integrate the From The Sea (FTS) kill chain consisting of the E-2D Advanced Hawkeye, Cooperative Engagement Capability (CEC), AEGIS, and SM-6 missile. This PE will support efforts including system definition and architecture development, performance prediction, performance assessment, system test and risk reduction efforts, system analysis, modeling and simulation, and capability demonstrations for the FTS kill chain. The project also facilitates the development of the concept of operations with the warfighter to maximize effectiveness when deployed with the Fleet. This PE also includes SEI&T activities to integrate the US Army's Joint Land Attack Cruise Missile Defense Elevated Netted Sensor (JLENS) into the FTS kill chain as an elevated sensor and conduct a joint demonstration of that capability when the Navy systems are mature.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Integration and Test (I&T) Integrated Product Team	12.818	19.206	30.776
Articles:	0	0	0
Description: Efforts: The Integration and Test (I&T) Integrated Product Team (IPT) develops and executes the test plan to assess the FTS operational capability, performs risk reduction testing leveraging various component system tests. Test data will be used over time to verify, validate, and accredit the FTS simulation federation. I&T IPT provides support to the Integrated Master Schedule (IMS) to include test design and planning, test security plans, data management and collection plans.			
FY 2011 Accomplishments: Conducted JLENS Simulation Integration Event. Replanned Project to support CNO direction to accelerate NIFC-CA Test Schedule. Conducted planning efforts, and developed scenarios/test documentation for Tracking Events at Wallops Island. Executed Monte Carlo analysis using the NIFC-CA Federation in support of scenario development and certification for Tracking Exercises at Wallops Island. Initialized planning efforts and conducted preliminary analysis for Events at White Sands Missile Range and initial at-Sea firing.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Finalized design and continued development/integration of hardware and software for the upgrade of the Desert Ship to ACB12 capability with CEC at White Sands Missile Range. Finalized Range upgrade design for NAW WD (Point Mugu, CA) and initiated Procurements/Integration activities. ***FY 2012 Plans:*** Deliver, install, integrate, and certify systems for Desert Ship Upgrade. Procure, install, conduct integration activities and certify upgrade of NAWC WD (Point Mugu, CA). Execute, conduct post-mission analyses, and report on Tracking Exercises at Wallops Island and WSMR JLENS Events. Conduct test planning efforts, documentation and conduct pre-mission analysis for tracking exercises and firing events. ***FY 2013 Plans:*** Execute, conduct post-mission analyses, and report on tracking exercising and firing events. Conduct test planning efforts, documentation and conduct pre-mission analyses for tracking exercises and firing events.			
Title: ENGINEERING MANAGMENT AND SYSTEM DEFINITION	12.009	4.692	9.198
Articles:	0	0	0
Description: Efforts: Engineering management and system definition including the development of the Systems Performance Document (SPD), SoS functional allocations, requirements, traceability, SoS trades studies, SoS information exchange requirements, interface specifications, and sensor network capability analysis. Provides for complete FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the FTS Programs of Record. Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain performance analysis and interface verification through development of a federation of simulations provided directly from the FTS Programs of Record. Federated SoS simulations support architecture development, scenario development, predictive analysis for testing, and define capabilities and limitations of FTS kill chain for deployment. Effort also includes maintenance and update of the NIFC-CA Integrated Master Schedule (IMS) to enable tracking of project health and status and enabling extraction of Earned Value Management (EVM)-like data products. ***FY 2011 Accomplishments:*** Integrated updated Pillar program models into the NIFC-CA Federation to support pre-mission analysis for NIFC-CA test events and conducted verification efforts. Ensured Measure of Effectiveness (MOEs) and Measure of Performance (MOPs) are validated in test plans and interfaced with Pillar programs to maintain and update interface and performance specifications. Updated and maintained NIFC-CA IMS. Updated and maintained NIFC-CA Risk Register. Developed and obtained approval of NIFC-CA FTS Test Strategy (Increment 1).			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Developed DRAFT Capability Development Document (CDD) and TEMP-like document. Developed Key Performance Parameters (KPPs) and Key System Attributes (KSAs) for inclusion into CDD and TEMP-like document. ***FY 2012 Plans:*** Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Provide feedback to Pillar programs on performance deltas. Continue to ensure that MOEs and MOPs are validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Support Increment 2 requirements development. Update and maintain NIFC-CA Risk Register. Update and maintain NIFC-CA IMS. ***FY 2013 Plans:*** Continue integration of updated Pillar program models into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA test events. Conduct verification and initial validation efforts. Provide feedback to Pillar programs on performance deltas. Continue to ensure that MOEs and MOPs are validated in test plans and interface with Pillar programs to maintain and update interface and performance specifications. Update NIFC-CA Architecture to reflect Increment 2 requirements. Update and maintain NIFC-CA Risk Register. Update and maintain NIFC-CA IMS.			
Title: SYSTEMS ENGINEERING, INTEGRATION AND TEST WITH ARMY JLENS PROGRAM	4.742	1.000	-
Articles:	0	0	
Description: Efforts: Perform Systems Engineering, Integration and Test with Army JLENS program. Supports modeling and simulation and predictive analysis with JLENS as airborne sensor in the FTS kill chain. Provides for demonstration planning, execution, and data analysis. ***FY 2011 Accomplishments:*** Integrated updated JLENS program models into the NIFC-CA Federation to support pre-mission analysis for NIFC-CA JLENS test events and conducted verification efforts. Supported development of JLENS test site at WSMR. JLENS Simulation Integration Event JLENS Integration Event with Aegis ACB12 equipment suite conducted in Moorestown, NJ.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Initialized planning efforts and conducted preliminary analysis for NIFC-CA JLENS test events in FY12. ***FY 2012 Plans:*** Continue integration of updated JLENS model into the NIFC-CA Federation to support pre-mission and post-mission analysis for NIFC-CA JLENS test events. Conduct verification and validation efforts. Provide feedback to Pillar programs on performance deltas. Execute, conduct post-mission analyses, and report on the NIFC-CA JLENS TrackEx and Firing Mission.			
Accomplishments/Planned Programs Subtotals	29.569	24.898	39.974

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0603658N: *CEC*	2.080	3.390	2.730	0.000	2.730	0.000	0.000	0.000	0.000	Continuing	Continuing
• 0604366N: *Standard Missile SM-6*	68.235	29.357	39.512	0.000	39.512	28.922	26.080	3.906	3.976	Continuing	Continuing
• 0604307N: *AEGIS*	21.497	11.994	8.826	0.000	8.826	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Not Applicable

E. Performance Metrics

Test Program and analysis conducted using the NIFC-CA Federation will provide data to verify NIFC-CA performance with respect to NIFC-CA MOEs, MOPs, and requirements being tracked as NIFC-CA related in the Pillar Programs. NIFC-CA Federation, once validated using test event data, will be used to update the expected performance of NIFC-CA, as required, and provide feedback to Pillar programs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC/DD:Dahlgren, VA	3.006	0.703	Oct 2011	-		-		-	0.000	3.709	
Systems Engineering	C/CPFF	Various:Various	6.503	1.599	Oct 2011	0.838	Oct 2012	-		0.838	0.000	8.940	
Systems Engineering	C/CPFF	JHU/APL:Laurel, MD	1.165	0.315	Oct 2011	-		-		-	0.000	1.480	
Systems Engineering	C/CPFF	NGMS:Reston, VA	1.382	0.389	Oct 2011	-		-		-	0.000	1.771	
Systems Engineering	C/CPFF	NGIS:Bethpage, NY	4.611	0.935	Oct 2011	2.129	Oct 2012	-		2.129	0.000	7.675	
Systems Engineering	C/CPFF	LM MS2:Moorestown, NJ	4.415	0.962	Oct 2011	2.129	Oct 2012	-		2.129	0.000	7.506	
Systems Engineering	C/CPFF	Raytheon Co.:Tucson, AZ	6.693	1.140	Oct 2011	3.406	Oct 2012	-		3.406	0.000	11.239	
Systems Engineering	C/CPFF	Boeing IDS:ST. Louis, MO	1.848	-		-		-		-	0.000	1.848	
Systems Engineering	C/CPFF	CSCI:Springfield, VA	0.700	-		-		-		-	0.000	0.700	
Systems Engineering	WR	SWDG:Norfolk, VA	0.599	0.130	Oct 2011	-		-		-	0.000	0.729	
Systems Engineering	WR	COTF:Norfolk, VA	0.774	0.268	Oct 2011	-		-		-	0.000	1.042	
Systems Engineering	WR	NSWC/PHD:Port Hueneme, CA	0.540	0.254	Oct 2011	-		-		-	0.000	0.794	
		Subtotal	32.236	6.695		8.502		-		8.502	0.000	47.433	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration and Test	WR	NSWC/DD:Dahlgren, VA	1.982	0.612	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Integration and Test	C/CPFF	Raytheon Co.:Tucson, AZ	4.466	3.050	Oct 2011	12.316	Oct 2012	-		12.316	Continuing	Continuing	Continuing
Integration and Test	C/CPFF	Lockheed Martin - Moorestown, NJ:Moorestown, NJ	5.197	8.054	Oct 2011	7.698	Oct 2012	-		7.698	Continuing	Continuing	Continuing
Integration and Test	C/CPFF	NGIS:Bethpage, NY	0.866	0.292	Oct 2011	7.698	Oct 2012	-		7.698	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration and Test	Various	Various:Various	6.676	2.571	Oct 2011	3.080	Oct 2012	-		3.080	Continuing	Continuing	Continuing
Integration and Test	WR	NSWC/PHD:Port Hueneme, CA	2.073	1.344	Oct 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	21.260	15.923		30.792		-		30.792			

Management Services ($ in Millions)

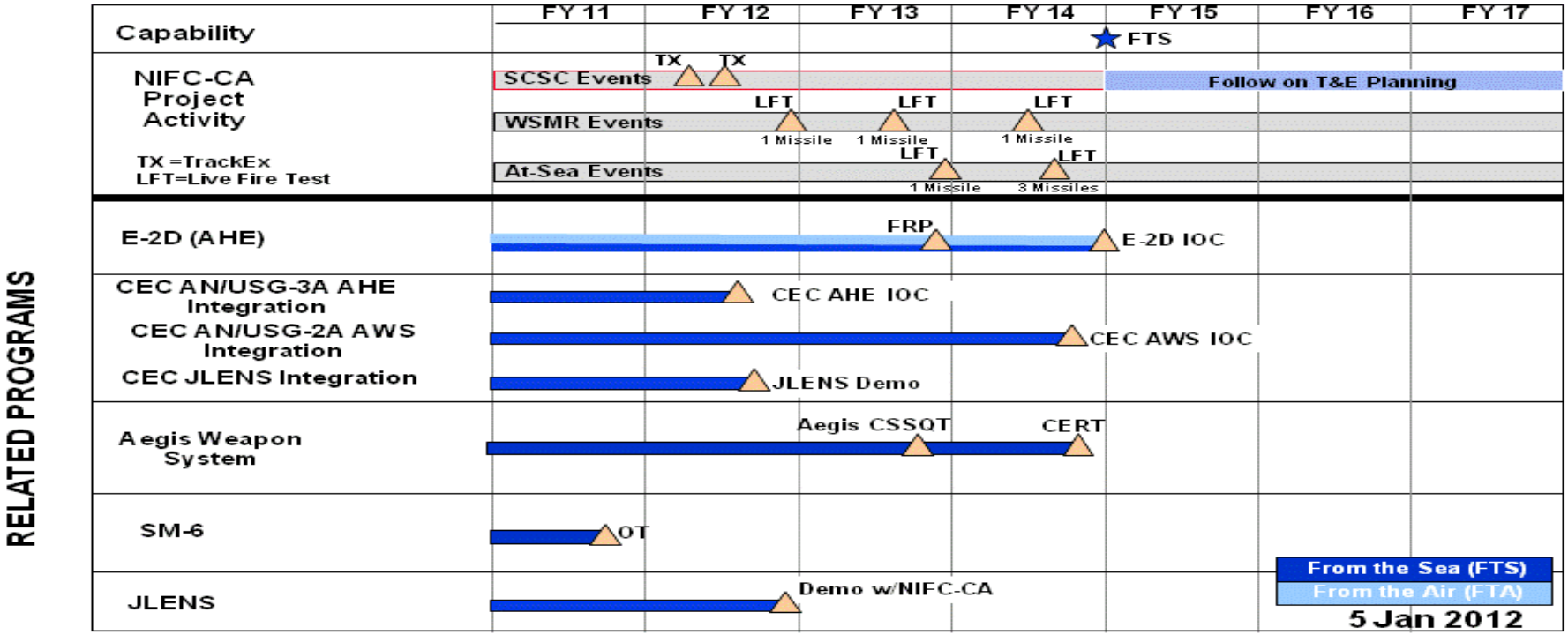
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Planning and Management	C/CPFF	BOEING IDS:St. Louis, MO	0.750	-		-		-		-	0.000	0.750	
Project Planning and Management	C/CPFF	Raytheon Co.:Tucson, AZ	1.776	0.444	Oct 2011	-		-		-	0.000	2.220	
Project Planning and Management	C/CPFF	LM MS2:Moorestown, NJ	1.485	0.275	Oct 2011	-		-		-	0.000	1.760	
Project Planning and Management	C/CPFF	NGIS:Bethpage, NY	1.681	0.398	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Project Planning and Management	WR	NSWC/DD:Dahlgren, VA	1.266	0.305	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Project Planning and Management	C/CPAF	MEI:Arlington, VA	2.331	0.595	Oct 2011	-		-		-	Continuing	Continuing	Continuing
Project Planning and Management	C/CPFF	Various:Various	4.195	0.263	Oct 2011	0.680	Oct 2012	-		0.680	Continuing	Continuing	Continuing
		Subtotal	13.484	2.280		0.680		-		0.680			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	66.980	24.898		39.974		-		39.974			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	PROJECT 3159: *Naval Integrated Fire Control-Counter Air SE&I*

NIFC-CA
Planning Schedule



1

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604378N: *Nav Integrated Fire Control-Counter Air Sys Eng*	**PROJECT** 3159: *Naval Integrated Fire Control-Counter Air SE&I*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3159				
FROM THE SEA (FTS) CAPABILITY	4	2014	1	2015
SCSC TX1	1	2012	1	2012
SCSC TX2	2	2012	2	2012
WSMR JLENS LFT	4	2012	4	2012
WSMR LFT1	2	2013	2	2013
WSMR LFT2	2	2014	2	2014
AT SEA EVENT 1	4	2013	4	2013
AT SEA EVENT 2	3	2014	3	2014
FOLLOW-ON TEST AND EVALUATION PLANNING	1	2015	4	2017
E-2D FRP	4	2013	4	2013
E-2D IOC	1	2015	1	2015
CEC AHE IOC	3	2012	3	2012
CEC AWS IOC	4	2014	4	2014
CEC JLENS DEMO	3	2012	4	2012
AEGIS CERT	4	2014	4	2014
SM-6 BLOCK 1 OT	3	2011	3	2011
JLENS DEMO WITH NIFC-CA	4	2012	4	2012
AEGIS CSSQT	3	2013	3	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	-	75.700	122.481	-	122.481	144.134	674.140	777.615	611.206	Continuing	Continuing
3278: *UCLASS Development*	-	75.700	122.481	-	122.481	144.134	674.140	777.615	611.206	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) system will enhance carrier capability and versatility for the Joint Forces Commander through integration of a persistent and mission flexible unmanned aircraft into the Carrier Air Wing. The UCLASS Initial Capabilities Document (ICD) highlights the need for a persistent, survivable carrier-based Intelligence, Surveillance, and Reconnaissance and precision strike asset. The UCLASS ICD was approved by the Joint Requirements Oversight Council (JROC) in April 2011. The JROC memorandum (JROCM 087-11 of 9 June 2011) states that the Navy should prioritize cost and effectiveness trades to include, but are not limited to, endurance, payload, speed, sensors, and survivability to maintain affordability.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	-	121.150	362.374	-	362.374
Current President's Budget	-	75.700	122.481	-	122.481
Total Adjustments	-	-45.450	-239.893	-	-239.893
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-45.450			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	-239.560	-	-239.560
• Rate/Misc Adjustments	-	-	-0.333	-	-0.333

Change Summary Explanation

Schedule: As a result of the JROCM approval of the UCLASS ICD in June 2011, the program's plan was adjusted, moving Milestone-A and contract award.
Technical: None.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3278: *UCLASS Development*	-	75.700	122.481	-	122.481	144.134	674.140	777.615	611.206	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) system will enhance carrier capability and versatility for the Joint Forces Commander through integration of a persistent and mission flexible unmanned aircraft into the Carrier Air Wing (CVW). The UCLASS Initial Capabilities Document (ICD) highlights the need for a persistent, survivable carrier-based Intelligence, Surveillance, and Reconnaissance (ISR) and precision strike asset. The UCLASS ICD was approved by the Joint Requirements Oversight Council (JROC) in April 2011. The JROC memorandum (JROCM 087-11 of 9 June 2011) states that the Navy should prioritize cost and effectiveness trades to include, but are not limited to, endurance, payload, speed, sensors, and survivability to maintain affordability.

The UCLASS system will provide persistent ISR with precision strike support in a range of missions including irregular warfare and major combatant operation environments. UCLASS will be a major step forward in achieving integration of manned and unmanned systems within the CVW and will contribute to increasing sea-based capacity across the spectrum of maritime and littoral missions. UCLASS will allow a single CVW to provide continuous 24/7 ISR/strike capability. The UCLASS system will be sustainable onboard an aircraft carrier, as well as ashore, and will be designed to minimize increases in the logistics footprint of the current CVW.

The UCLASS system will have the ability to pass command and control information along with sensor data to other aircraft, naval vessels, and ground forces. Sensor data will be transmitted, in either raw or processed forms, at appropriate classification levels, to exploitation nodes afloat and ashore (e.g. Distributed Common Ground/ Surface System - Navy).

The UCLASS system will achieve these capabilities through the use of a carrier-suitable, semi-autonomous, unmanned Air Segment; a Control System and Connectivity Segment and; a Carrier Segment. The UCLASS system will interface with existing ship and land-based command and control systems, including ISR Tasking, Processing, Exploitation, and Dissemination systems.

The scope of the program includes, but is not limited to, system level requirements identification, allocation of requirements to segments and components, design, development, integration, fabrication, test, training, and support activities to provide the UCLASS capabilities. To accomplish these capabilities the UCLASS program will (as required) transition technologies from other programs and adapt them into the carrier environment. The UCLASS system will deliver the necessary air vehicles, command, control, connectivity, shipboard and land-based launch and recovery control systems, associated support systems, interfaces, and upgrades to other Navy systems (as required) to meet the required capabilities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Product Development	-	57.700	101.921
Articles:		0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Product Development efforts include, but are not limited to, design, development, integration, fabrication, test, and training for all Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) capabilities across system segments. ***FY 2012 Plans:*** Initiate design and development of the UCLASS System. Government oversight of all UCLASS contract activities. Initiate Control System and Connectivity (CS&C) Segment interface and integration activities. Initiate CVN Segment interface and integration activities. ***FY 2013 Plans:*** Continue UCLASS system cross-segment design trades and industry analyses, and implement an open system architecture across all UCLASS segments. Initiate Air Segment design and integration activities. CS&C hardware/software development. Deliver CS&C software development tools and documentation for design and integration activities. Establish Air Segment, CS&C Segment, and Carrier Segment interfaces, while establishing landing system and data link interfaces. Complete technology maturation assessments and transitions, and mature, as required, technologies into the UCLASS system. Develop ship change request and Engineering Change Proposal (ECP) documentation in accordance with Naval Sea Systems Command (NAVSEA), Space and Naval Warfare Systems Command (SPAWAR), and Program Executive Office, Aircraft Carriers (PEO(CARRIERS)) processes. Execute UCLASS ship integration activities with NAVSEA, SPAWAR, and PEO(CARRIERS). Complete shipboard network ECP planning. Establish system integration laboratories in support of government-led open system architecture and program activities.			
Title: Management ***Articles:*** ***Description:*** Efforts include program, engineering, test, and logistics management. ***FY 2012 Plans:*** Complete milestone preparation activities. Oversee UCLASS System interface and integration activities. Conduct source selections and award UCLASS System contracts. Initiate logistics management tasks including facilities, training, and manpower. Establish and maintain security and program office environments. ***FY 2013 Plans:*** Oversee, coordinate and manage UCLASS acquisition, system interface and integration activities. Continue logistics management tasks. Maintain security and program office environments. Conduct UCLASS system engineering reviews. Provide oversight of UCLASS contract activities. Develop requests for proposals and conduct source selections, as necessary, to support UCLASS program activities.	-	18.000 0	18.360 0
Title: Test and Evaluation	-	-	2.200

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:			0
FY 2013 Plans: Initiate test plan for surrogates. Establish requirements for test facilities and ranges. Support engineering events and program management activities.			
Accomplishments/Planned Programs Subtotals	-	75.700	122.481

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Government will act as the system integrator across all Unmanned Carrier-Launched Airborne Surveillance and Strike Segments. The Government will develop and award contracts as required to support program activities. The Government's acquisition strategy will be approved by Milestone-A. Acquisition and contracting strategies comply with current statute, regulations, and instructions.

E. Performance Metrics

Meet Navy operational requirements as defined in requirements documents.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development (Risk Reduction)	C/FFP	TBD:TBD	-	10.000	Apr 2012	-		-		-	0.000	10.000	10.000
Primary Hardware Development (L/R Datalink - TTNT)	TBD	TBD:TBD	-	8.115	Jun 2012	22.000	Jan 2013	-		22.000	0.000	30.115	30.115
Primary Hardware Development (Air Segment)	TBD	TBD:TBD	-	-		28.000	Jun 2013	-		28.000	Continuing	Continuing	Continuing
Systems Engineering	Various	Various:Various	-	3.536	Feb 2012	5.011	Dec 2012	-		5.011	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:Patuxent River, MD	-	5.500	Feb 2012	6.989	Dec 2012	-		6.989	Continuing	Continuing	Continuing
Mission Segment (Networking)	TBD	TBD:TBD	-	3.304	Feb 2012	5.300	Dec 2012	-		5.300	Continuing	Continuing	Continuing
Mission Segment	Various	Various:Various	-	5.023	Feb 2012	8.144	Dec 2012	-		8.144	Continuing	Continuing	Continuing
Control Segment	TBD	TBD:TBD	-	8.522	Feb 2012	8.696	Dec 2012	-		8.696	Continuing	Continuing	Continuing
Carrier Segment (Landing System)	Various	Various:Various	-	-		3.083	Dec 2012	-		3.083	Continuing	Continuing	Continuing
Carrier Segment (Ship Installations)	Various	Various:Various	-	13.700	Feb 2012	14.698	Dec 2012	-		14.698	Continuing	Continuing	Continuing
		Subtotal	-	57.700		101.921		-		101.921			

Remarks

Launch and Recovery Datalink - Tactical Targeting Network Technology (L/R Datalink - TTNT)

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various:Various	-	-		2.200	Dec 2012	-		2.200	Continuing	Continuing	Continuing
		Subtotal	-	-		2.200		-		2.200			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*

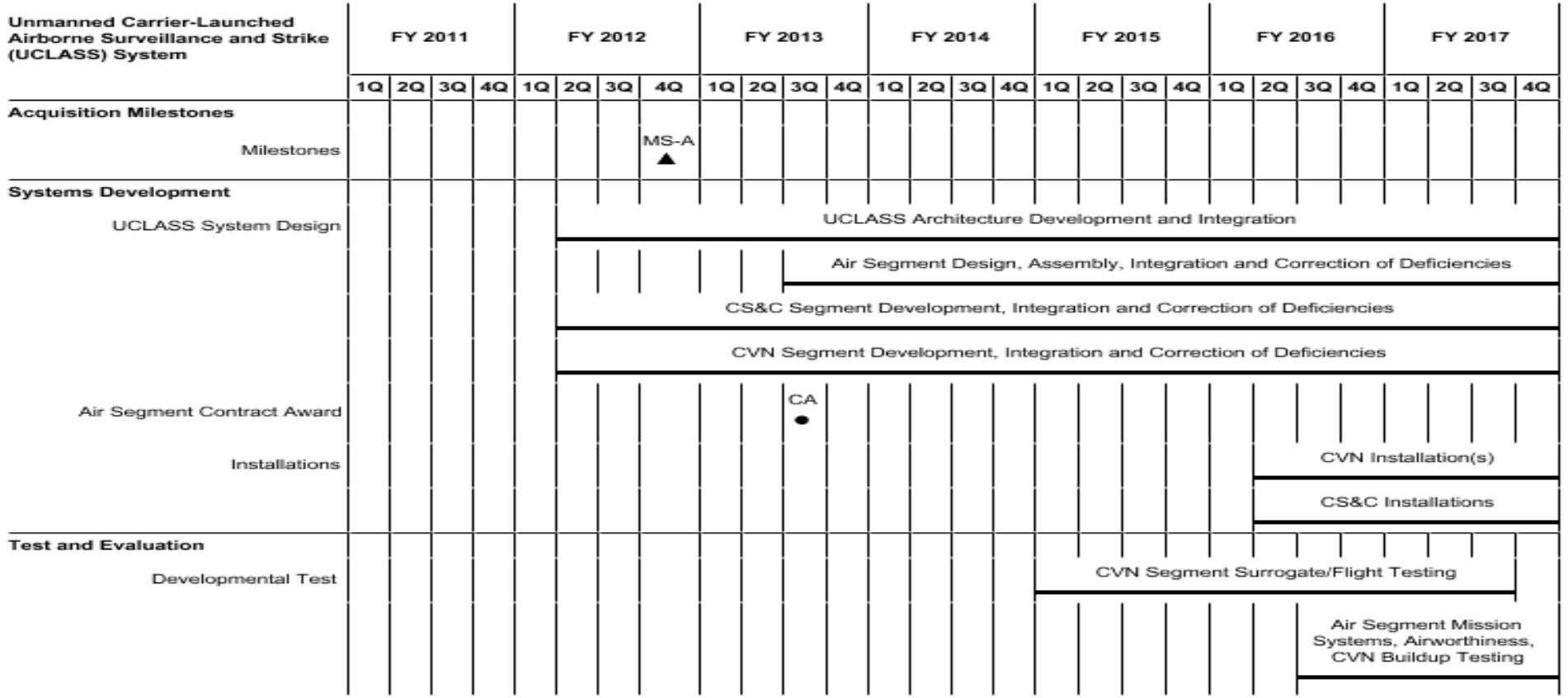
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management	Various	Various:Various	-	7.980	Feb 2012	8.140	Dec 2012	-		8.140	Continuing	Continuing	Continuing
Management	WR	NAWCAD:Patuxent River, MD	-	10.020	Feb 2012	10.220	Dec 2012	-		10.220	Continuing	Continuing	Continuing
		Subtotal	-	18.000		18.360		-		18.360			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	75.700		122.481		-		122.481			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	PROJECT 3278: *UCLASS Development*



2013PB - 0604404N - 3278

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604404N: *(U)Unman Carrier Launch A/B Surv & Strk(UCLASS)Sys*	**PROJECT** 3278: *UCLASS Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Unmanned Carrier-Launched Airborne Surveillance and Strike (UCLASS) System				
Acquisition Milestones: Milestones: Milestone A	4	2012	4	2012
Systems Development: UCLASS System Design: UCLASS Architecture Development and Integration	2	2012	4	2017
Systems Development: UCLASS System Design: UCLASS Air Segment System Design, Assembly, Integration and Correction of Deficiencies	3	2013	4	2017
Systems Development: UCLASS System Design: UCLASS Control System and Connectivity (CS&C) Segment Development Integration and Correction of Deficiencies	2	2012	4	2017
Systems Development: UCLASS System Design: Carrier Vessel Nuclear (CVN) Segment Development Integration and Correction of Deficiencies	2	2012	4	2017
Systems Development: Air Segment Contract Award: Air Segment Contract Award	3	2013	3	2013
Systems Development: Installations: CVN Installation(s)	2	2016	4	2017
Systems Development: Installations: UCLASS CS&C Installations	2	2016	4	2017
Test and Evaluation: Developmental Test: CVN Segment Surrogate/Flight Testing	1	2015	3	2017
Test and Evaluation: Developmental Test: UCLASS Air Segment Mission Systems, Airworthiness, CVN Buildup Testing	3	2016	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	254.778	247.071	255.516	-	255.516	388.654	282.817	288.134	104.204	Continuing	Continuing
3186: *Air and Missile Defense Radar*	204.159	166.282	223.621	-	223.621	352.698	251.760	262.452	79.757	Continuing	Continuing
3187: *Periscope Detection*	3.238	14.509	1.730	-	1.730	-	-	-	-	0.000	19.477
3188: *Dual-Band Radar*	11.276	10.291	12.042	-	12.042	18.999	14.266	8.428	6.975	Continuing	Continuing
3232: *Multi-Mission Signal Processor*	32.624	32.360	14.617	-	14.617	14.894	15.856	16.300	16.510	Continuing	Continuing
3301: *Improved Capabilities SPY-1 Radar*	3.481	3.629	3.506	-	3.506	2.063	0.935	0.954	0.962	Continuing	Continuing
9999: *Congressional Adds*	-	20.000	-	-	-	-	-	-	-	0.000	20.000

A. Mission Description and Budget Item Justification

Air and Missile Defense Radar (AMDR): The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding in FY 13-17 will develop AMDR-S and RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable/Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance.

Periscope Detection: The CVN Periscope Detection Radar program, AN/SPS-74(V)2, develops and delivers the capability which provides automated detection and discrimination of submarine periscopes using advanced algorithms. This enables discrimination of periscopes from surface contacts, buoys, small boats, floating mines, etc. This effort was initially based on an advanced development model, developed in PE 0603553N, Surface Antisubmarine Warfare. System Engineering efforts under RDT&E funding will support the conversion of the Advanced Demonstration Model (ADM) variant currently installed to a production representative model that addresses manufacturability, supportability and reliability aspects as well as full system certification. In addition, funding will develop the Periscope Detection and Discrimination (PDD) Interface for AN/SPQ-9B Radar.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*

Dual-Band Radar (DBR) Upgrades: Funding is for Dual Band Radar (DBR) System upgrades to implement cost savings initiatives for Volume Search Radar (VSR) modifications, supportability analysis and associated logistics product updates; future upgrades/technology insertion efforts for Multi-Function Radar (MFR)/VSR as a part of the DBR suite on CVN 78 Class ships and the MFR on DDG 1000 Class ships. Funding is also required to resolve the hardware and software issues discovered during the various test events to include: DTB2-411, SDTS testing, Land Based Testing and pertinent At-Sea test events. The upgrades will include all aspects of the radar system/subsystems, including hardware and software. Specific subsystem areas include the Array, Transmit/Receive (T/R) module, Receiver/Exciter, Signal Data Processor, Radome, and power/cooling systems. Upgrades and technology insertions are required to maintain the level of force protection needed for ship defense against all threats envisioned in the littoral environment. The supportability analysis and logistic products associated with these upgrades will also be developed and updated.

DBR interface with Battle Force Tactical Trainer (BFTT): FY12-14 supports the design, development, and testing of an interface between the DBR and BFTT (AN/USQ-46) system that will provide training to enhance combat readiness for the CVN 78 crew. The DBR/BFTT interface development project initiates with the FY12 contract award and continues with validation testing in FY14.

DBR CVN 78 Testing and Certification: Funding in FY13-FY17 supports DBR At-Sea Test and Evaluation (T&E), Environmental Testing, DBR Surface Tracks through Cooperative Engagement Capability (CEC) and DBR Systems Certification in support of CVN 78.

Multi-Mission Signal Processor (MMSP): The development of Multi-Mission Signal Processor (MMSP) provides Anti-Air Warfare (AAW)/Ballistic Missile Defense (BMD) Multi-mission capability for DDG 51-78 as part of Aegis Modernization Program. This capability will be utilized for DDG 113 and follow new construction and Aegis Ashore. Modifies SPY-1D Transmitters to enable dual beam for reduced frame times and better reaction time, and provides stability for all D(V) waveforms and avoid operational degradation. The SPY-1 radar system detects, tracks and supports engagements of a broader range of threats. MMSP improves performance in littoral, ducted clutter environments, and in electronic attack (EA), and chaff environments and provides greater commonality in computer programs and equipment.

Improved Capabilities for SPY-1 Radar: These Reliability, Maintainability, and Availability (RM&A) improvements are intended to reduce cascading failures, mitigate obsolescence issues, and improve reliability in support of Anti-Air Warfare (AAW) and Ballistic Missile Defense (BMD) missions; while still providing AN/SPY-1 Radar Total Ownership Cost Reductions. Improvements will yield reductions in annual fleet maintenance costs.

Advanced Radar Innovation Fund: Funds the development and integration of existing and new technologies into the Navy's sensors to enhance performance and ensure sensor operations and sustainment throughout the lifecycle of the sensor and platforms on which installed.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	274.371	227.358	355.366	-	355.366
Current President's Budget	254.778	247.071	255.516	-	255.516
Total Adjustments	-19.593	19.713	-99.850	-	-99.850
• Congressional General Reductions	-	-0.287			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	20.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-9.999	-			
• SBIR/STTR Transfer	-7.961	-			
• Program Adjustments	-	-	-99.257	-	-99.257
• Rate/Misc Adjustments	-	-	-0.593	-	-0.593
• Congressional General Reductions Adjustments	-1.633	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Adv Radar Innovation Fund - Surf (Cong)*	-	20.000
Congressional Add Subtotals for Project: 9999	-	20.000
Congressional Add Totals for all Projects	-	20.000

Change Summary Explanation

Technical: Removed AMDR X-Band Radar E&MD effort
Schedule: Not Applicable
Cost: Removed AMDR X-Band Radar E&MD effort

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3186: *Air and Missile Defense Radar*	204.159	166.282	223.621	-	223.621	352.698	251.760	262.452	79.757	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Air and Missile Defense Radar (AMDR): The AMDR suite is being developed to fulfill Integrated Air and Missile Defense requirements for multiple ship classes. This suite consists of an S-Band radar (AMDR-S), an X-band radar and a Radar Suite Controller (RSC). Funding in FY 13-17 will develop AMDR-S and RSC, and integrate these components with an available X band radar. AMDR will provide multi-mission capabilities, simultaneously supporting both long range, exoatmospheric detection, tracking and discrimination of ballistic missiles, as well as Area and Self Defense against air and surface threats. For the Ballistic Missile Defense (BMD) capability, increased radar sensitivity and bandwidth over current radar systems are needed to detect, track and support engagements of advanced ballistic missile threats at the required ranges, concurrent with Area and Self Defense against Air and Surface threats. For the Area Air Defense and Self Defense capability, increased sensitivity and clutter capability is needed to detect, react to, and engage stressing Very Low Observable /Very Low Flyer (VLO/VLF) threats in the presence of heavy land, sea, and rain clutter. This effort provides for the development of an active phased array radar with the required capabilities to address the evolving threat. The AMDR suite will obtain performance and technology enhancements throughout its service life based upon an approach that includes modularity of hardware and software, a scalable design and Open Architecture (OA) compliance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: R&D/RISK REDUCTION	10.351	2.929	-
Articles:	0	0	
FY 2011 Accomplishments: - Continued risk reduction activities associated with digital beamforming, array architectures, Transmit/Receive (T/R) modules, thermal management, and Radio Frequency (RF) semiconductors - Performed critical component and subsystem demonstrations, integration and testing - Continued international cooperative research projects, including ARTIST (U.K.), AUSPAR (Australia), and OARIS (Maritime Theater Missile Defense Forum)			
FY 2012 Plans: - Evaluate Gallium Nitride (GaN) High Power Amplifier (HPA) performance, reliability, and producibility improvements - Perform risk reduction activities associated with digital beamforming, array architectures, Transmit/Receive (T/R) modules, thermal management, and Radio Frequency (RF) semiconductors - Conduct critical component and subsystem demonstrations, integration and testing			
Title: SYSTEMS ENGINEERING	186.752	157.120	217.614

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3186: *Air and Missile Defense Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
FY 2011 Accomplishments: - Continued TD phase focused on demonstrating AMDR key technologies are scalable and sufficiently mature - Completed Technology Demonstration Plans - Reviewed preliminary system concepts and prototype designs - Matured the AMDR suite system concept to a level sufficient to support a Preliminary Design Review (PDR) - Initiated development of the Test and Evaluation Master Plan (TEMP) and update to the Systems Engineering Plan (SEP) - Reviewed system requirements and combat system/ship interfaces - Continued preparation for AMDR-S/RSC contract award ***FY 2012 Plans:*** - Conduct Preliminary Design Reviews with each TD contractor - Conduct the technology development component and prototype testing - Analyze and review prototype test results - Conduct Technology Readiness Level assessments - Complete Technology Development Phase contracts ***FY 2013 Plans:*** - Achieve successful Milestone B decision and proceed into EMD phase - Award AMDR-S/RSC EMD contract - Mature AMDR design and radar parameters necessary for ship integration - Conduct Delta Hardware and Software Preliminary Design Reviews			
Title: PROGRAM MANAGEMENT SUPPORT	7.056	6.233	6.007
Articles:	0	0	0
FY 2011 Accomplishments: - Provided support to Integrated Product Teams (IPTs) and Working Groups (WGs) required for program execution and achievement of Milestone 'B' in FY13 - Assisted in cost, schedule and performance management, contract administration and oversight, risk identification and mitigation - Reviewed available/proposed technical alternatives ***FY 2012 Plans:*** - Provide support to Integrated Product Teams (IPTs) and WGs required for program execution and achievement of Milestone 'B' in FY13 - Assist in cost, schedule and performance management, contract administration and oversight, risk identification and mitigation			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Analyze and assess contractor studies - Review available/proposed technical alternatives			
FY 2013 Plans: - Achieve successful Milestone B decision and proceed into EMD phase - Provide support to Integrated Product Teams (IPTs) and WGs required for program execution of the EMD contracts - Assist in cost, schedule and performance management, contract administration and oversight, risk identification and mitigation - Analyze and assess contractor studies - Review available/proposed technical alternatives			
Accomplishments/Planned Programs Subtotals	204.159	166.282	223.621

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

AMDR: Plans for the Air and Missile Defense Radar are to leverage research and development investments, integrate sufficiently matured fundamental advanced technologies from technology risk reduction efforts, and incorporate Open Architecture approaches to develop a scalable radar design with major improvements in power, sensitivity, resistance to natural and man-made environments over current radar systems for simultaneous multi-mission BMD, Area and Self Defense Anti-Air Warfare (AAW). System design will be accomplished by employing proven technologies and commercial standards to lower schedule risk and develop a product with the lowest life-cycle cost.

Program scope consists of the following phases: a Concept Studies phase; a Technology Development phase which includes competitive prototyping; an EMD phase which includes completion of a full Engineering Development Model (EDM) for land-based testing; and transition to production. The detailed scope of this acquisition is defined in the approved Technology Development Strategy (TDS) and will be updated for Milestone B in the AMDR Acquisition Strategy.

E. Performance Metrics

- Complete Technology Development (TD) phase System Requirements Review, Test Readiness Review, TD Prototype testing, TD System Functional Review, and TD Preliminary Design Review (PDR)
- Achieve Milestone B decision to proceed into EMD phase
- Award/Exercise EMD contracts
- Conduct Delta Hardware / Software PDRs and Hardware / Software Critical Design Reviews (CDRs)
- Complete Engineering Development Model (EDM) Testing
- Achieve Milestone C decision to proceed into production

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Risk Reduction	WR	SCSC Wallops:Wallops Island, VA	10.530	-		-		-		-	0.000	10.530	
Risk Reduction	MIPR	DMEA:McClellen AFB, CA	48.022	-		-		-		-	0.000	48.022	
Risk Reduction	SS/CPFF	JHU/APL:Baltimore, MD	9.820	0.100	Jan 2012	-		-		-	0.000	9.920	
Risk Reduction	MIPR	MIT:Cambridge, MA	2.538	-		-		-		-	0.000	2.538	
Risk Reduction	WR	NRL:Washington, DC	7.178	0.916	Nov 2011	-		-		-	0.000	8.094	
Risk Reduction	C/CPAF	BAE Systems:Rockville, MD	1.980	-		-		-		-	0.000	1.980	
Risk Reduction	WR	NSWC/CR:Crane, IN	-	0.746	Dec 2011	-		-		-	0.000	0.746	
Risk Reduction	C/CPFF	SPA-PSS:Alexandria, VA	3.048	0.769	Jan 2012	-		-		-	0.000	3.817	
Risk Reduction	WR	NSWC/DD:Dahlgren, VA	6.439	-		-		-		-	0.000	6.439	
Risk Reduction	MIPR	DARPA:Adelphi, MD	5.484	0.398	Jan 2012	-		-		-	0.000	5.882	
Systems Engineering	SS/CPFF	GTRI:Atlanta, GA	5.019	3.542	Jan 2012	3.095	Dec 2012	-		3.095	Continuing	Continuing	Continuing
Systems Engineering	SS/FFP	BAE Systems:Rockville, MD	9.536	-		-		-		-	0.000	9.536	
Systems Engineering	Various	VARIOUS-SPECIAL:Special	3.078	-		-		-		-	0.000	3.078	
Systems Engineering	WR	NSWC/DD:Dahlgren, VA	38.303	14.958	Nov 2011	12.984	Dec 2012	-		12.984	Continuing	Continuing	Continuing
Systems Engineering	WR	PMRF:Kekaha, HI	1.375	0.712	Dec 2011	2.826	Dec 2012	-		2.826	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	JHU/APL:Baltimore, MD	38.725	15.249	Jan 2012	13.363	Dec 2012	-		13.363	Continuing	Continuing	Continuing
Systems Engineering	MIPR	MIT:Cambridge, MA	10.445	5.749	Nov 2011	5.020	Dec 2012	-		5.020	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/PHD:Port Hueneme, CA	6.069	6.412	Nov 2011	6.104	Dec 2012	-		6.104	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC/CR:Crane, IN	2.449	1.100	Dec 2011	3.341	Dec 2012	-		3.341	Continuing	Continuing	Continuing
Systems Engineering	WR	NRL:Washington, DC	3.721	2.281	Nov 2011	2.271	Dec 2012	-		2.271	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPFF	SPA-PSS:Alexandria, VA	9.433	4.667	Jan 2012	5.459	Dec 2012	-		5.459	Continuing	Continuing	Continuing
Systems Engineering	WR	COMPTEVFOR:Norfolk, VA	0.446	0.556	Jan 2012	0.772	Dec 2012	-		0.772	Continuing	Continuing	Continuing
Systems Engineering	C/FFP	CS-Northrop Grumman:Linthicum Heights, MD	10.000	-		-		-		-	0.000	10.000	
Systems Engineering	C/FFP	CS-Lockheed Martin:Moorestown, NJ	10.000	-		-		-		-	0.000	10.000	
Systems Engineering	C/FFP	CS-Raytheon:Sudbury, MA	9.909	-		-		-		-	0.000	9.909	
Systems Engineering	WR	NSWC/PHD (VAB):Virginia Beach, VA	0.730	-		-		-		-	0.000	0.730	
Systems Engineering	C/FP	Program Office System Engineering Staff:Washington, DC	1.855	1.040	Jan 2012	1.125	Dec 2012	-		1.125	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	INTEGRITS (via KRATOS):San Diego, CA	0.149	-		-		-		-	0.000	0.149	
Systems Engineering	WR	NAWC AD:Patuxent River, MD	0.501	9.373	Jan 2012	0.542	Dec 2012	-		0.542	Continuing	Continuing	Continuing
Systems Engineering	WR	SCSC Wallops:Wallops Island, VA	0.037	0.092	Jan 2012	0.081	Dec 2012	-		0.081	Continuing	Continuing	Continuing
Systems Engineering	WR	SPAWAR:San Diego, CA	0.028	-		-		-		-	0.000	0.028	
Systems Engineering	C/FPIF	TD Contractor Raytheon:Sudbury, MA	89.751	30.249	Oct 2011	-		-		-	0.000	120.000	
Systems Engineering	WR	NAVFAC MID-ATLANTIC:Pearl Harbor, HI	4.026	-		-		-		-	0.000	4.026	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/FPIF	TD Contractor Northrop Grumman:Linthicum Heights, MD	89.751	30.249	Oct 2011	-		-		-	0.000	120.000	
Systems Engineering	C/FPIF	TD Contractor Lockheed Martin:Moorestown, NJ	89.751	30.249	Oct 2011	-		-		-	0.000	120.000	
Systems Engineering	MIPR	ARL:Adelphi, MD	0.206	0.642	Jan 2012	0.560	Dec 2012	-		0.560	Continuing	Continuing	Continuing
Systems Engineering	C/CPIF	TBD-AMDR-S/RSC EMD:Not Specified	-	-		159.990	Nov 2012	-		159.990	Continuing	Continuing	Continuing
		Subtotal	530.332	160.049		217.533		-		217.533			

Remarks

AMDR-S/RSC Engineering and Manufacturing Development contract has not yet been awarded, therefore 'Performer' TBD.

Management Services ($ in Millions)

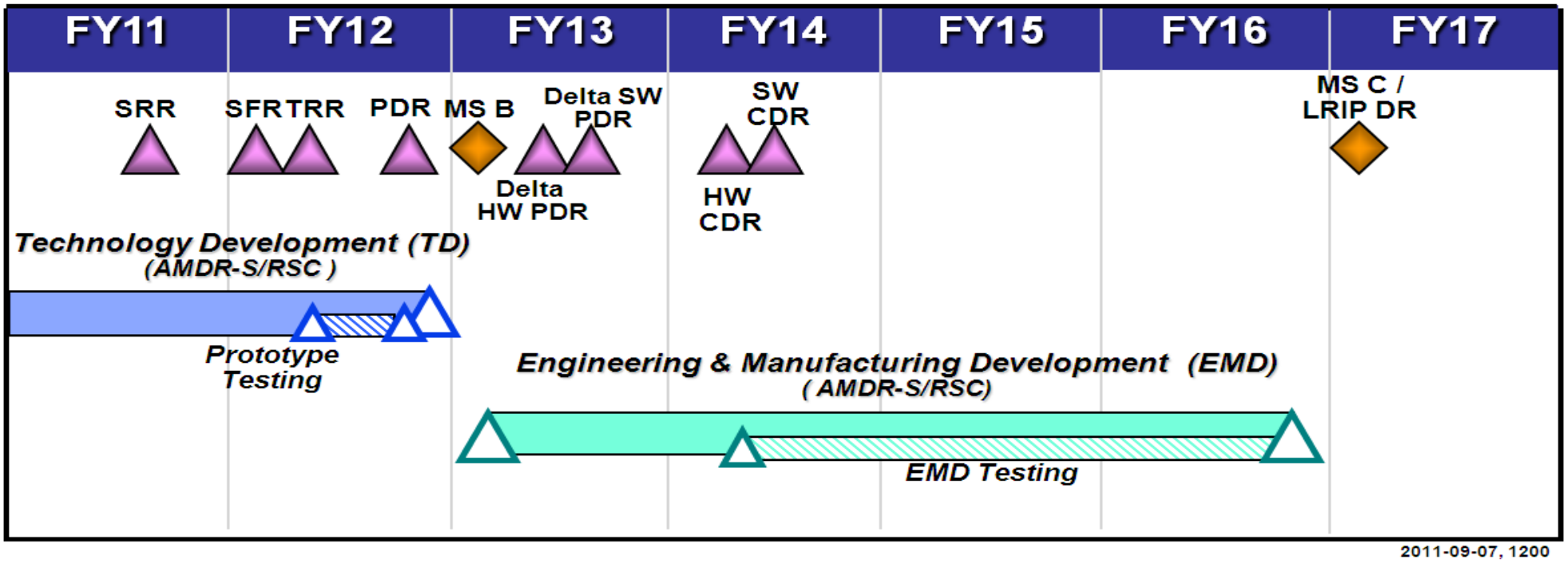
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Management Services	SS/FFP	BAE Systems:Rockville, MD	5.319	-		-		-		-	0.000	5.319	
Support Management Services	C/CPFF	SPA-PSS:Alexandria, VA	9.206	2.675	Jan 2012	2.719	Dec 2012	-		2.719	Continuing	Continuing	Continuing
Travel	Allot	PEOIWS2:Washington, DC	0.511	0.200	Jan 2012	0.203	Dec 2012	-		0.203	Continuing	Continuing	Continuing
DAWDF	Various	N/A:N/A	0.513	-		-		-		-	0.000	0.513	
Support Management Services	WR	NSWC/IHD:Indian Head, MD	1.142	-		-		-		-	0.000	1.142	
Support Management Services	WR	NSWC/DD:Dahlgren, VA	-	3.358	Nov 2011	3.166	Dec 2012	-		3.166	Continuing	Continuing	Continuing
		Subtotal	16.691	6.233		6.088		-		6.088			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	547.023	166.282		223.621		-		223.621			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3186: *Air and Missile Defense Radar*



CDR	Critical Design Review
DR	Decision Review
LRIP	Low Rate Initial Production
MS	Milestone
PDR	Preliminary Design Review
RSC	Radar Suite Controller
SFR	System Functional Review
SRR	System Requirements Review
TRR	Test Readiness Review

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3186: *Air and Missile Defense Radar*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3186				
Technology Development (TD)	1	2011	4	2012
System Readiness Review (SRR)	3	2011	3	2011
TD System Functional Review (SFR)	1	2012	1	2012
TD Test Readiness Review (TRR)	2	2012	2	2012
TD Prototype Testing	2	2012	4	2012
TD Preliminary Design Review (PDR)	4	2012	4	2012
Milestone B (MS B)	1	2013	1	2013
Engineering & Manufacturing Development (EMD)	1	2013	4	2016
EMD HW Delta PDR	2	2013	2	2013
EMD SW / System Delta PDR	3	2013	3	2013
EMD HW Critical Design Review (CDR)	2	2014	2	2014
EMD SW / System Critical Design Review (CDR)	3	2014	3	2014
EMD Testing	2	2014	4	2016
Milestone C (MS C) / Low Rate Initial Production Decision Review (LRIP DR)	1	2017	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3187: *Periscope Detection*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3187: *Periscope Detection*	3.238	14.509	1.730	-	1.730	-	-	-	-	0.000	19.477
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Periscope Detection: The CVN Periscope Detection Radar program, AN/SPS-74(V)2, develops and delivers the capability which provides automated detection and discrimination of submarine periscopes using advanced algorithms. This enables discrimination of periscopes from surface contacts, buoys, small boats, floating mines, etc. This effort was initially based on an advanced development model, developed in PE 0603553N, Surface Antisubmarine Warfare. System Engineering efforts under RDT&E funding will support the conversion of the Advanced Demonstration Model (ADM) variant currently installed to a production representative model that addresses manufacturability, supportability and reliability aspects as well as full system certification. In addition, funding will develop the Periscope Detection and Discrimination (PDD) Interface for AN/SPQ-9B Radar.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Periscope Detection	3.238	14.509	1.730
Articles:	0	0	0
FY 2011 Accomplishments: Continued design and development of AN/SPS-74(V)2 and conducted Critical Design Review (CDR).			
FY 2012 Plans: Begin First Article Testing for AN/SPS-74(V)2 to include Environmental Qualification Testing (EQT) and below deck shock testing. Begin AN/SPQ-9B Radar PDD interface development and testing. Begin planning for Independent Operational Test and Evaluation (IOT&E).			
FY 2013 Plans: Complete First Article Testing for AN/SPS-74(V)2, install Land Based Test Site system, perform software verification, conduct Factory Acceptance Test (FAT), and conduct Independent Operational Test and Evaluation (IOT&E). Complete AN/SPQ-9B Radar PDD interface development and testing.			
Accomplishments/Planned Programs Subtotals	3.238	14.509	1.730

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2040: *0204228N/2040 Radar Support (OPN)*	6.962	10.618	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.507

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3187: *Periscope Detection*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OMN/2980: *0204228N/2980 Radar Support (OPN)*	0.000	0.000	13.256	0.000	13.256	16.405	9.441	7.253	4.563	Continuing	Continuing

D. Acquisition Strategy

Current Program supports 9 total units - 8 for installation onboard CVNs (includes upgrade of 4 Advanced Demonstration Models (ADMs) from (V)1 to (V)2 configuration) and one (1) LBTS. Two systems will be procured and installed beyond the FYDP.

E. Performance Metrics

- Complete AN/SPS-74(V)2 IOT&E
- Complete AN/SPQ-9B PDD Interface Development and Testing
- Complete AN/SPS-74(V)2 First Article Test

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3187: *Periscope Detection*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Design Support	SS/CPFF	JHU/APL:Laurel, MD	2.071	0.890	Jan 2012	-		-		-	0.000	2.961	
Primary Hardware Development	SS/CPFF	NGC:Melville, NY	8.760	3.990	Feb 2012	-		-		-	0.000	12.750	
Engineering Design Support	WR	NSWC/ Dahlgren:Dahlgren, VA	2.270	-		-		-		-	0.000	2.270	
Primary Hardware Development	SS/CPFF	3 Phoenix:Fairfax, VA	9.109	6.621	Feb 2012	1.230	Jan 2013	-		1.230	0.000	16.960	
		Subtotal	22.210	11.501		1.230		-		1.230	0.000	34.941	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NSWC/PHD:Virginia Beach, VA	6.494	0.633	Nov 2011	0.500	Dec 2012	-		0.500	0.000	7.627	
Test and Evaluation	WR	OPTEVFOR:Norfolk, VA	0.150	0.005	Jan 2012	-		-		-	0.000	0.155	
Test and Evaluation	WR	NSWC/PHD:Port Hueneme, CA	-	1.868	Nov 2011	-		-		-	0.000	1.868	
Test and Evaluation	WR	NSWC/Crane:Crane, IN	2.227	0.050	Jan 2012	-		-		-	0.000	2.277	
Test and Evaluation	WR	NSWC/Corona:Corona, CA	-	0.052	Nov 2011	-		-		-	0.000	0.052	
Test and Evaluation	WR	NRL:Washington, DC	1.271	0.400	Nov 2011	-		-		-	0.000	1.671	
		Subtotal	10.142	3.008		0.500		-		0.500	0.000	13.650	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Management Services	SS/CPFF	GCAS:San Marcos, CA	0.051	-		-		-		-	0.000	0.051	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3187: *Periscope Detection*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Management Services	C/CPAF	DTI:Norfolk, VA	0.063	-		-		-		-	0.000	0.063	
DAWDF	Allot	N/A:N/A	0.036	-		-		-		-	0.000	0.036	
		Subtotal	0.150	-		-		-		-	0.000	0.150	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	32.502	14.509		1.730		-		1.730	0.000	48.741	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3187: *Periscope Detection*

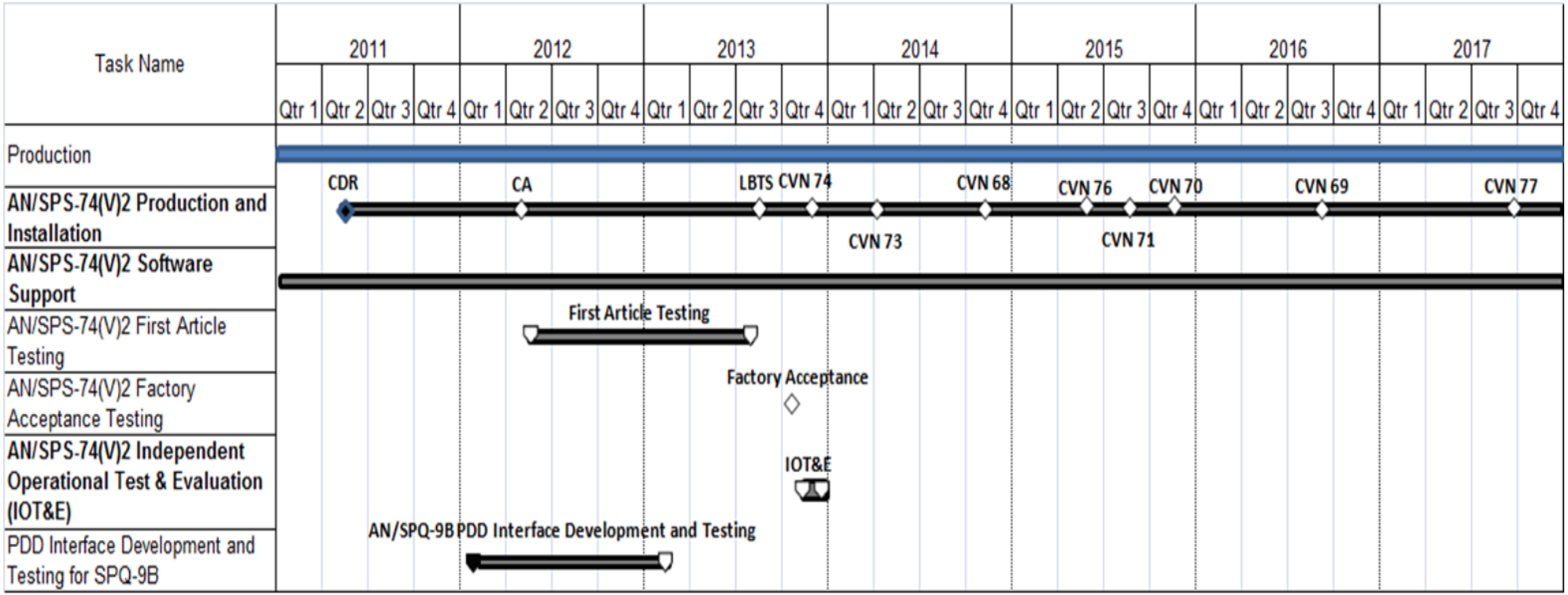


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3187: *Periscope Detection*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3187				
AN/SPS-74(V)2 Software Support	1	2011	4	2017
AN/SPS-74(V)2 CDR	2	2011	2	2011
PDD Interface Development and Testing for SPQ-9B	1	2012	1	2013
AN/SPS-74(V)2 Production and Installation (Contract Award 2Q FY12)	2	2012	4	2017
AN/SPS-74(V)2 First Article Test / Factory Acceptance Test	2	2012	3	2013
AN/SPS-74(V)2 LBTS Installation	3	2013	3	2013
AN/SPS-74(V)2 Factory Acceptance Test	4	2013	4	2013
AN/SPS-74(V)2 IOT&E	4	2013	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3188: *Dual-Band Radar*	11.276	10.291	12.042	-	12.042	18.999	14.266	8.428	6.975	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Dual-Band Radar (DBR) Upgrades: Funding is for Dual Band Radar (DBR) System upgrades to implement cost savings initiatives for Volume Search Radar (VSR) modifications, supportability analysis and associated logistics product updates; future upgrades/technology insertion efforts for Multi-Function Radar (MFR)/VSR as a part of the DBR suite on CVN 78 Class ships and the MFR on DDG 1000 Class ships. Funding is also required to resolve the hardware and software issues discovered during the various test events to include: DTB2-411, SDTS testing, Land Based Testing and pertinent At-Sea test events. The upgrades will include all aspects of the radar system/subsystems, including hardware and software. Specific subsystem areas include the Array, Transmit/Receive (T/R) module, Receiver/Exciter, Signal Data Processor, Radome, and power/cooling systems. Upgrades and technology insertions are required to maintain the level of force protection needed for ship defense against all threats envisioned in the littoral environment. The supportability analysis and logistic products associated with these upgrades will also be developed and updated.

DBR interface with Battle Force Tactical Trainer (BFTT): FY12-14 supports the design, development, and testing of an interface between the DBR and BFTT (AN/USQ-46) system that will provide training to enhance combat readiness for the CVN 78 crew. The DBR/BFTT interface development project initiates with the FY12 contract award and continues with validation testing in FY14.

DBR CVN 78 Testing and Certification: Funding in FY13-FY17 supports DBR At-Sea Test and Evaluation (T&E), Environmental Testing, DBR Surface Tracks through Cooperative Engagement Capability (CEC) and DBR Systems Certification in support of CVN 78.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: RADAR UPGRADES TECHNOLOGY INSERTION	5.736	7.954	8.288
Articles:	0	0	0
FY 2011 Accomplishments: - Continued Volume Search Radar (VSR) radome development and testing efforts. Initiated material procurement and drawing updates. - Provided integration support and defined requirements for specification changes. - Provided systems, software and hardware engineering support for combat system integration and integration with TPX-42. - Conducted DBR Common Array Power System (CAPS) study to determine design model modifications needed to make the power system compatible with system specifications.			
FY 2012 Plans: - Finalize VSR development and testing.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Conduct Technology Insertion for the MFR/VSR/DBR hardware and software and development/updates to associated logistics products. - Commence software development to implement live over simulation training capability in support of BFTT integration. ***FY 2013 Plans:*** - Continue Technology Insertion for the MFR/VSR/DBR hardware and software and development/updates to associated logistics products. - Continue software development to implement live over simulation training capability in support of BFTT integration. - Provide technical support to reformat DBR messages necessary to meet the Cooperative Engagement Capability (CEC) Interface requirements and to complete DBR element certification to the overall combat system certification for CVN 78.			
Title: RADAR UPGRADES GOVERNMENT ENGINEERING SERVICES	4.272	1.906	3.344
Articles:	0	0	0
FY 2011 Accomplishments: - Prepared test documentation (test plans/procedures) in support of DBR EMI testing efforts. - Began assessment of VSR Radome Performance. - Provided required engineering to achieve technology improvements for Dual Band Radar (DBR). - Provided systems engineering expertise to assist contractor in determining adequate CAPS design modification. - Conducted assessment of system level element certification plan. ***FY 2012 Plans:*** - Provide Government Engineering Services support for radar upgrades and technology insertion of the MFR/VSR/DBR radars. Perform oversight and assessment of efforts associated with this phase of the program. - Provide Government Engineering Services in support of DBR BFTT integration for CVN 78. - Continue DBR EMI testing efforts. - Complete assessment of VSR Radome Performance. ***FY 2013 Plans:*** - Continue to provide Government Engineering Services support for radar upgrades and technology insertion of the MFR/VSR/DBR radars. Perform oversight and assessment of efforts associated with this phase of the program. - Complete DBR EMI testing efforts. - Continue to provide Government Engineering Services in support of DBR BFTT integration for CVN 78. - Provide Government Engineering Services required to complete DBR element certification to support overall combat system certification for CVN 78.			
Title: RADAR UPGRADES PROGRAM MANAGEMENT	1.268	0.431	0.410

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
FY 2011 Accomplishments: - Provided Program Management and logistics support for radar upgrades and technology insertion for the MFR/VSR/DBR radars. - Performed analysis of the system specifications for CAPS redesign.			
FY 2012 Plans: - Continue to provide Program Management and logistics support for radar upgrades and technology insertion for the MFR/VSR/ DBR radars.			
FY 2013 Plans: - Continue to provide Program Management and logistics support for radar upgrades and technology insertion for the MFR/VSR/ DBR radars. - Continue to provide Program Management support of DBR BFTT integration for CVN 78.			
Accomplishments/Planned Programs Subtotals	11.276	10.291	12.042

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2980: *BLI 2980/OPN Items Less Than $5M*	0.000	0.000	4.900	0.000	4.900	3.269	7.418	11.700	16.500	0.000	43.787
• OMN/0702228N: *0702228N/1C2C/O&M,N*	0.000	0.000	1.512	0.000	1.512	3.239	3.873	3.440	3.366	0.000	15.430

D. Acquisition Strategy

Radar Upgrades and logistic products will be developed to address lessons learned and technology refresh for DBR systems on multiple ship classes.

E. Performance Metrics

- Complete upgrade studies and analyses each fiscal year to determine efficiencies for H/W and S/W upgrades and to determine appropriate logistics product updates
- Complete co-site and off-ship EMI analysis testing
- Complete VSR Radome development and determine opportunities to improve configuration and performance
- Complete upgrade technology insertion
- Complete development of logistics products
- Implement supportability analysis to improve supportability and reduce overall lifecycle cost
- Complete DBR At-Sea Test and Evaluation (T&E)

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*

- Complete Environmental Testing
- Complete DBR Surface Tracks through Cooperative Engagement Capability (CEC)
- Complete DBR Systems Certification
- Complete CAPS redesign

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	WR	Other Government Activities:Various	1.143	-		-		-		-	0.000	1.143	
Government Engineering Support	WR	NSWC/ Dahlgren:Dahlgren, VA	3.246	0.951	Nov 2011	1.306	Dec 2012	-		1.306	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC/PHD:Port Hueneme, CA	2.767	-		1.176	Dec 2012	-		1.176	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC/Crane:Crane, IN	4.010	0.380	Jan 2012	0.491	Dec 2012	-		0.491	Continuing	Continuing	Continuing
Government Engineering Support	WR	NRL:Washington, DC	3.725	-		-		-		-	0.000	3.725	
Government Engineering Support	SS/CPFF	JHU/APL:Baltimore, MD	0.300	0.362	Dec 2011	0.121	Dec 2012	-		0.121	Continuing	Continuing	Continuing
Government Engineering Support	MIPR	NSMA:Arlington, VA	0.903	-		-		-		-	0.000	0.903	
Government Engineering Support	SS/CPFF	GTRI:Atlanta, GA	0.453	0.139	Feb 2012	-		-		-	0.000	0.592	
Government Engineering Support	WR	NSWC/ Carderock:Philadelphia, PA	0.044	0.034	Dec 2011	0.215	Dec 2012	-		0.215	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	Raytheon:Raytheon, Sudbury, MA	12.921	7.954	Jun 2012	8.288	Dec 2012	-		8.288	Continuing	Continuing	Continuing
Systems Engineering	SS/CPAF	Raytheon IDS:San Diego, CA	1.500	-		-		-		-	0.000	1.500	
Systems Engineering	SS/CPFF	General Dynamics AIS:Fairfax, VA	1.000	-		-		-		-	0.000	1.000	
Systems Engineering	SS/CPFF	PMS 320 Syntek:Arlington, VA	0.400	-		-		-		-	0.000	0.400	
		Subtotal	32.412	9.820		11.597		-		11.597			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3188: *Dual-Band Radar*

Management Services ($ in Millions)

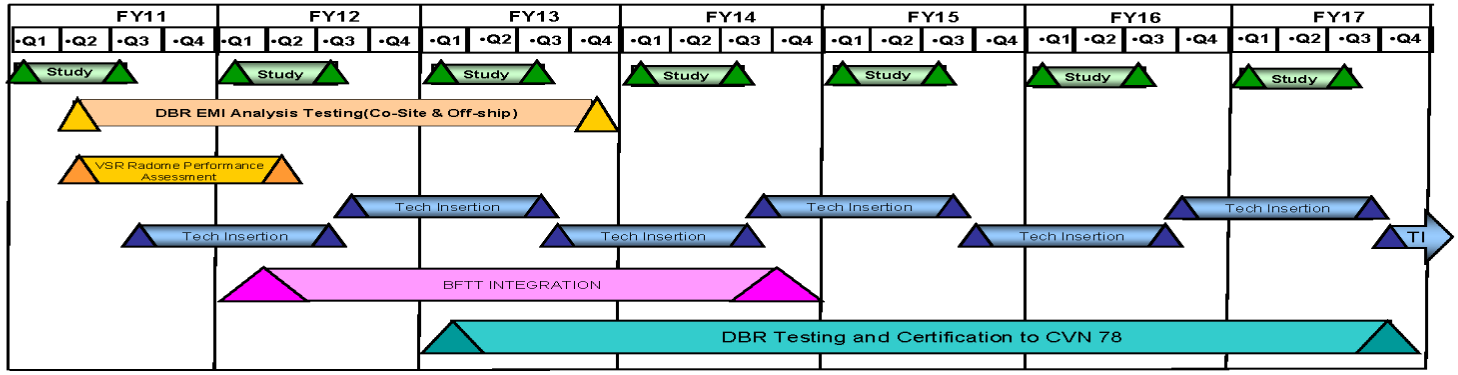
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	SPA:Washington, DC	1.546	0.431	Jan 2012	0.410	Dec 2012	-		0.410	Continuing	Continuing	Continuing
DAWDF	Allot	N/A:N/A	0.027	-		-		-		-	0.000	0.027	
Travel	Allot	PEOIWS2:Washington, DC	0.100	0.040	Jan 2012	0.035	Dec 2012	-		0.035	0.000	0.175	
Program Management Support	C/CPIF	ALION:Washington, DC	0.026	-		-		-		-	0.000	0.026	
Program Management Support	C/CPFF	CACI:Washington, DC	0.040	-		-		-		-	0.000	0.040	
		Subtotal	1.739	0.471		0.445		-		0.445			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	34.151	10.291		12.042		-		12.042			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3188: *Dual-Band Radar*

DBR System Upgrades



Note: Supportability Analysis is conducted in conjunction with the Study.
Hardware, software and logistic product updates are conducted in conjunction with the Tech Insertion and CVN 78 BFTT Integration.
DBR At-Sea T&E, Environmental Testing, DBR Surface Tracks through CEC and DBR System Certification are included in the DBR Testing and Certification support to CVN 78.

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3188: *Dual-Band Radar*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3188				
DBR System Upgrade Studies and Analysis	1	2011	3	2017
DBR EMI Analysis Testing (Co-Site & Off-ship)	2	2011	4	2013
DBR VSR Radome Performance Assessment	2	2011	2	2012
DBR System Upgrade Technology Insertion	3	2011	4	2017
DBR BFTT Integration for CVN 78	1	2012	4	2014
DBR Testing and Certification to CVN 78	1	2013	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3232: *Multi-Mission Signal Processor*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3232: *Multi-Mission Signal Processor*	32.624	32.360	14.617	-	14.617	14.894	15.856	16.300	16.510	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Multi-Mission Signal Processor (MMSP): The development of Multi-Mission Signal Processor (MMSP) provides Anti-Air Warfare (AAW)/Ballistic Missile Defense (BMD) Multi-mission capability for DDG 51-78 as part of AEGIS Modernization Program. This capability will be utilized for DDG 113 and follow new construction and AEGIS Ashore. Modifies SPY-1D Transmitters to enable dual beam for reduced frame times and better reaction time, and provides stability for all D(V) waveforms and avoid operational degradation. The SPY-1 radar system detects, tracks and supports engagements of a broader range of threats. MMSP improves performance in littoral, ducted clutter environments, and in electronic attack (EA), and chaff environments and provides greater commonality in computer programs and equipment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SYSTEMS ENGINEERING	32.624	32.360	14.617
Articles:	0	0	0
FY 2011 Accomplishments: - Preparation for and completion of Engineering Exercises - Continued MMSP design and development - Supported MMSP integration testing with ACB-12 to address all MMSP related issues - Completed transmitter modification development - Maintained alignment with the Ballistic Missile Defense Program and the associated Ballistic Missile Defense Signal Processor (BSP) Adjunct to incorporate BMD capability within MMSP during AEGIS Modernization - Initiated cruiser variant engineering and design			
FY 2012 Plans: - Preparation for the Multi-Mission Exercise and Qualification Testing - Continue to support MMSP integration testing with ACB-12 to address all MMSP related issues - Installation of Transmitter Modification at CSEDS - Continue to maintain alignment with the Ballistic Missile Defense Program and the associated Ballistic Missile Defense Signal Processor (BSP) adjunct to incorporate BMD capability within MMSP during AEGIS Modernization			
FY 2013 Plans: - Support of Combat System Ship Qualification Trials (CSSQT) testing - Continue to support MMSP integration testing with ACB-12 to address all MMSP related issues			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3232: *Multi-Mission Signal Processor*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continue to maintain alignment with the Ballistic Missile Defense Program and the associated Ballistic Missile Defense Signal Processor (BSP) adjunct to incorporate BMD capability within MMSP during AEGIS Modernization			
Accomplishments/Planned Programs Subtotals	32.624	32.360	14.617

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/2122: *BLI 2122/SCN DDG 51*	2,900.331	2,081.432	3,514.941	0.000	3,514.941	2,014.297	3,002.049	3,508.440	4,048.090	Continuing	Continuing
• OPN/0900: *BLI 0900/OPN DDG Modernization*	288.118	117.522	477.772	0.000	477.772	288.134	516.908	469.812	529.385	Continuing	Continuing

D. Acquisition Strategy

Multi-Mission Signal Processor (MMSP) provides AAW/BMD Multi-mission capability for AEGIS Modernization Program and leverages BMD 4.0.1 and SPY-1D(V) designs. This MMSP development efforts support integration of BMD 5.0 signal processing, and will lead to the OPN/SCN procurement for shore sites and shipsets.

E. Performance Metrics

- Complete DDG Advanced Capability Build 12 (ACB 12) In-Process Review (IPR) #5
- Complete DDG SPY-1D(V) Engineering Exercise (EE) #1
- Complete DDG Jamex #2
- Complete DDG SPY-1D(V) Engineering Exercise (EE) #2
- Complete DDG Qualification Testing
- Complete DDG ACB 12 Multi-Mission Exercise
- Complete DDG Delivery
- Complete DDG Aegis Light Off (ALO)
- Complete DDG Combat System Ship Qualification Trials (CSSQT)
- Complete DDG Final Certification
- Complete DDG Commercial Off The Shelf (COTS) Refresh - Engineering Change Proposal (ECP)

- Complete CG ACB 12 System Readiness Review (SRR)
- Complete CG ACB 12 Focus Day

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3232: *Multi-Mission Signal Processor*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SYSTEM ENGINEERING	SS/CPFF	Lockheed Martin:Moorestown, NJ	77.236	24.855	Jan 2012	8.615	Dec 2012	-		8.615	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	C/CPFF	AEGIS Techrep:Moorestown, NJ	1.084	1.527	Jan 2012	1.260	Dec 2012	-		1.260	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	SS/FP	APL/JHU:Laurel, MD	1.188	1.121	Jan 2012	0.970	Dec 2012	-		0.970	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	CSCS:Dahlgren, VA	0.513	0.285	Jan 2012	0.210	Dec 2012	-		0.210	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NRL:Washington, DC	0.960	0.799	Jan 2012	0.664	Dec 2012	-		0.664	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NSWC/DD:Dahlgren, VA	1.153	1.487	Jan 2012	1.128	Nov 2012	-		1.128	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NSWC/CR:Crane, IN	0.980	0.810	Jan 2012	0.583	Nov 2012	-		0.583	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NSWC/PHD:Port Hueneme, CA	1.110	1.049	Jan 2012	0.805	Nov 2012	-		0.805	Continuing	Continuing	Continuing
		Subtotal	84.224	31.933		14.235		-		14.235			

Management Services ($ in Millions)

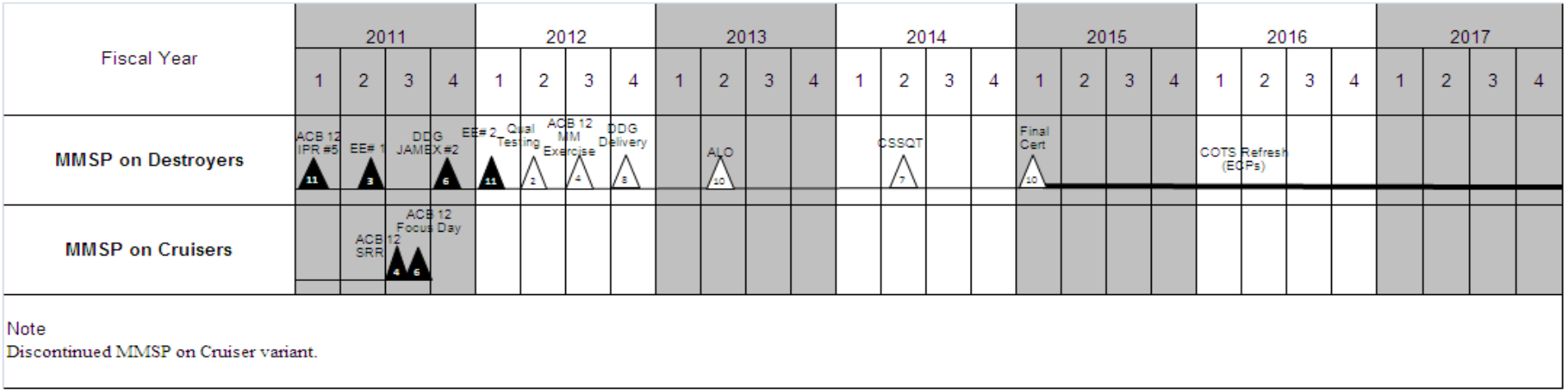
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Allot	PEOIWS2:Washington, DC	0.100	0.060	Jan 2012	0.060	Nov 2012	-		0.060	Continuing	Continuing	Continuing
PSS	C/CPFF	SPA-PSS:Washington, DC	0.550	0.367	Nov 2011	0.322	Nov 2012	-		0.322	Continuing	Continuing	Continuing
		Subtotal	0.650	0.427		0.382		-		0.382			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	84.874	32.360		14.617		-		14.617			

Remarks

Discontinued ACB 14 MMSP for AN/SPY-1B(V) Cruiser variant, resulting in a reduction of $11.070 in FY13.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3232: *Multi-Mission Signal Processor*



Note
Discontinued MMSP on Cruiser variant.

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3232: *Multi-Mission Signal Processor*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3232				
DDG Advanced Capability Build 12 (ACB 12) In Process Review (IPR) # 5	1	2011	1	2011
DDG SPY-1D(V) Engineering Exercise (EE) #1	2	2011	2	2011
DDG Jamming Exercise (JAMEX) #2	4	2011	4	2011
DDG SPY-1D(V) EE #2	1	2012	1	2012
DDG Qualification Testing	2	2012	2	2012
DDG ACB 12 Multi-Mission Exercise	3	2012	3	2012
DDG Delivery	4	2012	4	2012
DDG Aegis Light Off (ALO)	2	2013	2	2013
DDG Combat System Ship Qualification Trials (CSSQT)	2	2014	2	2014
DDG Final Certification	1	2015	1	2015
DDG Commercial Off The Shelf (COTS) Refresh - Engineering Change Proposals (ECP)	1	2015	4	2017
CG ACB 12 System Readiness Review (SRR)	3	2011	3	2011
CG ACB 12 Focus Day	3	2011	3	2011

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3301: *Improved Capabilities SPY-1 Radar*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3301: *Improved Capabilities SPY-1 Radar*	3.481	3.629	3.506	-	3.506	2.063	0.935	0.954	0.962	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Improved Capabilities for SPY-1 Radar: These Reliability, Maintainability, and Availability (RM&A) improvements are intended to reduce cascading failures, mitigate obsolescence issues, and improve reliability in support of Anti-Air Warfare (AAW) and Ballistic Missile Defense (BMD) missions while still providing AN/SPY-1 Radar Total Ownership Cost Reductions. Improvements will yield reductions in annual fleet maintenance costs.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Improved Capabilities SPY-1 Radar	3.481	3.629	3.506
Articles:	0	0	0
FY 2011 Accomplishments: - Initiated requirements development and design of 10KW Traveling Wave Tube (TWT) and Continuous Wave Illuminator (CWI) Microwave Tubes - Initiated design and development of sidewall capacitor monitoring circuit for Transmitter High Voltage Power Supply (HVPS) - Initiated design and development and environmental testing for 10kW TWT - Initiated improvements to design of Cathode for MK 99 CWI TWT			
FY 2012 Plans: - Continue design and development of Sidewall Capacitor monitoring circuit for HVPS - Continue design, development, Environmental Testing for 10kW TWT - Initiate design improvements to filament for Switch Tube			
FY 2013 Plans: - Finalize design and development of Sidewall Capacitor monitoring circuit for HVPS - Finalize design and development of 10kW TWT - Continue design improvements to filament for Switch Tube - Initiate design and development of Cross Fielded Amplifier Microwave Tube			
Accomplishments/Planned Programs Subtotals	3.481	3.629	3.506

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3301: *Improved Capabilities SPY-1 Radar*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2980: *Items Less Than $5M*	0.000	0.000	2.400	0.000	2.400	9.593	6.400	1.500	1.630	Continuing	Continuing
• O&MN/0702228N: *O&M,N AEGIS Wholeness SPY Transmitter Reliability*	0.000	0.000	3.312	0.000	3.312	3.928	4.449	2.415	6.042	Continuing	Continuing

D. Acquisition Strategy

Improved Capabilities SPY-1 Reliability, Maintainability, and Availability (RM&A) will design and development of an Ordnance Alterations (ORDALT) Package for fixes and modifications to known transmitter, microwave tube (MWT), and logistic shortcomings (also includes the MK-99 CWI MWT).

E. Performance Metrics

- Complete 10kW Traveling Wave Tube/Continuous Wave Illumination Microwave Tube (TWT/CWI MWT) Improvement Design/Development
- Complete A/B EI Switch Improvement Design/Development
- Complete Sidewall Capacitor Monitoring Circuit
- Complete 10kW Monitoring Circuit development
- Complete Cross-Field Amplifier/Switch Tube (CFA/SWT) MWT Improvement Design Development
- Complete MWT Improvement Design/Development

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3301: *Improved Capabilities SPY-1 Radar*

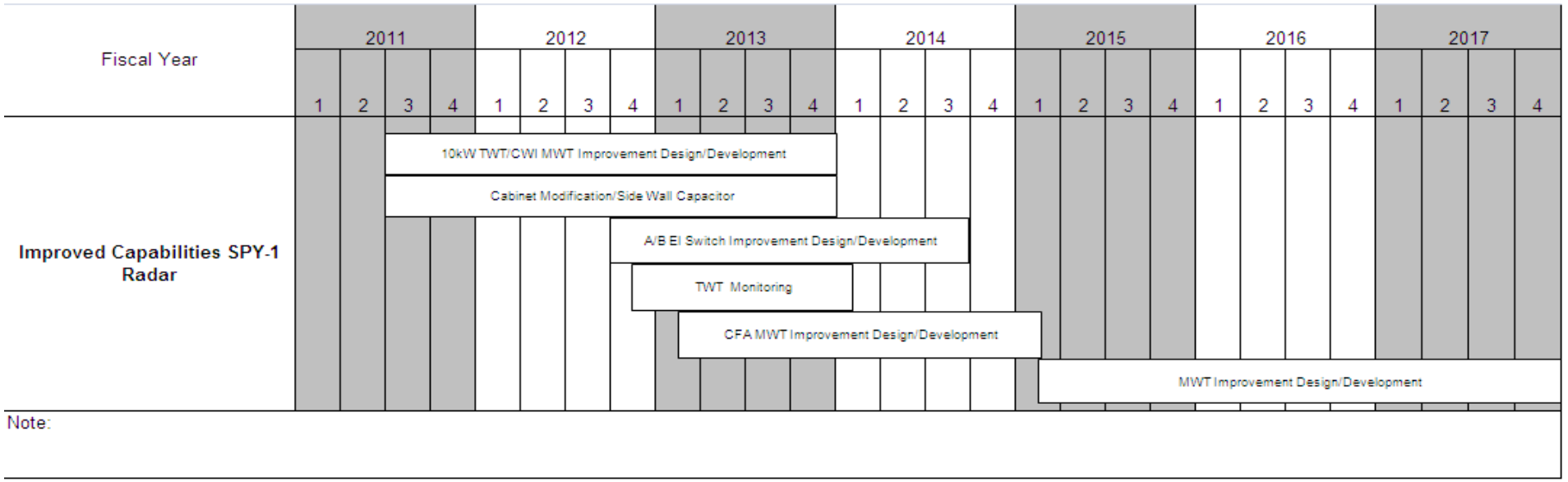
Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
SYSTEM ENGINEERING	C/CPFF	Raytheon:Sudbury, MA	0.700	0.400	Jan 2012	0.600	Dec 2012	-		0.600	Continuing	Continuing	Continuing
SYSTEM ENGINEERING	WR	NSWC/Crane, IN:Crane, IN	2.781	3.229	Jan 2012	2.906	Nov 2012	-		2.906	Continuing	Continuing	Continuing
		Subtotal	3.481	3.629		3.506		-		3.506			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.481	3.629		3.506		-		3.506			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 3301: *Improved Capabilities SPY-1 Radar*



Note:

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604501N: *Advanced Above Water Sensors*	**PROJECT** 3301: *Improved Capabilities SPY-1 Radar*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3301				
10 kW Traveling Wave Tube (TWT)/Continuous Wave Illuminator (CWI) Microwave Tube (MWT) Improvement Design/Development	3	2011	4	2013
Cabinet Modification/Side Wall Capacitor	3	2011	4	2013
A/B Electric Switch Improvement Design/Development	4	2012	3	2014
Travel Wave Tube (TWT) Monitoring	4	2012	1	2014
Cross Field Amplifier (CFA)/Switch Tube (SWT) Microwave Tube (MWT) Improvement Design/Development	1	2013	1	2015
MWT Improvement Design/Development	1	2015	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604501N: *Advanced Above Water Sensors*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	20.000	-	-	-	-	-	-	-	0.000	20.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Advanced Radar Innovation Fund: Funds the development and integration of existing and new technologies into the Navy's sensors to enhance performance and ensure sensor operations and sustainment throughout the lifecycle of the sensor and platforms on which installed.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Adv Radar Innovation Fund - Surf (Cong)	-	20.000
FY 2012 Plans: N/A		
Congressional Adds Subtotals	-	20.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Add.

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	100.717	90.180	82.620	-	82.620	88.156	82.653	97.962	103.826	Continuing	Continuing
0219: *Sub Sonar Improvement (ENG)*	63.150	54.389	53.835	-	53.835	56.319	57.605	58.447	59.759	Continuing	Continuing
0742: *Sub Integrated Ant System*	19.257	22.671	18.395	-	18.395	16.383	13.888	26.663	30.945	Continuing	Continuing
0775: *Submarine Supt Equip Prog*	-	1.271	1.297	-	1.297	1.325	1.361	1.394	1.420	Continuing	Continuing
1411: *Sub Tact Comm System*	18.310	11.849	9.093	-	9.093	14.129	9.799	11.458	11.702	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Submarine Support Equipment Program develops and improves submarine Electronic Warfare Support (EWS) technology, components, equipment, and systems that will increase submarine operational effectiveness, safety of ship, and survivability in an increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. Enhancements are necessary for submarine EWS to be operationally effective in the following mission areas: Joint Littoral Warfare, Joint Surveillance, Space and Electronic Warfare and Intelligence Collection, Maritime protection, and Joint Strike.

The Submarine Sonar Improvement Program delivers block updates to Sonar Systems and improved Sensors installed on SSN 688, 688I, SSN 21, VIRGINIA, SSBN, and SSGN Class Submarines to maintain clear acoustical, tactical and operational superiority over submarine and surface combatants in all scenarios through detection, classification, localization, and contact following. Current developments are focused on supporting Littoral Warfare, Regional Sea Denial, Battle Group Support, Diesel Submarine Detection, Surveillance, and Peacetime Engagement.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	118.897	100.591	87.802	-	87.802
Current President's Budget	100.717	90.180	82.620	-	82.620
Total Adjustments	-18.180	-10.411	-5.182	-	-5.182
• Congressional General Reductions	-	-0.111			
• Congressional Directed Reductions	-	-10.300			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-7.800	-			
• SBIR/STTR Transfer	-3.025	-			
• Program Adjustments	-	-	-4.974	-	-4.974
• Rate/Misc Adjustments	-	-	-0.208	-	-0.208
• Congressional General Reductions Adjustments	-0.655	-	-	-	-
• Congressional Directed Reductions Adjustments	-6.700	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0219: *Sub Sonar Improvement (ENG)*	63.150	54.389	53.835	-	53.835	56.319	57.605	58.447	59.759	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program delivers block updates to Sonar Systems installed on SSN 688, 688I, SSN 21, VIRGINIA, SSBN, and SSGN Class Submarines to maintain clear acoustical, tactical and operational superiority over submarines and surface combatants in all scenarios through detection, classification, localization, and contact following.

Acoustics Rapid COTS Insertion (A-RCI) was a multi-phased evolutionary development geared toward addressing acoustic superiority issues through the rapid introduction of interim development products applicable to all classes of submarines. A-RCI Phase I and II introduced Towed Array processing improvements, Phase III introduced Spherical

Array processing improvements, and Phase IV provided High Frequency (HF) Array processing improvements for SSN 688I, SSGN, VIRGINIA and SSN 21 Class Submarines. As part of CNO N872's plan to maintain acoustic superiority for in-service submarines, a joint cooperative effort with PEO IWS-5 was established to deliver annual Advanced Processing

Builds (APBs) to prevent obsolescence and deliver ongoing capability improvements. The capabilities in the APBs will be integrated as part of A-RCI certified system.

Sensor efforts provide increased operational capabilities for littoral operations, situational awareness, and reliability improvements.

Towed Systems development efforts provide increased operational capabilities and reliability improvements to maintain a clear acoustical, tactical, and operational superiority over submarine and surface combatants.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: APB Productionization	14.065	14.474	14.002
Articles:	0	0	0
Description: APB productionization provides for the transition of APB capability improvements to the Fleet for the integration, testing and formal certification.			
FY 2011 Accomplishments: Continued Advanced Processing Build (APB) Sea Testing, Integration, and Certification. This effort is primarily the transition of APB software from development to A-RCI for integration, testing, and formal certification.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue Advanced Processing Build (APB) Sea Testing, Integration, and Certification. This effort is primarily the transition of APB software from development to A-RCI for integration, testing, and formal certification. ***FY 2013 Plans:*** Continue Advanced Processing Build (APB) Sea Testing, Integration, and Certification. This effort is primarily the transition of APB software from development to A-RCI for integration, testing, and formal certification.			
Title: Integration and Testing ***Articles:*** ***Description:*** Integration and Testing provides support to integrated and test APB's into all submarine classes with numerous sensor systems. ***FY 2011 Accomplishments:*** Supported Advanced Processing Builds installed on SSN 688I, SSN 688, SSBN 730, SSN 21, SSGN 726, VA Class, new sensors TB-34 Towed Arrays, and Low Cost Conformal Array (LCCA). ***FY 2012 Plans:*** Supports Advanced Processing Builds installed on SSN 688I, SSN 688, SSBN 730, SSN 21, SSGN 726, VA Class, new sensors TB-34 Towed Arrays, and Low Cost Conformal Array (LCCA). ***FY 2013 Plans:*** Supports Advanced Processing Builds installed on SSN 688I, SSN 688, SSBN 730, SSN 21, SSGN 726, VA Class, new sensors TB-34 Towed Arrays, and Low Cost Conformal Array (LCCA).	41.231 0	39.648 0	39.833 0
Title: Affordable Towed Array Technology (TB-33) ***Articles:*** ***Description:*** Affordable Towed Array Technology development provides more affordable and reliable thinline arrays using fiber optic technology and eliminates "wet end" electronics. ***FY 2011 Accomplishments:*** Continued development of special test modules to evaluate PRU design. TB-33 program was cancelled, letter dated February 28, 2011 signed by RDML Johnson	5.044 0	-	-
Title: Future Sensor Capability ***Articles:***	2.810 0	0.267 0	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Improving array capabilities, long-range passive detection, and component reliability through development of state-of-the-art technologies. ***FY 2011 Accomplishments:*** Funded operational testing for Small Diameter Heading Sensors, Compact Towed Array Telemetry, and software development for the Non-Traditional Sensor System. ***FY 2012 Plans:*** Develop a Non-Traditional Sensor System to furnish the sonar suite with previously-unavailable search tactics. Continue initiatives with single crystal, vector sensor, and fiber optic sonar technologies.			
Accomplishments/Planned Programs Subtotals	63.150	54.389	53.835

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/BLI 214700: *SSN Acoustics*	185.367	176.482	156.353	0.000	156.353	231.308	210.615	260.133	183.036	Continuing	Continuing
• OPN/BLI 214705: *SSN Acoustics Installation*	47.376	36.431	34.521	0.000	34.521	23.102	36.444	38.749	38.727	Continuing	Continuing

D. Acquisition Strategy

Acoustic Systems:
A-RCI utilizes an open architecture and Commercial Off-the-Shelf products in support of new and upgraded sonar systems. A follow-on development and production sole source cost plus incentive fee contract was awarded to General Dynamics, Advanced Information Systems in August 2009 and to Lockheed Martin Maritime Systems & Sensors in April 2010. Program Review with Milestone Decision Authority was conducted in November 2011 granting approval for the FY12 production option.

Thinline Arrays:
Thin line towed arrays provide a key anti-submarine capability, and towed array reliability remains a critical Fleet need. Investment in engineering efforts such as array telemetry improvements along with Highly Accelerated Life Testing (HALT), array hosewall ruggedization, a solid-state heading sensor, and others, are still needed for continued system improvements.

Hull Mounted Arrays:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

The Low Cost Conformal Array (LCCA) transitioned from PEO IWS in FY08 with a competitive contract awarded for the PRU development. PRU procurements, fabrication, and assembly began in FY08. PRU deliveries were accepted in FY10. ARCI Integration, TECHEVAL, and OPEVAL testing were conducted in FY10. LCCA Milestone C Full Rate Production was accomplished in August 2011.

E. Performance Metrics

The A-RCI program will modernize and sustain approximately 25% of the SSN Fleet per year through executing bi-annual software Advanced Processing Builds (APBs) and bi-annual hardware Technical Insertions (TIs). The Low Cost Conformal Array (LCCA) program will successfully complete initial installation, developmental testing (DT), and operational testing (OT) in support of achieving the Initial Operating Capability (IOC). The TB-34 program will successfully achieve a Milestone C Full Rate Production decision.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPIF	LMC:Manassas, VA	262.844	21.706	Dec 2011	20.991	Dec 2012	-		20.991	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPFF	Chesapeake Sciences:Millersville, MD	48.492	-		-		-		-	0.000	48.492	
Ancillary Hardware Development	SS/CPFF	ARL University of Texas:Austin, TX	21.800	3.061	Feb 2012	3.113	Feb 2013	-		3.113	Continuing	Continuing	Continuing
Systems Engineering	SS/CPFF	Johns Hopkins APL:Baltimore, MD	24.255	2.980	Dec 2011	3.030	Dec 2012	-		3.030	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	Lockheed Eagan:MN - Keyport	21.276	3.024	Jan 2012	3.075	Jan 2013	-		3.075	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPIF	Progeny Systems:Manassas, VA	33.481	6.171	Jan 2012	6.257	Jan 2013	-		6.257	Continuing	Continuing	Continuing
Systems Engineering	WR	NUWC:Newport, RI	143.445	6.250	Jan 2012	5.987	Dec 2012	-		5.987	Continuing	Continuing	Continuing
Systems Engineering	WR	NSWC:Carderock, MD	15.705	2.514	Dec 2011	2.557	Dec 2012	-		2.557	Continuing	Continuing	Continuing
Systems Engineering	WR	Naval Research Lab:Washington, DC	1.857	-		-		-		-	Continuing	Continuing	Continuing
Hardware/Software Development	C/CPFF	SBIR (Various):Not Specified	2.665	-		-		-		-	0.000	2.665	
		Subtotal	575.820	45.706		45.010		-		45.010			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Software Development	C/CPIF	General Dynamics, AIS:Fairfax, VA	142.553	3.015	Dec 2011	3.066	Dec 2012	-		3.066	Continuing	Continuing	Continuing
Primary Software Development	C/CPFF	Sedna Digital,:Manassas, VA	16.757	4.004	Dec 2011	4.072	Dec 2012	-		4.072	Continuing	Continuing	Continuing
		Subtotal	159.310	7.019		7.138		-		7.138			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test and Evaluation	WR	OPTEVFOR:Norfolk, VA	7.404	0.600	Jan 2012	0.610	Dec 2012	-		0.610	Continuing	Continuing	Continuing
		Subtotal	7.404	0.600		0.610		-		0.610			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Support Services	C/FFP	EG&G Technical Services:Washington, DC	10.100	0.814	Jan 2012	0.827	Dec 2012	-		0.827	0.000	11.741	
Travel	WR	NAVSEA:Washington, DC	1.825	0.250	Dec 2011	0.250	Dec 2012	-		0.250	Continuing	Continuing	Continuing
		Subtotal	11.925	1.064		1.077		-		1.077			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	754.459	54.389		53.835		-		53.835			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

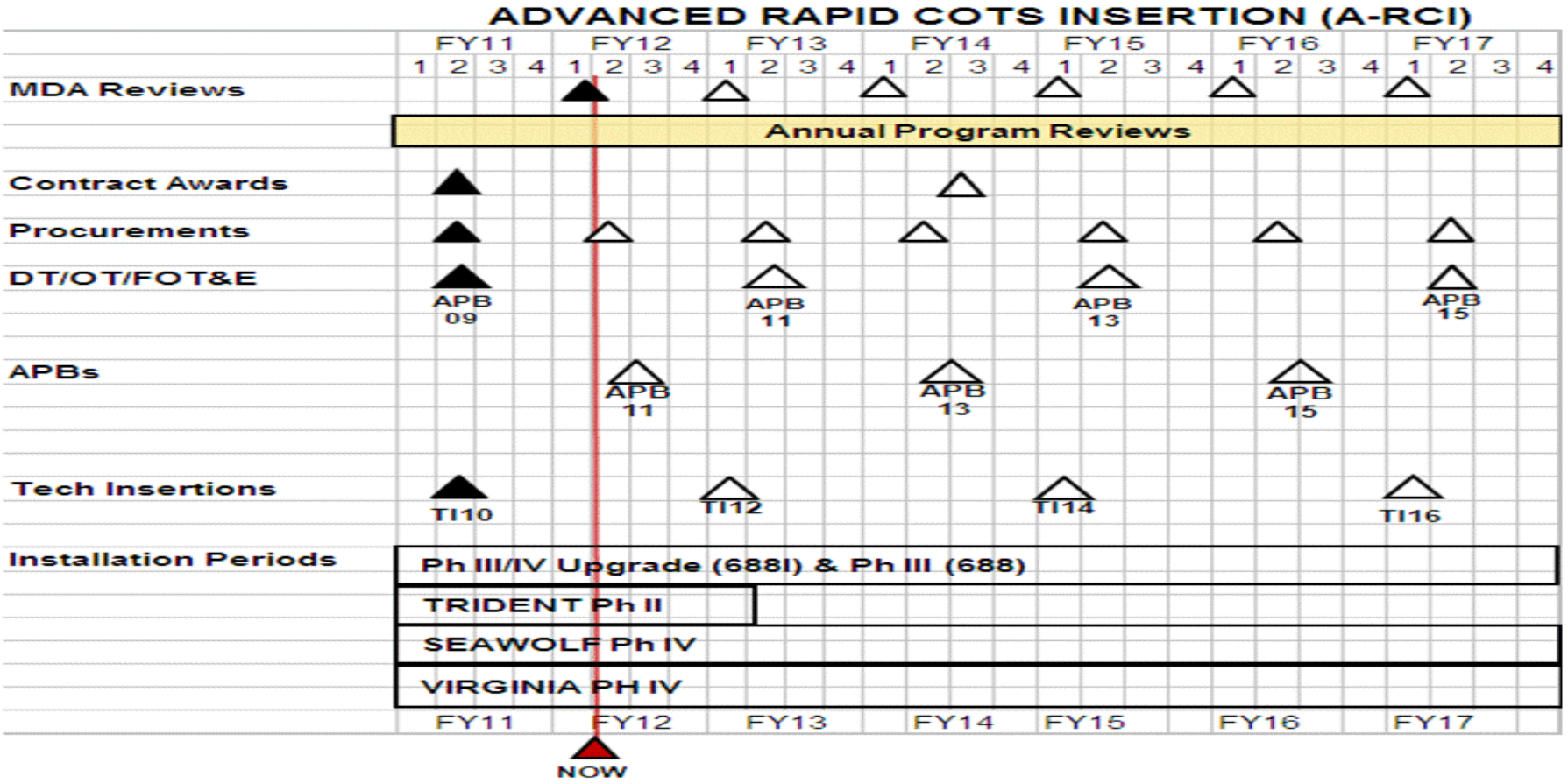


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

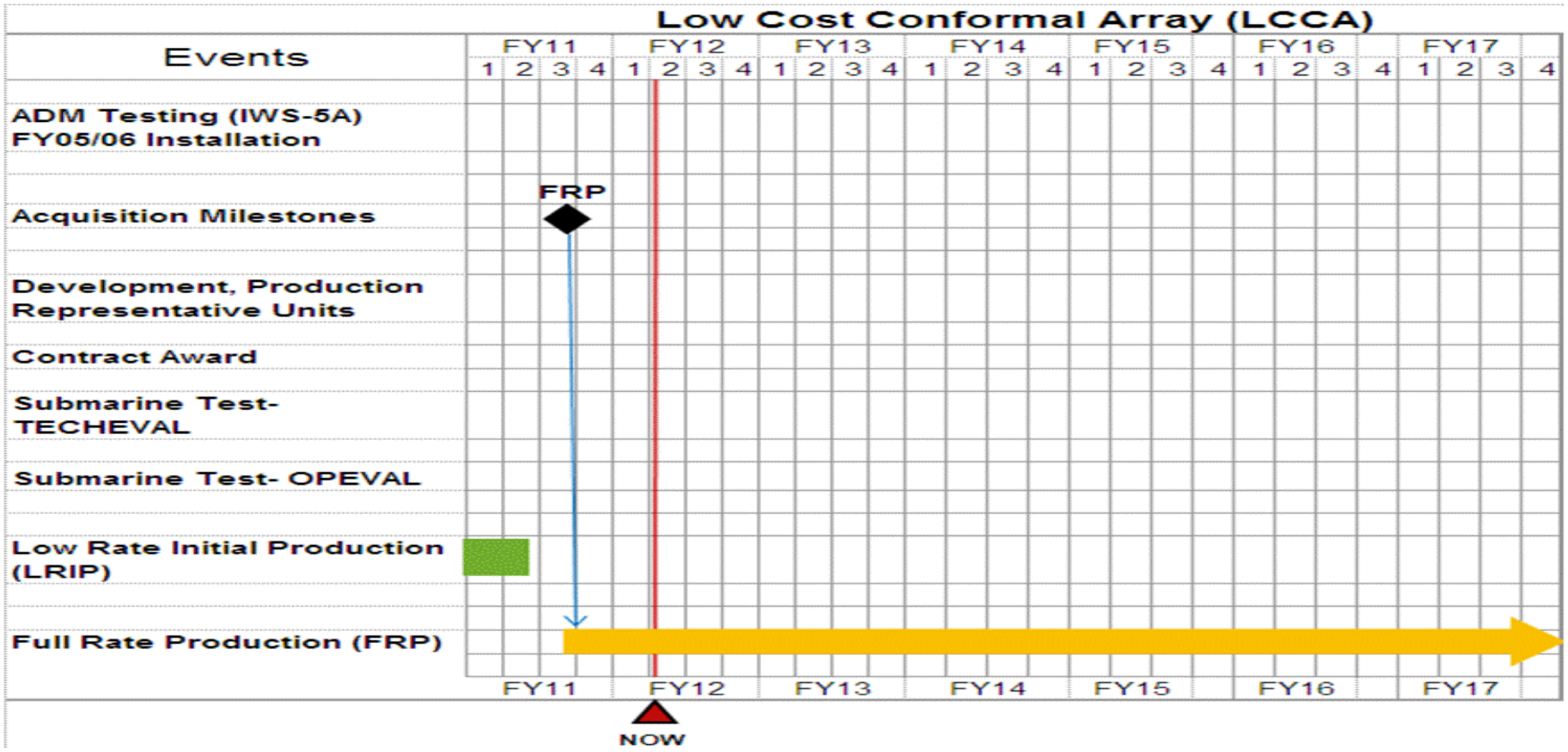


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0219: *Sub Sonar Improvement (ENG)*

TB-34

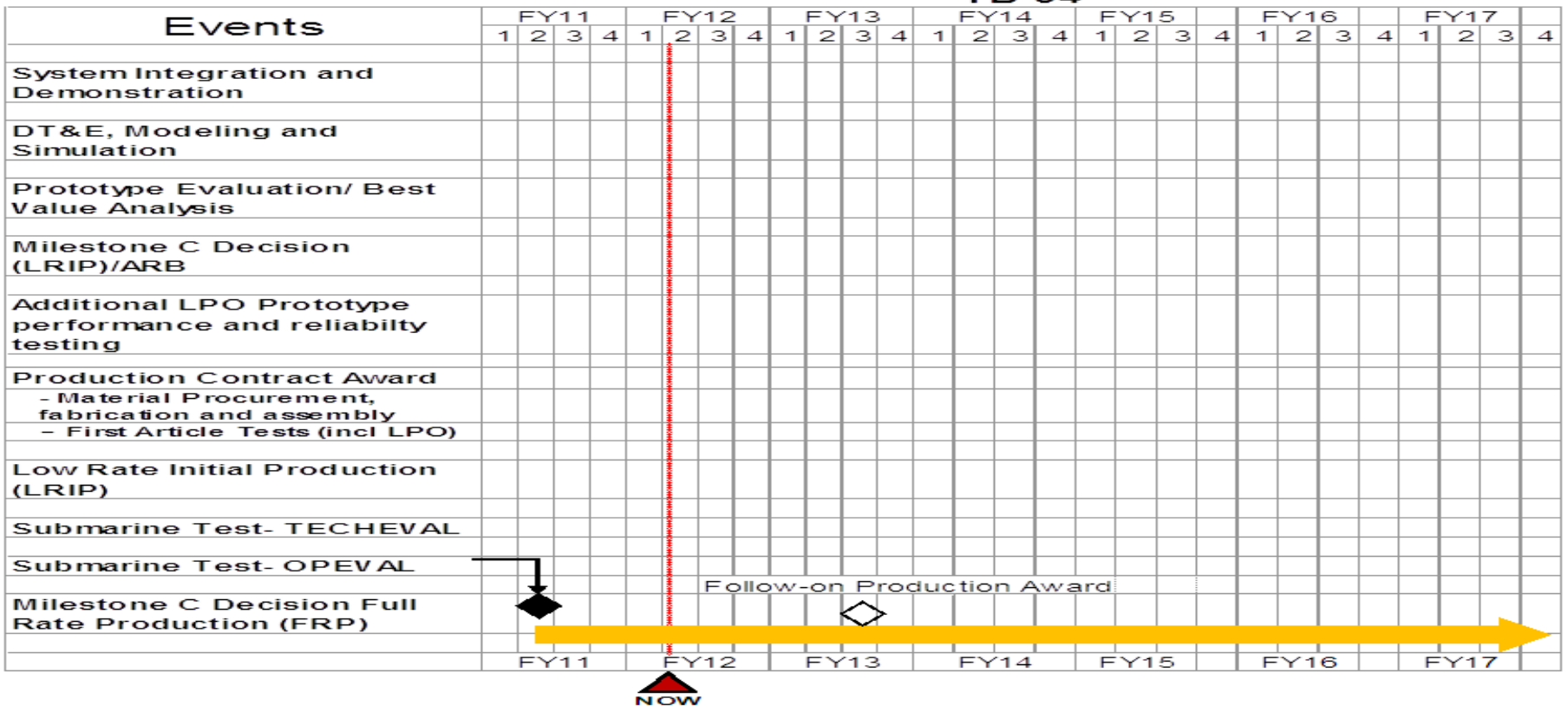


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604503N: *SSN-688 & Trident Modernization*	**PROJECT** 0219: *Sub Sonar Improvement (ENG)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0219				
ACOUSTICS	1	2011	4	2017
Acquisition Milestones	1	2011	1	2013
Annual Program Review	1	2011	4	2017
Contract Awards	2	2011	3	2014
Procurements	2	2011	2	2017
DT/OT/FOT&E Tests	2	2011	2	2012
APB Deliveries	1	2011	4	2012
Tech Insertions	1	2011	1	2015
Installation Periods	1	2011	4	2014
LCCA	1	2011	4	2017
Low Rate Initial Production	1	2011	2	2011
Full Rate Production	3	2011	4	2017
Low Rate Initial Production (LRIP)	1	2011	4	2011
Milestone C Decision (FRP) / ARB	2	2011	3	2011
TB-34 Production Deliveries	2	2011	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0742: *Sub Integrated Ant System*	19.257	22.671	18.395	-	18.395	16.383	13.888	26.663	30.945	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Submarine Integrated Antenna System project (0742) provides for the development and testing of submarine antennas designed to meet emerging submarine requirements of: (a) Improved frequency coverage and data rate capabilities of submarine antennas and their interface to the External Communications System, (b) Improved submarine antenna performance and data rate while the submarine is operating at speed and depth, (c) Antenna compatibility with new waveforms and transceiver equipment, (d) Improved stealth capability of existing and future antennas and (e) Improved antenna design to reduce Total Ownership Cost. This project funds research and development for submarine antennas including (1) Pre-Planned Product Improvement (P3I) efforts to existing antennas including Outboard Electronics (OE)-538/BRC Multi-Function Antenna, (2) OE-562 Submarine, High Data Rate (SubHDR) system development of components for reliability improvements, (3) Development of new systems including Advanced High Data Rate (AdvHDR), and (4) Commence support of Submarine Communications Buoy (SCB) Project Arrangement with United Kingdom (UK). The efforts listed above will provide Ship Submersible Nuclear (SSN), Ship Submersible Ballistic Nuclear (SSBN) and Ship Submersible Guided Nuclear (SSGN) platforms with improved communications capabilities to support future Joint, Allied, and Naval operations.

JUSTIFICATION FOR BUDGET ACTIVITY:
This project is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.
Notes/Comments:
FY13 OE-538: Complete Developmental Test (DT) and Operational Assessment (OA), continue development/update of required Milestone C acquisition documents, and complete additional EDM procurement.
FY13 SubHDR: Continue development of components identified by research and analysis. Complete UNDEX development and testing.
FY13 Advanced High Data Rate (AdvHDR): Continue risk mitigation demonstrations and technology maturation efforts towards technology readiness assessments in preparation of Advanced Development Model (ADM) Demonstration.
FY13 Submarine Communications Buoy (SCB): Continue support for SCB Project Arrangement with United Kingdom and continue providing program, contract, and system engineering management support for Submarine Communications Buoy.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Antenna Transition Engineering	4.557	3.942	4.096
Articles:	0	0	0
FY 2011 Accomplishments: - Continued to provide emerging requirements and satellite communications database/link analysis for other development programs in support of current & future communication architectures.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continued Pre-Planned Product Improvement (P3I) investigation and development efforts towards legacy antenna systems. - Continued concept engineering, new technology evaluations, and assessments in support of current and future submarine antenna applications, which included Hull, Mechanical, and Electrical (HM&E) interfaces. - Continued to investigate multiple usage antennas, including antennas that can be used for communications and other functions. ***FY 2012 Plans:*** - Continued to provide emerging requirements and satellite communications (SATCOM) database/link analysis for other development programs in support of current & future communication architectures. - Continued Pre-Planned Product Improvement (P3I) investigation and development efforts towards legacy antenna systems. - Continued concept engineering, new technology evaluations, and assessments in support of current and future submarine antenna applications, to include HM&E interfaces. - Continued to investigate multiple usage antennas, including antennas that can be used for communications and other functions. ***FY 2013 Plans:*** - Continue to provide emerging requirements and SATCOM database/link analysis for other development programs in support of current & future communication architectures. - Continue P3I investigation and development efforts towards legacy antenna systems. - Continue concept engineering, new technology evaluations, and assessments in support of current and future submarine antenna applications, to include HM&E interfaces. - Continue to investigate multiple usage antennas, including antennas that can be used for communications and other functions.			
Title: Outboard Electronics (OE)-538	6.970	8.875	3.972
Articles:	0	0	0
FY 2011 Accomplishments: - Continued Increment 2 system design, manufactured & tested EDM to validate the design supports Fleet requirements (Mobile User Objective System (MUOS)/Link-16/Iridium). - Prepared acquisition (e.g., Capabilities Production Document (CPD)) and applicable ILS documentation to support Low-Rate Initial Production decision. - Continued development/updated required Milestone C acquisition documents. ***FY 2012 Plans:*** - Completed Increment 2 system design, manufacture & test EDM to validate the design supports Fleet requirements (MUOS/ Link-16/Iridium). - Continued Capabilities Production Document (CPD) and applicable ILS documentation to support Low-Rate Initial Production (LRIP) decision.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continued development/update of required Milestone C acquisition documents. ***FY 2013 Plans:*** - Complete CPD and continue applicable ILS documentation to support Low-Rate Initial Production (LRIP) decision. - Continue development/update of required Milestone C acquisition documents. - Complete Developmental Test (DT) and Operational Assessment (OA). - Complete additional EDM procurement in support of MUOS Terminal DT/OT.			
Title: Submarine High Data Rate (SubHDR) Pre-Planned Product Improvement (P3I)	1.621	3.649	5.151
Articles:	0	0	0
FY 2011 Accomplishments: Continued Underwater Explosion (UNDEX) development and testing. Continued research and analysis on SubHDR components to increase performance reliability.			
FY 2012 Plans: Continued UNDEX development and testing. Completed research and analysis on SubHDR components to increase performance reliability. Commenced development of components identified by research and analysis for performance reliability improvements.			
FY 2013 Plans: - Continue development of components identified by research and analysis for performance reliability improvements. Complete UNDEX development and testing.			
Title: Advanced High Data Rate (AdvHDR)	6.109	3.291	2.634
Articles:	0	0	0
FY 2011 Accomplishments: - Continued design and acquisition documentation development in support of Milestone B. - Continued system definition/risk reduction and system development efforts based on risk mitigation hardware. - Continued technology maturation and demonstration efforts. - Continued system development engineering efforts.			
FY 2012 Plans: - Continued design and acquisition documentation development in support of Milestone B. - Continued system definition/risk reduction and system development efforts based on risk mitigation hardware. - Continued technology maturation and demonstration efforts. - Continued system development engineering efforts.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continue design and Capability Development Document (CDD) in support of Advanced Development Model (ADM) demonstration. - Continue system definition/risk reduction and system development efforts based on risk mitigation hardware. - Complete technology maturation. - Continue demonstration efforts. - Continue system development engineering efforts.			
Title: Submarine Communications Buoy (SCB)	-	2.914	2.542
Articles:		0	0
Description: A project arrangement between the United States and the United Kingdom. ***FY 2012 Plans:*** - Commenced support for SCB Project Arrangement with United Kingdom. - Commenced component design specification development of a candidate SCB components. - Commenced development of demonstration plan for SCB components. - Commenced performance evaluation of the candidate SCB components. ***FY 2013 Plans:*** - Continue support for SCB Project Arrangement with United Kingdom - Continue component design specification development of a candidate SCB components. - Continue development of demonstration plan for SCB components. - Continue performance evaluation of the candidate SCB components.			
Accomplishments/Planned Programs Subtotals	19.257	22.671	18.395

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 313000: *Submarine Communications*	55.434	74.047	69.025	0.000	69.025	74.698	71.576	46.746	59.558	Continuing	Continuing

D. Acquisition Strategy

Program Milestones (MS):
Outboard Electronics (OE)-538: 4th Quarter (QTR) FY14 Milestone C (MS C); 4th QTR FY16 Full Rate Production (FRP) Decision Review.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

Advanced High Data Rate (AdvHDR): 4th QTR FY14 Advanced Development Model (ADM) Demonstration.

Test and Evaluation (T&E) Milestones:
OE-538: 3rd QTR FY13 Developmental Test (DT) for MS C; 4th QTR FY13 Operational Assessment (OA) for MS C; 2nd QTR FY16 DT for FRP; 3rd QTR FY16 Operational Test for FRP

E. Performance Metrics

FY13 OE-538: Complete Capability Production Document (CPD).
FY13 AdvHDR: Complete Capability Development Document (CDD).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Interface Dev (Submarine High Data Rate - SubHDR)	C/CPAF	Raytheon:Marlboro, MA	3.545	-		-		-		-	0.000	3.545	3.545
Digital Dev (SubHDR)	C/CPAF	Raytheon:Marlboro, MA	8.182	-		-		-		-	0.000	8.182	8.182
Hardware Dev (SubHDR)	WR	NUWC:Newport, RI	2.888	-		-		-		-	0.000	2.888	Continuing
Hardware Dev (SubHDR SHF/ FOT)	C/CPAF	Raytheon:Marlboro, MA	14.632	-		-		-		-	0.000	14.632	14.632
Hardware Dev (Antenna Trans Eng)	C/CPAF	Sippican:Marion, MA	2.207	-		-		-		-	0.000	2.207	2.207
Hardware Dev (Communications at Speed and Depth - CSD)	C/CPAF	Apogen:San Diego, CA	2.800	-		-		-		-	0.000	2.800	2.800
Systems/Hardware Dev (CSD)	C/CPAF	Various:Various	36.623	-		-		-		-	0.000	36.623	Continuing
Systems/Hardware Dev (Submarine Communications Buoy - SCB)	WR	NSWC:Philadelphia	-	1.900	May 2012	2.316	Nov 2012	-		2.316	Continuing	Continuing	Continuing
Hardware Dev (Outboard Electronics (OE)-538)	C/CPAF	Submarine Antenna Joint Venture:MA and NH	17.564	1.241	Jan 2012	-		-		-	Continuing	Continuing	Continuing
Systems Engineering (OE-538)	WR	NUWC:Newport, RI	3.975	1.310	Jan 2012	1.056	Oct 2012	-		1.056	Continuing	Continuing	Continuing
Systems Engineering (SubHDR)	C/CPFF	Raytheon:Marlboro, MA	6.316	-		-		-		-	0.000	6.316	6.316
System Engineering (SubHDR)	WR	NUWC:Newport, RI	15.807	0.354	Jan 2012	0.400	Dec 2012	-		0.400	Continuing	Continuing	Continuing
Systems Engineering (Advanced High Data Rate - AdvHDR)	WR	NUWC:Newport, RI	6.412	0.800	Nov 2011	0.802	Nov 2012	-		0.802	Continuing	Continuing	Continuing
System Engineering (Antenna Trans Eng)	WR	NUWC:Newport, RI	19.804	1.581	Nov 2011	1.388	Nov 2012	-		1.388	Continuing	Continuing	Continuing
System Engineering (Antenna Trans Eng)	Various	NUWC:Newport, RI	10.924	1.681	Nov 2011	1.825	Nov 2012	-		1.825	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering (CSD)	Various	Various:Various	4.628	-		-		-		-	0.000	4.628	
System Engineering (CSD)	WR	SSC PAC:San Diego, CA	3.048	-		-		-		-	0.000	3.048	
Systems Engineering (SCB)	C/CPFF	FSI:San Diego, CA	-	0.550	Oct 2011	0.100	Nov 2012	-		0.100	0.000	0.650	
Systems Engineering (CSD)	WR	NUWC:Newport, RI	18.521	-		-		-		-	0.000	18.521	Continuing
UNDEX Kit Development (SubHDR)	C/CPAF	Raytheon:Marlboro, MA	5.475	-		-		-		-	0.000	5.475	5.475
Technology Maturation/ Demonstrations Dev (Advanced High Data Rate - AdvHDR)	C/CPAF	NUWC:Newport, RI	7.671	0.799	Dec 2011	0.642	Dec 2012	-		0.642	Continuing	Continuing	Continuing
Research and Analysis Reliability Dev (Submarine High Data Rate - SubHDR)	WR	NUWC:Newport, RI	1.329	0.620	Jan 2012	0.780	Dec 2012	-		0.780	Continuing	Continuing	Continuing
Systems Engineering (AdvHDR)	Various	NUWC:Newport, RI	3.392	0.486	Nov 2011	0.468	Nov 2012	-		0.468	Continuing	Continuing	Continuing
Research and Analysis Reliability Dev (Submarine High Data Rate - SubHDR)	C/CPAF	I Square Systems:Middletown, RI	-	2.198	Jan 2012	2.956	Feb 2013	-		2.956	0.000	5.154	
		Subtotal	195.743	13.520		12.733		-		12.733			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support (AdvHDR)	C/CPFF	UNKNOWN:UNKNOWN	0.903	0.128	May 2012	0.103	Nov 2012	-		0.103	Continuing	Continuing	Continuing
Integrated Logistics Support (Antenna Trans Eng)	C/CPFF	UNKNOWN:UNKNOWN	0.050	-	May 2012	-		-		-	0.000	0.050	0.050
Integrated Logistics Support (Outboard Electronics - OE-538)	C/CPFF	UNKNOWN:UNKNOWN	1.670	1.875	May 2012	0.715	Oct 2012	-		0.715	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support (Communications at Speed and Depth - CSD)	C/CPFF	UNKNOWN:UNKNOWN	0.283	-	May 2012	-		-		-	0.000	0.283	
Cost Estimating(Submarine Communication Buoy - SCB)	C/CPFF	BAH:San Diego, CA	-	0.050	Oct 2011	0.025	Nov 2012	-		0.025	0.000	0.075	
Acquisition Documentation (Various)	C/CPFF	UNKNOWN:UNKNOWN	1.132	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	4.038	2.053		0.843		-		0.843			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation (Communication at Speed and Depth - CSD)	WR	COTF:Norfolk, VA	0.637	-		-		-		-	0.000	0.637	
Test & Evaluation (Outboard Electronics (OE)-538)	WR	COTF:Norfolk, VA	0.424	1.178	Jan 2012	0.246	Oct 2012	-		0.246	Continuing	Continuing	Continuing
Test & Evaluation (Submarine High Data Rate - SubHDR)	WR	NUWC:Newport, RI	0.603	-		0.540	Dec 2012	-		0.540	Continuing	Continuing	Continuing
Developmental/Operational T&E (Advanced High Data Rate - AdvHDR)	WR	COTF:Norfolk, VA	0.065	0.022	Nov 2011	0.018	Nov 2012	-		0.018	Continuing	Continuing	Continuing
Developmental/Operational T&E (AdvHDR)	WR	NUWC:Newport, RI	0.605	0.115	Nov 2011	0.170	Nov 2012	-		0.170	Continuing	Continuing	Continuing
Developmental/Operational T&E (OE-538)	WR	NUWC:Newport, RI	0.616	2.425	Jan 2012	1.263	Oct 2012	-		1.263	Continuing	Continuing	Continuing
Test & Evaluation (CSD)	WR	SSC PAC:San Diego, CA	2.497	-		-		-		-	0.000	2.497	
Test & Evaluation (SCB)	WR	NUWC:Newport, RI	-	0.214	Nov 2011	0.025	Nov 2012	-		0.025	0.000	0.239	
		Subtotal	5.447	3.954		2.262		-		2.262			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support (SubHDR)	C/CPFF	CSA:San Diego, CA	2.042	0.477	Jan 2012	0.475	Nov 2012	-		0.475	Continuing	Continuing	Continuing
Program Management Support (AdvHDR)	C/CPFF	CSA:San Diego, CA	6.191	0.941	Nov 2011	0.431	Nov 2012	-		0.431	Continuing	Continuing	Continuing
Program Management Support (Antenna Trans Eng)	C/CPFF	CSA:San Diego, CA	1.947	0.680	Nov 2011	0.884	Nov 2012	-		0.884	Continuing	Continuing	Continuing
Program Management Support (CSD)	C/CPFF	CSA:San Diego, CA	4.819	-		-		-		-	0.000	4.819	
Program Management Support (Submarine Communications Buoy - SCB)	C/CPFF	CSA:San Diego, CA	-	0.200	Nov 2011	0.076	Nov 2012	-		0.076	0.000	0.276	
Program Management Support (OE-538)	C/CPFF	CSA:San Diego, CA	3.183	0.846	Jan 2012	0.691	Oct 2012	-		0.691	Continuing	Continuing	Continuing
Acquisition Workforce	Various	Various:Various	0.280	-		-		-		-	0.000	0.280	0.280
		Subtotal	18.462	3.144		2.557		-		2.557			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	223.690	22.671		18.395		-		18.395			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604503N: *SSN-688 & Trident Modernization*	**PROJECT** 0742: *Sub Integrated Ant System*

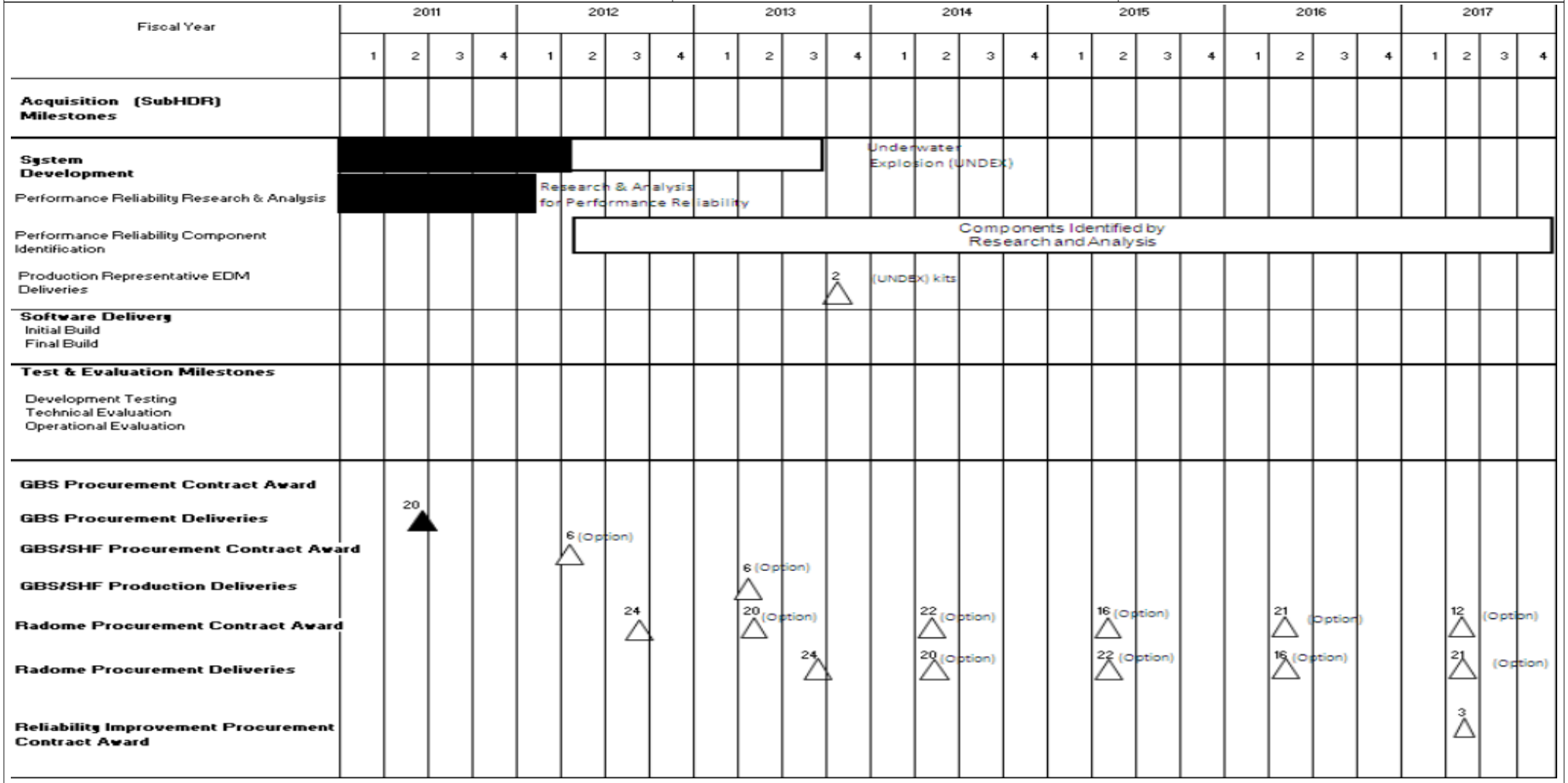


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

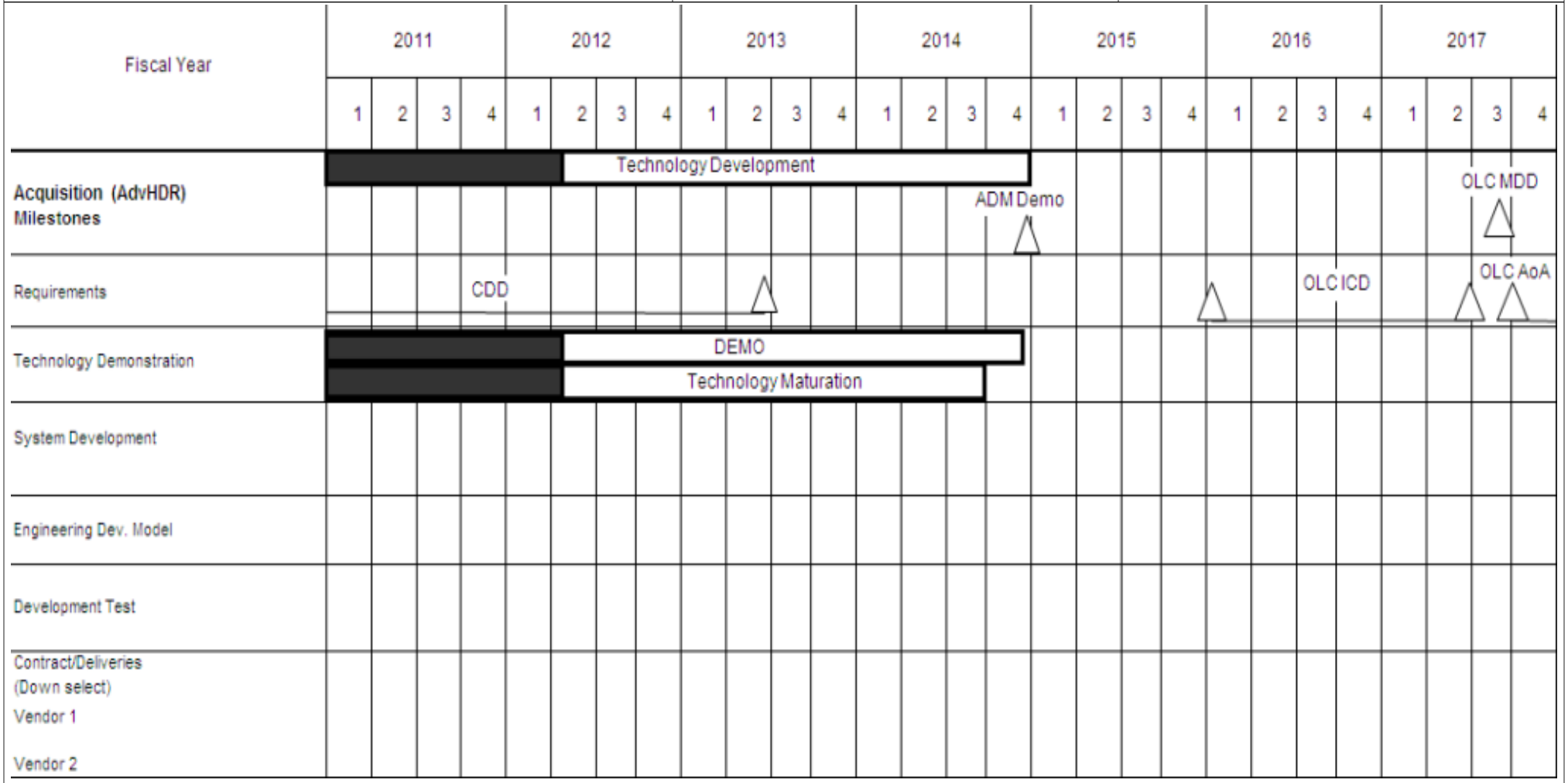


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*	

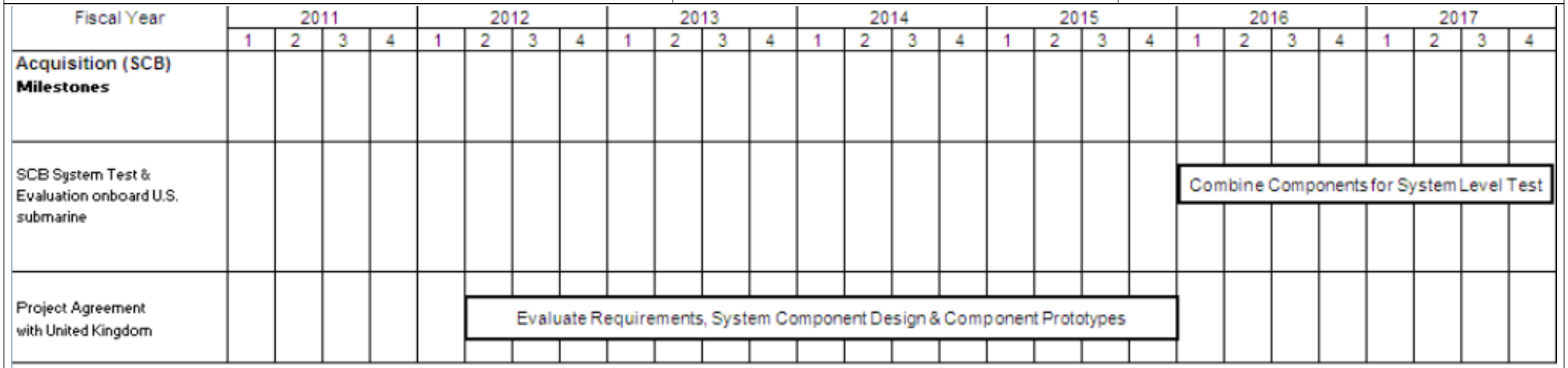


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

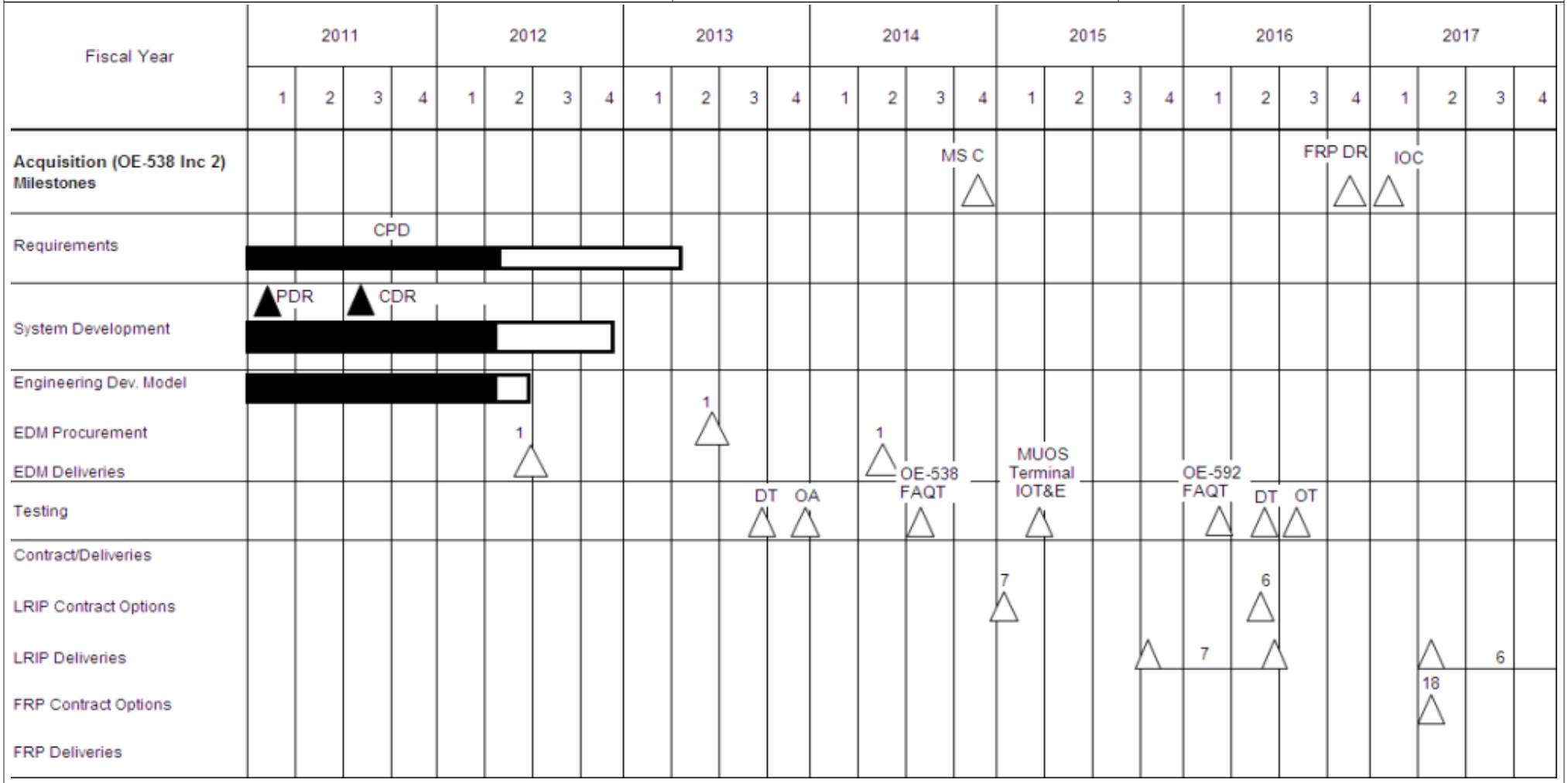


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0742				
Submarine High Data Rate (SubHDR) Under Water Explosion (UNDEX) Development	1	2011	3	2013
SubHDR Research & Analysis for Performance Reliability	1	2011	1	2012
SubHDR Performance Reliability Component Development/Test	2	2012	4	2017
SubHDR Production Representative Engineering Development Model (EDM) Deliveries	4	2013	4	2013
SubHDR GBS/SHF Procurement Contract Option Award	2	2012	2	2012
SubHDR GBS/SHF Production Deliveries	2	2013	2	2013
SubHDR Radome Procurement Contract Option Awards	3	2012	2	2017
SubHDR Radome Production Deliveries	3	2013	2	2017
SubHDR Reliability Procurement Contract Award	2	2017	2	2017
Advanced High Data Rate (AdvHDR) Technology Development	1	2011	4	2014
AdvHDR Advanced Development Model (ADM) Demonstration	4	2014	4	2014
AdvHDR Material Development Decision (MDD) Optical Laser Communications (OLC)	3	2017	3	2017
AdvHDR Capabilities Development Document	1	2011	2	2013
AdvHDR Initial Capability Document (ICD) for OLC	1	2016	2	2017
AdvHDR Analysis of Alternative (AOA) for OLC	4	2017	4	2017
AdvHDR Demonstration (DEMO)	1	2011	4	2014
AdvHDR Technology Maturation	1	2011	3	2014
Submarine Communications Buoy (SCB) System Test & Evaluation	1	2016	4	2017
SCB Project arrangement with United Kingdom (UK)	2	2012	4	2015
Outboard Electronics (OE)-538 Milestone C (MS C) Decision	4	2014	4	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0742: *Sub Integrated Ant System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
OE-538 Full Rate Production Decision Review (FRP DR)	4	2016	4	2016
OE-538 Initial Operational Capability (IOC)	1	2017	1	2017
OE-538 Capability Production Document (CPD)	1	2011	2	2013
OE-538 Preliminary Design Review (PDR)	1	2011	1	2011
OE-538 Critical Design Review (CDR)	3	2011	3	2011
OE-538 System Development	1	2011	4	2012
OE-538 Engineering Development Model (EDM)	1	2011	2	2012
OE-538 2nd EDM Procurement	2	2013	2	2013
OE-538 1st EDM Delivery	2	2012	2	2012
OE-538 2nd EDM Delivery	2	2014	2	2014
OE-538 First Article Qualification Test (FAQT)	3	2014	3	2014
OE-538 Developmental Test (DT) for Milestone C (MS C)	3	2013	3	2013
OE-538 Operational Assessment (OA)	4	2013	4	2013
OE-538 Mobile Users Objective Systems (MUOS) Terminal IOT&E	1	2015	1	2015
OE-538 FAQT for OE-592 Variant	1	2016	1	2016
OE-538 DT for Full Rate Production (FRP)	2	2016	2	2016
OE-538 Operational Test (OT)	3	2016	3	2016
OE-538 Low-Rate Initial Production (LRIP) Contract Option Year 1	1	2015	1	2015
OE-538 LRIP Deliveries Year 1	4	2015	2	2016
OE-538 LRIP Contract Option Year 2	2	2016	2	2016
OE-538 LRIP Deliveries Year 2	2	2017	4	2017
OE-538 Full Rate Production (FRP) Contract Options Year 1	2	2017	2	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0775: *Submarine Supt Equip Prog*	-	1.271	1.297	-	1.297	1.325	1.361	1.394	1.420	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program develops and improves techniques, components, equipment, and systems that will increase submarine operational effectiveness, safety of ship, and survivability in the increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. Improvements are necessary for Submarine Electronic Warfare Support (ES) systems to be operationally effective in the following mission areas: Joint Littoral Warfare; Joint Surveillance, Space and Electronic Warfare and Intelligence Collection; Maritime Protection; Information Operations, Special Operations Force (SOF) Support; and Joint Strike. Efforts include: (1) Integration of the technology developed and transitioned from the Advanced Submarine Support Equipment Program (ASSEP), project F0770 into the tactical ES system; (2) Resolution of software trouble reports during technology updates, from fleet feedback reports, and Submarine Warfare Federated Tactical System (SWFTS)/Non Propulsion Electronic System (NPES) Tactical Local Area Network (TACLAN) migrations; (3) Integration, test, and installation of COTS technology for system enhancements.

The Electronic Warfare Support (ES) Development Projects include the development of: Distant ES Support and Remote Log-In, Specific Emitter Identification (SEI) Improvements, Integrated ES and Radio Frequency Distribution Unit (RFDU), Capability and Technical Initiatives, and next generation processes and radar wideband miniaturization.

RDTE Funding line supports the entire AN/BLQ-10 ES procurement program. Average FY OPN and SCN hardware procurement yearly funds are $100M.

Submarine Support Equipment Program was transfered from a Military Intelligence Program, Program Element (PE) 0304503N in Fiscal Year 2012 back to PE 06034503N.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Submarine Support Equipment Program	-	1.271	1.297
Articles:		0	0
FY 2012 Plans: Update AN/BLQ-10 software baseline changes for SWFTS and NPES. Research, test and integrate technical insertion upgrades to the AN/BLQ-10 system. Test the next generation of technical processors.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Update AN/BLQ-10 software baseline changes for SWFTS and NPES. Test and integrate technical insertion upgrades to the AN/BLQ-10 system. Research, test and develop the next generation of AN/BLQ-10 system processors.			
Accomplishments/Planned Programs Subtotals	-	1.271	1.297

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/256000: *Submarine Supt Equip Prog*	0.000	89.241	34.050	0.000	34.050	51.397	54.504	63.422	73.539	Continuing	Continuing
• SCN/201300: *VIRGINIA Class Submarine*	57.952	53.896	54.974	0.000	54.974	28.307	57.195	58.339	59.506	Continuing	Continuing
• RDT&E/0604558N: *Submarine Tactical Warfare System*	0.000	1.500	1.300	0.000	1.300	1.500	1.500	1.500	1.500	Continuing	Continuing

D. Acquisition Strategy

AN/BLQ-10 (V) ES System - Procurements are executed/managed in accordance with the Acquisition Strategy Report (Rev 6) for AN/BLQ-10(V) ES System dtd 12/14/09 and the Acquisition Plan (Rev 8) for AN/BLQ-10(V) ES System dtd 12/15/09.

E. Performance Metrics

The RDD program goal is to respond to urgent operational needs within 30 days and provide for rapid development and fielding of prototype solutions within 270 days.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/BLQ-10 ES Product Development	C/FP	Various Contractors:Not Specified	2.867	0.130	Mar 2012	0.130	Mar 2013	-		0.130	Continuing	Continuing	Continuing
Systems Engineering & Test Support	WR	NUWC:Newport, RI	2.192	0.881	Oct 2011	1.137	Oct 2012	-		1.137	Continuing	Continuing	Continuing
Systems Engineering & Test Support	C/CPAF	TBD*:Not Specified	0.369	0.225	Mar 2012	-	Oct 2012	-		-	0.000	0.594	
		Subtotal	5.428	1.236		1.267		-		1.267			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Technical Support	C/CPAF	AT&T GSI:VA	1.131	-		-		-		-	0.000	1.131	
		Subtotal	1.131	-		-		-		-	0.000	1.131	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	NAVSEA:WNY	0.347	0.005	Mar 2012	-	Mar 2013	-		-	0.000	0.352	
SBIR Assessment	Reqn	Not Specified:Not Specified	0.285	0.030	Feb 2012	0.030	Feb 2013	-		0.030	0.000	0.345	
Labor (Research Personnel)	Reqn	Not Specified:Not Specified	0.122	-	Oct 2011	-	Oct 2012	-		-	0.000	0.122	
		Subtotal	0.754	0.035		0.030		-		0.030	0.000	0.819	

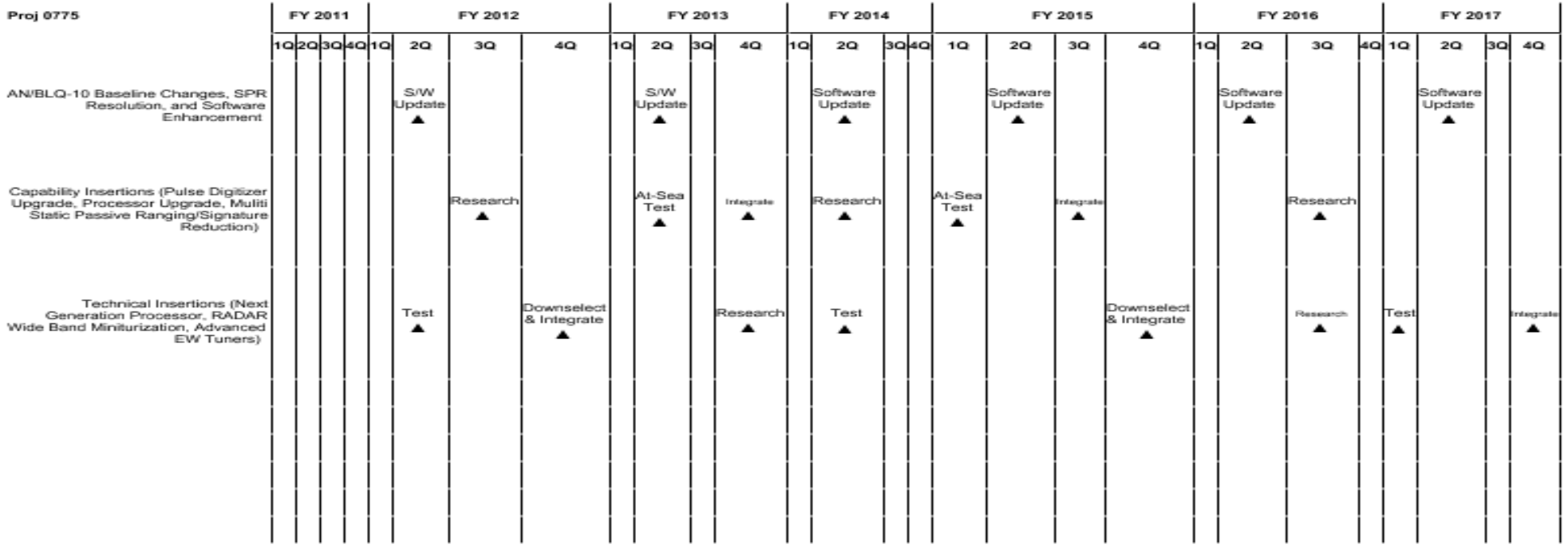
	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.313	1.271		1.297		-		1.297			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*



2013OSD - 0604503N - 0775

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0775				
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: AN/ BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement	2	2012	2	2012
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: Software Update 1	2	2013	2	2013
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: Software Update 2	2	2014	2	2014
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: Software Update 3	2	2015	2	2015
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: Software Update 4	2	2016	2	2016
AN/BLQ-10 Baseline Changes, SPR Resolution, and Software Enhancement: Software Update 5	2	2017	2	2017
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Research	3	2012	3	2012
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): At-Sea Test	2	2013	2	2013
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Integrate	4	2013	4	2013
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Research 1	2	2014	2	2014
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): At-Sea Test 1	1	2015	1	2015
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Integrate 1	3	2015	3	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 0775: *Submarine Supt Equip Prog*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Technical Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Research 2	3	2016	3	2016
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Test	2	2012	2	2012
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Downselect & Integrate	4	2012	4	2012
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Research TI	4	2013	4	2013
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Test 1 TI	2	2014	2	2014
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Downselect & Integrate 1	4	2015	4	2015
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Research 2 TI	3	2016	3	2016
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Test 2	1	2017	1	2017
Technical Insertions (Next Generation Processor, RADAR Wide Band Miniturization, Advanced EW Tuners): Integrate TI	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1411: *Sub Tact Comm System*	18.310	11.849	9.093	-	9.093	14.129	9.799	11.458	11.702	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Common Submarine Radio Room (CSRR) transforms LOS ANGELES, OHIO and SEAWOLF Class radio rooms from suites of class-specific, closed system equipment to a common design which incorporates open system architecture communications equipment. CSRR will leverage VIRGINIA Class Exterior Communications System (ECS) design, utilize VIRGINIA Class ECS Control and Management software, apply a systems approach to design and implementation of Joint Maritime Communication System, and maximize use of Commercial Off-The-Shelf (COTS) products and emerging technologies. The Submarine Tactical Communications System project (1411) provides submarines with communications systems designed to: (a) enhance data throughout through automation and integrated network management; (b) convert to ForceNet and tactical data networks, (c) provide submarine internet protocol connectivity; (d) be interoperable with other joint United States and combined allied military networks; and (e) improve reliability, maintainability, and availability. This is accomplished by providing the submarine with a properly integrated mix of fully interoperable Navy standard and COTS communication equipment covering a wide range of frequencies and modes. The project utilizes land-based integration test facilities to integrate Command, Control, Communications, Computer and Intelligence program of record components into the open architecture prior to fleet implementation on all submarine platforms. This project funds the development of a replacement simulation/stimulation suite to support testing and training requirements. The project includes system engineering efforts associated with demonstration of new technology which will allow submarines to connect to the global information grid and participate in strike group, as well as joint operations. The new technology will ensure the submarine's continued ability to participate in network-centric warfare and exploit its inherent stealth capabilities in support of the joint and combined fight to achieve total battlespace dominance.

JUSTIFICATION FOR BUDGET ACTIVITY:
This program is funded under ENGINEERING and MANUFACTURING DEVELOPMENT because it encompasses development and demonstration of new end-items prior to production approval decision.

Funding in FY13 is to complete CSRR modernization Increment 1 Version 3 for SEAWOLF and Ship Submersible Guided Nuclear (SSGN) class submarines. Develop platform specific builds of control & management software incorporating Increment 1 Version 3 capabilities for SEAWOLF, SSGN and Ship Submersible Ballistic Nuclear (SSBN) submarines. Continue CSRR modernization of Increment 1 Version 3 for SSBN class submarines.

Acquisition Decision Memorandum signed by Assistant Secretary of Navy for Research, Development & Acquisition dated 15 July 2008 approved consolidating Increments 1 and 2 to a single Increment 1 with multiple block upgrades (Versions).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Common Submarine Radio Room (CSRR)	18.310	11.849	9.093
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: - Continued Multi-Purpose Reconfigurable Training System (MRTS) software upgrade for Increment 1 Ver 3 Common Submarine Radio Room (CSRR) baseline. - Continued implementation of security upgrades and meet information assurance, information security and multiple levels of certification requirements for general service and sensitive compartmented information for all CSRR platforms. - Completed upgrade of CSRR Increment 1 Ver 2 for VIRGINIA FLT 1&2 and SEAWOLF control and management software. - Completed systems engineering development for CSRR modernization Increment 1 Ver 3 LA class submarines. - Continued CSRR modernization Increment 1 Version 3 for SEAWOLF, VIRGINIA and Ship Submersible Guided, Nuclear (SSGN) class submarines. - Continued upgrade of Control and Management software to include Increment 1 Ver 3 capabilities. ***FY 2012 Plans:*** - Continued MRTS software upgrade for Increment 1 Ver 3 CSRR baseline. - Continued implementation of security upgrades and meet information assurance, information security and multiple levels of certification requirements for general service and sensitive compartmented information for all CSRR platforms. - Completed CSRR modernization of Increment 1 Version 3 for VIRGINIA and continued for SEAWOLF and SSGN class submarines. - Supported Operational Testing of the CSRR Increment 1 Version 3 baseline. - Commenced CSRR modernization Increment 1 Version 3 for Ship Submersible Ballistic, Nuclear (SSBN) class submarines. - Completed Virginia and SSGN Increment 1 Version 3 upgrade of Control and Management software. - Commenced development of the Increment 1 Version Control and Management software for SEAWOLF and SSBN capabilities and provided specific builds. ***FY 2013 Plans:*** - Complete MRTS development for Increment 1 Version 3. - Continue implementation of security upgrades and meet information assurance, information security and multiple levels of certification requirements for general service and sensitive compartmented information for all CSRR platforms. - Continue modernization for Increment 1 Version 3 SSBN class submarines. - Complete Increment 1 Version 3 modernization for SEAWOLF and SSGN. - Complete Operational Testing (OT) of CSRR Increment 1 Version 3 baseline. - Develop platform specific builds of control & management software incorporating Increment 1 Version 3 capabilities for SEAWOLF, SSGN and SSBN.			
Accomplishments/Planned Programs Subtotals	18.310	11.849	9.093

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 313000: *Submarine Communications*	55.434	74.047	69.025	0.000	69.025	74.698	71.576	46.746	59.558	Continuing	Continuing

D. Acquisition Strategy

CSRR transforms LOS ANGELES, OHIO and SEAWOLF Class radio rooms from suites of class-specific, closed system equipment to a common design which incorporates Open System Architecture (OSA) communications equipment. CSRR will leverage VIRGINIA Class Exterior Communication System (ECS) design, utilize VIRGINIA Class ECS Control and Management software, apply a systems approach to design and implementation of Joint Maritime Communication System (JMCOMS), and maximize use of Commercial Off-The-Shelf (COTS) products and emerging technologies. Program Milestones: Completed Increment 1 Ver 2 Developmental Test & Evaluation (DT) in 3Q FY10. Completed Follow-on Test & Evaluation (FOT&E) in 2Q FY11 on a Ship Submersible Guided Nuclear (SSGN) platform and was evaluated as operationally effective and operationally suitable. Increment 1 Ver 3 DT 3Q FY12, FOT&E 4Q FY12.

E. Performance Metrics

FY11 - FY13 CSRR reduces the overall cost for implementation of Command, Control, Communications, Computer, Intelligence (C4I) programs of record components into the submarine external communication system by implementing block upgrades and reducing the integration/installation costs. The amount of RDTE funding is dependent on the number of baselines being integrated and tested in any given year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	C/CPFF	SSC PAC:San Diego, CA	2.776	-		-		-		-	0.000	2.776	2.776
Hardware Development	C/CPFF	SSC LANT:Charleston, SC	0.211	0.219	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Multi-Crypto System (MCS) Development	Various	Motorola:Scottsdale, Arizona	10.214	-		-		-		-	0.000	10.214	10.214
Software Development	Various	SSC PAC:San Diego, CA	2.068	-		-		-		-	0.000	2.068	2.068
Software Development	WR	NUWC:Newport, RI	5.498	0.354	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Multi-Purpose Reconfigurable Training System (MRTS) Development	C/CPFF	NAVAIR:Orlando, FL	15.037	0.969	Jan 2012	1.421	Jan 2013	-		1.421	Continuing	Continuing	Continuing
Systems Engineering	Various	NUWC:Newport, RI	33.041	2.916	Nov 2011	3.364	Nov 2012	-		3.364	Continuing	Continuing	Continuing
Systems Eng/Design 688 Class	Various	NUWC:Newport, RI	7.084	-		-		-		-	Continuing	Continuing	Continuing
Site Platform Integration/ Certification	Various	NUWC:Newport, RI	12.117	0.434	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Broadcast Control Authority/ Operational Control (BCA/ OPCON) architecture	WR	NUWC:Newport, RI	3.683	-		-		-		-	0.000	3.683	3.683
Software Development (CSRR)	C/CPAF	Lockheed Martin:Eagan, MN	30.978	3.253	Dec 2011	2.610	Nov 2012	-		2.610	0.000	36.841	
		Subtotal	122.707	8.145		7.395		-		7.395			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NUWC:Newport, RI	3.071	0.330	Dec 2011	-		-		-	Continuing	Continuing	Continuing
Software Engineering	WR	SSC PAC:San Diego, CA	2.969	0.239	Nov 2011	0.125	Nov 2012	-		0.125	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Information Security/ Information Assurance (INFOSEC/IA) Certification	Various	SSC PAC/SSC LANT:San Diego, CA/ Charleston, SC	18.128	1.123	Nov 2011	1.087	Nov 2012	-		1.087	Continuing	Continuing	Continuing
		Subtotal	24.168	1.692		1.212		-		1.212			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental/Operational Test and Evaluation (T&E)	C/CPFF	COTF, JITC:Various	9.283	1.406	Dec 2011	0.486	Dec 2012	-		0.486	Continuing	Continuing	Continuing
		Subtotal	9.283	1.406		0.486		-		0.486			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	CSA:San Diego, CA	9.890	0.606	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Acquisition Workforce	C/CPFF	UNKNOWN:UNKNOWN	0.077	-		-		-		-	0.000	0.077	0.077
		Subtotal	9.967	0.606		-		-		-			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	166.125	11.849		9.093		-		9.093			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*

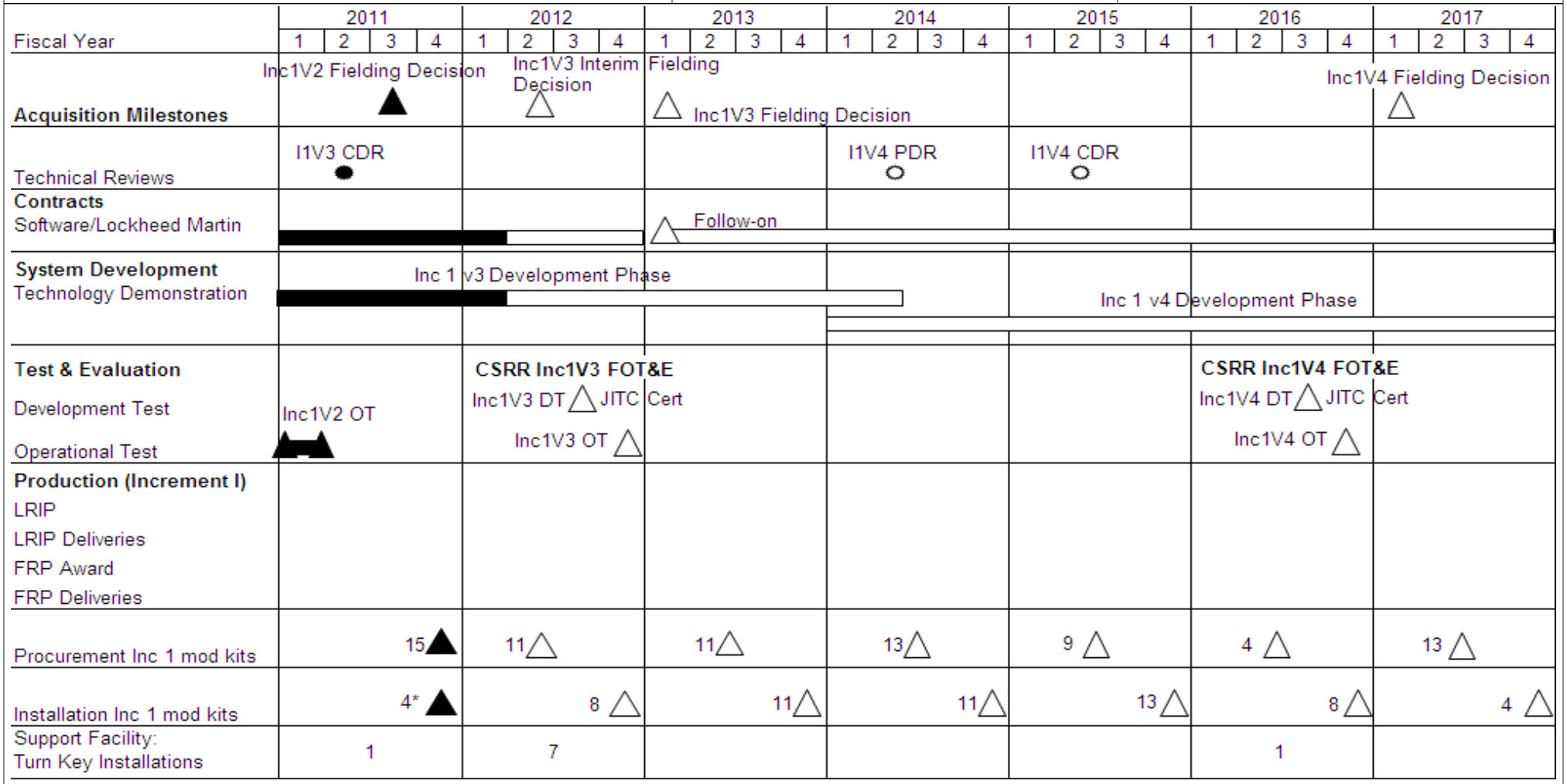


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604503N: *SSN-688 & Trident Modernization*	PROJECT 1411: *Sub Tact Comm System*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 1411				
Fielding Decision (Increment 1 Version 2)	3	2011	3	2011
Interim Fielding Decision (Increment 1 Version 3)	2	2012	2	2012
Fielding Decision (Increment 1 Ver 3)	1	2013	1	2013
Fielding Decision (Increment 1 Ver 4)	1	2017	1	2017
Technical Reviews (Increment 1 Ver 3 Critical Design Review (CDR))	2	2011	2	2011
Technical Reviews (Increment 1 Ver 4 Preliminary Design Review (PDR))	2	2014	2	2014
Technical Reviews (Increment 1 Ver 4 CDR)	2	2015	2	2015
Technology Demonstration (Increment 1 Ver 3) Development Phase	1	2011	2	2014
Technology Demonstration (Increment 1 Ver 4) Development Phase	1	2014	4	2017
Contracts (Software---Lockheed Martin)	1	2011	4	2012
Contracts (Software---Follow-On)	1	2013	4	2017
Operational Testing (OT) (Increment 1 Ver 2)	1	2011	2	2011
DT (Increment 1 Ver 3) JITC Cert	3	2012	3	2012
OT (Increment 1 Ver 3)	4	2012	4	2012
DT (Increment 1 Ver 4) JITC Cert	3	2016	3	2016
OT (Increment 1 Ver 4)	4	2016	4	2016
Procurement (Increment 1 Modernization Kits)	4	2011	3	2017
Installation (Increment 1 Modernization Kits)	4	2011	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	5.511	5.521	5.633	-	5.633	6.084	6.181	6.248	6.370	Continuing	Continuing
0718: *MATCALS*	0.347	0.620	0.630	-	0.630	0.633	0.645	0.650	0.663	Continuing	Continuing
0993: *Carrier ATC*	4.760	4.507	4.603	-	4.603	5.049	5.129	5.186	5.288	Continuing	Continuing
1657: *ATC Improvement*	0.404	0.394	0.400	-	0.400	0.402	0.407	0.412	0.419	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element provides for the development, integration, and testing of Automated Air Traffic Control (ATC) hardware and software required to provide improved flight safety and more reliable all-weather ATC and landing system capabilities at Naval Air Stations (NASs) and Marine Corps Air Stations (MCASs) and Fleet Area Control and Surveillance Facilities (FACSFAC) worldwide. Funded programs are required to upgrade or replace aging ATC and landing system equipment on aircraft, aircraft carriers, amphibious ships, NASs, MCASs and Navy/Marine Corps tactical/expeditionary airfields and remote landing sites.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	5.665	5.521	5.618	-	5.618
Current President's Budget	5.511	5.521	5.633	-	5.633
Total Adjustments	-0.154	-	0.015	-	0.015
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.113	-			
• SBIR/STTR Transfer	-0.012	-			
• Program Adjustments	-	-	-0.003	-	-0.003
• Rate/Misc Adjustments	-	-	0.018	-	0.018
• Congressional General Reductions Adjustments	-0.029	-	-	-	-

Change Summary Explanation

Schedule:
Proj. 0993: Prototype deliveries of TPX-42 will commence 3rd quarter 2017; Developmental Testing of TPX-42 will commence in 4th quarter 2017.
Technical: Not applicable.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*

FY 11- Reprogrammed $.113 million for higher priority Department needs.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0718: *MATCALS*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0718: *MATCALS*	0.347	0.620	0.630	-	0.630	0.633	0.645	0.650	0.663	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for continued development, integration, and testing of hardware and software to meet requirements for all-weather operation and improved flight safety of Air Traffic Control and Landing Systems at Marine Corps expeditionary airfields. Current program includes approved transition to Air Surveillance and Precision Approach Radar Control System (ASPARCS). The ASPARCS will replace the legacy Air Traffic Control (ATC) Precision Approach Radar (PAR), Air Surveillance Radar (ASR), and Communications and Control Subsystem with a High Mobility Multipurpose Wheeled Vehicle based PAR, ASR, and Command and Control (C2) Subsystem. Efforts have begun for requirements definition, development and engineering for the ASPARCS Pre-Planned Product Improvements (P3I), in accordance with Marine Corps Requirements Oversight Council (MROC) Decision Memorandum 11-2005 dated December 2004. P3I includes the design and development of software code to interface C2 input/output to existing software, incorporating Radar Range Extension and Mapping functionality, enhanced simulation and training and providing increased operator workstations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: ASPARCS Improvements	0.347	0.620	0.630
Articles:	0	0	0
Description: Investigate and resolve obsolescence issues. Perform studies and analyses to implement P3I and other evolutionary improvements. Develop criteria for existing ASPARCS software to achieve Defense Information Infrastructure-Common Operating Environment Level 5 compliance, Information Assurance, Radar Range Extension and Mapping functionality, and enhanced simulation and training into the existing ASPARCS software. Perform studies and analyses.			
FY 2011 Accomplishments: Completed a study on development of TACAN interface to the ASPARCS AN/TSQ-263 (Work Station Expansion). Conducted liaison and assisted the Ground Air Task Oriented Radar System (GATOR) Program Office in developing Capability Production Document (CPD).			
FY 2012 Plans: Fund the development of a Capabilities Development Document for Replacement Expeditionary ATC Tower. Initial Capabilities Document for ATC states that a deployable, mobile, scalable (the size of airfield) tower with enhanced night vision device capability, and equipped with a certified tower radar display, is a capability gap in fielded Marine Air Traffic Control and Landing System (MATCALS) equipment. Current tower has increasing obsolescence issues and is reaching its service life limits.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0718: *MATCALS*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct investigation on obsolescence issues. Continue integration of Ground Air Task Oriented Radar System (GATOR) and Common Aviation Command and Control Suite (CAC2S) with ASPARCS.			
Accomplishments/Planned Programs Subtotals	0.347	0.620	0.630

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2815: *MATCALS*	39.747	13.368	5.861	0.000	5.861	5.999	13.638	6.322	6.438	Continuing	Continuing

D. Acquisition Strategy

Air Surveillance and Precision Approach Radar Control System (ASPARCS) is an ACAT IVT program. Lockheed Martin was awarded the contract for this effort in June 2000. This effort included First Article development (Fixed Price Incentive) with (Firm Fixed Priced) production options. Schedule delays and technical issues with the Precision Approach Radar (PAR) and Air Surveillance Radar (ASR) and integration with the operation subsystem/communication subsystem resulted in a no-cost close out to the Lockheed Martin contract in November 2004. An Acquisition Decision Memorandum was signed in Jan 2005 approving the procurement of the Army AN/TPN-31 System to fulfill the ASPARCS requirement for July 2006. The MROC Decision Memorandum 11-2005 of December 2004 outlined the evolutionary improvements envisioned by Headquarters Marine Corps. This program has joined with the Army to implement P3I and evolutionary product improvements.

E. Performance Metrics

The MATCALS RDTEN funding will develop a planned replacement for the current ASR.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0993: *Carrier ATC*	4.760	4.507	4.603	-	4.603	5.049	5.129	5.186	5.288	Continuing	Continuing
Quantity of RDT&E Articles	1	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Shipboard Air Traffic Control (ATC) Central systems, interfacing with versions of the AN/TPX-42(V) Direct Altitude and Identity Readout system (DAIR), allow Shipboard Air Traffic Controllers to identify, marshal, and direct aircraft within a 50 Nautical Mile (NM) radius of the ship. At closer range (8NM) a ship's Automatic Carrier Landing System (ACLS) and Independent Landing Monitor (ILM) are operationally required to affect safe landing on the moving decks of ships. The AN/SPN-41 ILM and AN/SPN-46 ACLS provide verification of aircraft approach glideslope position and precise aircraft automatic control respectively during its final approach and landing sequence to an aircraft carrier. Dual efforts are underway to improve the AN/SPN-46 system availability and supportability until at least September 2020. These efforts include various Engineering Change Proposals (ECPs), and the Life Cycle Extension (LCE) program transitional changes include a re-architecture of its radar control group process with Commercial Off the Shelf (COTS) technology, replacement of the computer group processing hardware, and conversion of system program software from CMS-2 to the more commonly used 'C' programming language. In recent years, the top 25% of the AN/SPN-43 frequency band has been reallocated to the Fixed Wireless Access community prohibiting ATC radar operation within 50 miles of the coast. Because the Navy requires an air traffic control radar, this project unit will include engineering efforts to identify requirements and develop a suitable replacement and/or a Service Life Extension Plan (SLEP) before the AN/SPN-43 becomes operationally ineffectual. Finally, the AN/TPX-42A(V)14 DAIR underwent several phased upgrades that have resulted in three field changes. System improvements include replacing militarized front-end equipment in the track processor with COTS technology, converting the operational program software to more commonly used and flexible 'C' language, integrating and interface with Mode 5 Identification Friend or Foe, and integrating a flat panel monitor into the AN/UYQ-70 console. The development of an ATC common console will reduce operational costs, improve reliability, and provide compatible interfaces and commonality for all ATC workstations.

Test Article Descriptions:

The AN/TPX-42 ATC Console Engineering Development Model delivered in FY 2012 will be used to support developmental testing to verify system performance against established requirements.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AN/TPX-42	1.822	1.239	1.742
Articles:	0	0	0
Description: This project funds development of the final ATC Console configuration to include JPALS interface, Dual Band Radar interface, and replacement of AN/SPN-35 Operator displays. It is anticipated that this technology insertion will result in a formal nomenclature change for the AN/TPX-42 system, as such the identification of the modification kits will change to 'H' Kits. "H" Kits will also identify and test Voice Recorder replacement technology and obsolete components.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued development of ADS B interface requirements, Completed Field Change 4 testing and commenced testing of Field Change 5 to AN/TPX-42. ***FY 2012 Plans:*** Continue development of ADS B interface requirements; continue Field Change 5 testing to AN/TPX-42. ***FY 2013 Plans:*** Complete Field Change 5 testing for the AN/TXP-42. Develop Requirements Documentation for ATC Console.			
Title: AN/SPN-43C	2.938	3.268	2.861
Articles:	1	0	0
Description: This project funds development of the final ATC Console configuration to include Joint Precision Approach and Landing System (JPALS) interface, Dual Band Radar interface, and replacement of AN/SPN-35 Operator displays. It is anticipated that this technology insertion will result in a formal nomenclature change for the AN/TPX-42 system, as such the identification of the modification kits will change to 'H' Kits. "H" Kits will also identify and test Voice Recorder replacement technology and obsolete components. This project funds development of an AN/SPN-43C replacement or SLEP. ***FY 2011 Accomplishments:*** Commenced Block 1 of the AN/SPN-43C SLEP. ***FY 2012 Plans:*** Complete system development of the AN/SPN-43C SLEP. Perform quality design and build of AN/SPN-43C. ***FY 2013 Plans:*** Continue system development and begin design of a receiver ECP prototype for the AN/SPN-43C SLEP testing. Deliver AN/SPN-43C prototype.			
Accomplishments/Planned Programs Subtotals	4.760	4.507	4.603

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2831: *Shipboard Air Traffic Control*	7.617	7.394	8.362	0.000	8.362	9.225	9.914	10.050	10.269	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2832: *Automatic Carrier Landing Systems*	10.724	17.018	15.685	0.000	15.685	17.897	19.137	19.456	19.841	Continuing	Continuing

D. Acquisition Strategy

AN/SPN-46 Computer Group replacement subprojects are part of the AN/SPN-46 LCE project, which is an ECP. Initial contract was awarded in November 2003 for the Radar Control Group, and the contract for the Computer Group was awarded in December 2005. AN/TPX-42 Voice/Video recorder replacement, JPALS Interface, Shipboard trainer, and ATC Console are all anticipated ECPs, with improvements being incorporated into the production of AN/TPX-42 upgrade kits. AN/SPN-43 SLEP will consist of a receiver, pedestal, and transmitter ECPs and will be incorporated into AN/SPN-43 upgrade kits.

All other projects are non-ACAT upgrades to existing systems. An evolutionary acquisition approach is being used to introduce these technology advancements that either satisfy user requirements, such as all weather operation, or address supportability and cost of ownership problems.

E. Performance Metrics

Prototype Delivery will occur in First Quarter FY13 for the AN/SPN-43.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HDW Develop-SPN-46	WR	NAWCAD:PAX River, MD	11.546	-		-		-		-	0.000	11.546	
Primary HDW Develop-SPN-46	SS/CPIF	SNC:Sierra, NV	6.356	-		-		-		-	0.000	6.356	6.356
Primary HDW Develop-TPX-42	WR	NAWCAD:PAX River, MD	2.948	0.794	Dec 2011	0.219	Dec 2012	-		0.219	Continuing	Continuing	Continuing
Primary HDW Develop - SPN-43	WR	NAWCAD:PAX River, MD	-	1.703	Dec 2011	2.711	Dec 2012	-		2.711	Continuing	Continuing	Continuing
		Subtotal	20.850	2.497		2.930		-		2.930			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development-SPN-46	WR	NAWCAD:PAX River, MD	13.120	-		-		-		-	0.000	13.120	
Software Development-TPX-42	WR	NAWCAD:PAX River, MD	11.257	1.153	Dec 2011	1.160	Dec 2012	-		1.160	Continuing	Continuing	Continuing
Integrated Logistics Support-TPX-42	WR	NAWCAD:PAX River, MD	0.732	0.075	Dec 2011	0.050	Dec 2012	-		0.050	Continuing	Continuing	Continuing
Studies & Analysis- SPN-46	WR	NAWCAD:PAX River, MD	0.273	-		-		-		-	0.000	0.273	
Studies & Analysis- SPN-43	WR	NAWCAD:PAX River, MD	1.350	0.050	Dec 2011	0.050	Dec 2012	-		0.050	Continuing	Continuing	Continuing
Studies & Analysis- TPX-42	WR	NAWCAD:PAX River, MD	0.250	0.050	Dec 2011	0.050	Dec 2012	-		0.050	Continuing	Continuing	Continuing
Integrated Logistics Support - SPN-43	WR	NAWCAD:PAX River, MD	-	0.075	Dec 2011	0.100	Dec 2012	-		0.100	Continuing	Continuing	Continuing
		Subtotal	26.982	1.403		1.410		-		1.410			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation- SPN-46	WR	NAWCAD:PAX River, MD	1.645	-		-		-		-	0.000	1.645	
Developmental Test & Evaluation- TPX-42	WR	NAWCAD:PAX River, MD	1.050	0.458	Dec 2011	0.157	Dec 2012	-		0.157	Continuing	Continuing	Continuing
OperationalTest & Evaluation- TPX-42	WR	OPTEVOR:Norfolk, VA	0.062	-		-		-		-	0.000	0.062	
		Subtotal	2.757	0.458		0.157		-		0.157			

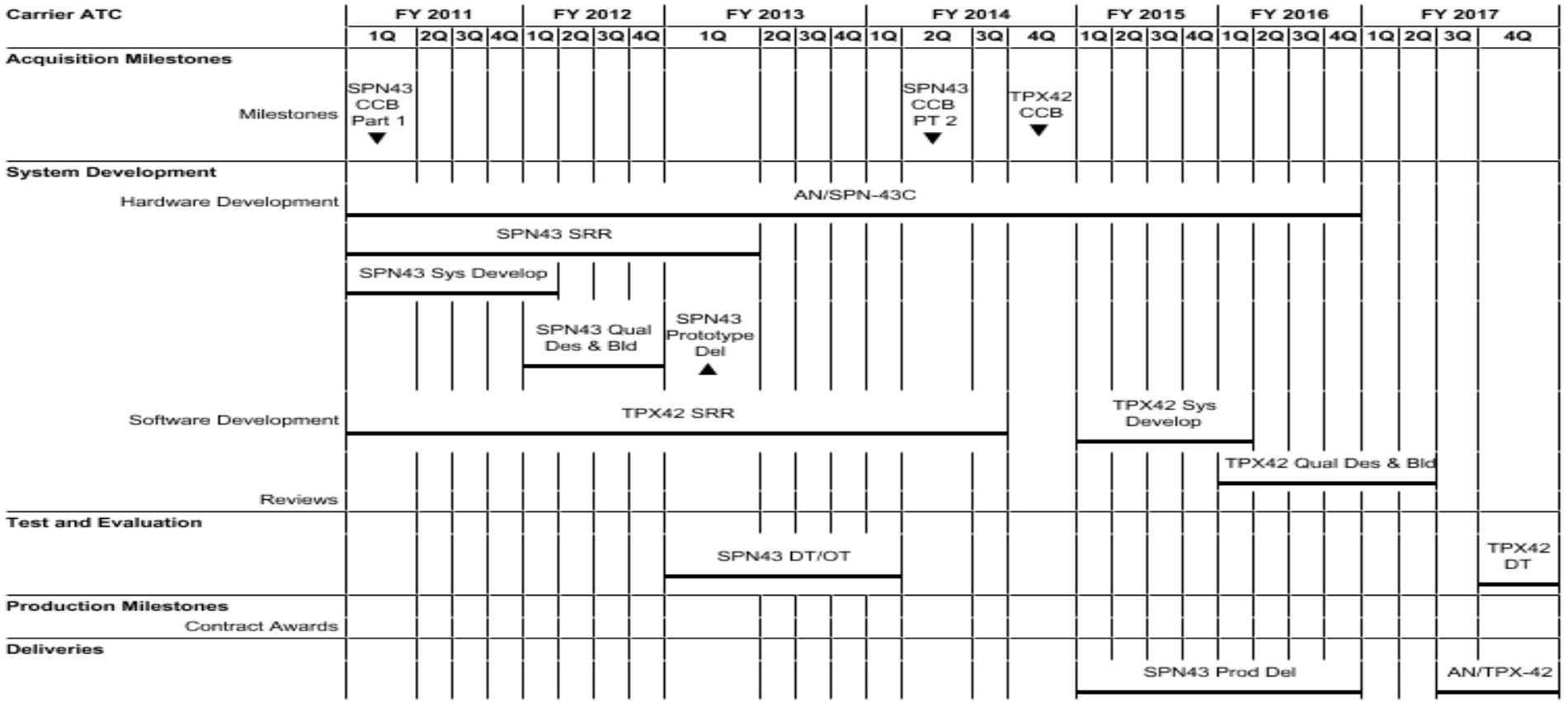
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	American Electronics, Inc.:California, MD	1.937	0.046	Dec 2011	0.046	Dec 2012	-		0.046	Continuing	Continuing	Continuing
Program Management Support	WR	NAWCAD:PAX River, MD	-	0.103	Dec 2011	0.060	Dec 2012	-		0.060	Continuing	Continuing	Continuing
Travel	WR	NAVAIRHQ:PAX River, MD	0.135	-		-		-		-	0.000	0.135	
		Subtotal	2.072	0.149		0.106		-		0.106			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	52.661	4.507		4.603		-		4.603			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*



2013PB - 0604504N - 0993

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 0993: *Carrier ATC*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Carrier ATC				
Acquisition Milestones: Milestones: Configuration Control Board (SPN43) - Part 1	1	2011	1	2011
Acquisition Milestones: Milestones: Configuration Control Board (TPX42)	4	2014	4	2014
Acquisition Milestones: Milestones: Configuration Control Board (SPN43) - Part 2	2	2014	2	2014
System Development: Hardware Development: AN/SPN-43C	1	2011	4	2016
System Development: Hardware Development: System Requirement Review (SRR) (SPN43)	1	2011	1	2013
System Development: Hardware Development: System Development (SPN43)	1	2011	1	2012
System Development: Hardware Development: Quality Design and Build (SPN43)	1	2012	4	2012
System Development: Hardware Development: Prototype Delivery (SPN43)	1	2013	1	2013
System Development: Software Development: System Requirement Review (SRR) (TPX42)	1	2011	3	2014
System Development: Software Development: System Development (TPX42)	1	2015	1	2016
System Development: Software Development: Quality Design and Build (TPX42)	1	2016	2	2017
Test and Evaluation: Developmental Testing/Operational Testing (SPN43)	1	2013	1	2014
Test and Evaluation: Developmental Testing (TPX42)	4	2017	4	2017
Deliveries: Production Deliveries (SPN43)	1	2015	4	2016
Deliveries: Prototype Deliveries (TPX-42)	3	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 1657: *ATC Improvement*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1657: *ATC Improvement*	0.404	0.394	0.400	-	0.400	0.402	0.407	0.412	0.419	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program provides for engineering development, integration, adaptation, and testing of new and/or modernized Air Traffic Control (ATC) systems, air navigational aids, landing systems, and ATC communication systems for Naval and Marine Corps Air Stations (NAS/MCAS) and Fleet Air Traffic Control Systems. These systems are critical to Naval Aviation and provide for safe, efficient air operations. Additionally, the Federal Aviation Administration (FAA) is affecting major modernization of the National Airspace System (NAS). The Navy must maintain compatibility with FAA-developed ATC systems in order to ensure seamless interoperability within the NAS. NAS modernization initiatives in Project 1657 include the Visual Information Display System (VIDS) and follow-on Pre-Planned Product Improvements, with additional RDT&E efforts required for modified commercial-off-the-shelf ATC systems and equipment for modernization and recapitalization of these systems at our NAS, MCAS & Fleet Area Control & Surveillance Facilities (FACSFACs) worldwide. Landing Systems initiatives include re-engineering and technology insertion efforts for the Precision Approach Radar, Tactical Air Navigation System, and other landing systems.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: NAS MOD VIDS	0.387	0.194	0.200
Articles:	0	0	0
Description: Continue engineering development of pre-planned product improvements for the VIDS and initiate efforts to incorporate VIDS into the FACSFACs. Research display alternatives for Navy ATC systems, and evaluate alternatives for future communication and radar systems.			
FY 2011 Accomplishments: Continued engineering development of Pre-Planned Product Improvements for VIDS to develop additional capabilities into VIDS.			
FY 2012 Plans: Continue engineering development of Pre-Planned Product Improvements for VIDS to incorporate multiple weather source inputs. Continue Standard Terminal Automation Replacement System and VIDS engineering development for technology insertion. Begin engineering efforts to maintain interoperability with the FAA's next generation air traffic control system.			
FY 2013 Plans: Continue engineering development of Pre-Planned Product Improvements for VIDS to incorporate multiple weather source inputs. Continue Standard Terminal Automation Replacement System and VIDS engineering development for technology insertion. Continue engineering efforts to maintain interoperability with the FAA's next generation air traffic control system.			
Title: Fleet ATC Systems	0.017	0.200	0.200

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604504N: *Air Control*	PROJECT 1657: *ATC Improvement*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
Description: Research efforts to determine the best technical approach to integrate various data link and communication system upgrades into Navy/Marine Corps ATC Systems including but not limited to the Digital Airport Surveillance Radar (DASR) into the FACSFAC Fleet Area Control Tracking System (FACTS) 3200 system. Evaluate alternatives for future processor/display, sensor and communication systems. ***FY 2011 Accomplishments:*** Identified components for Navy Scheduling System (NAVSKED)/FACTS Technology Refresh. Began engineering efforts to maintain interoperability with the FAA's next generation air traffic control system. ***FY 2012 Plans:*** Continue engineering development for NAVSKED/FACTS Technology Refresh and engineering efforts to maintain interoperability with the FAA's next generation air traffic control system. ***FY 2013 Plans:*** Continue engineering development for NAVSKED/FACTS Technology Refresh and engineering efforts to maintain interoperability with the FAA's next generation air traffic control system.			
Accomplishments/Planned Programs Subtotals	0.404	0.394	0.400

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2840: *National Air Space System Modernization*	17.436	24.581	16.919	0.000	16.919	19.405	28.392	28.550	29.176	Continuing	Continuing
• OPN/2845: *Fleet Air Traffic Control Systems*	6.814	7.213	6.828	0.000	6.828	7.691	8.262	8.353	8.513	Continuing	Continuing

D. Acquisition Strategy

All projects are non-ACAT upgrades to existing systems. An evolutionary acquisition approach is being used to introduce technology advancements that either satisfy emergent requirements or address supportability and cost of ownership problems.

E. Performance Metrics

The ATC Improvement program goal is to continue to research, evaluate and develop display and other alternatives for Navy ATC, communication and radar systems.

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	68.438	45.445	55.826	-	55.826	30.354	19.458	19.696	20.087	Continuing	Continuing
2232: *CV/CVN Launch and Recover*	68.438	45.445	55.826	-	55.826	30.354	19.458	19.696	20.087	Continuing	Continuing

A. Mission Description and Budget Item Justification

CV Launch & Recovery System - This Navy unique project addresses the System Development and Demonstration of all systems required to recover and launch Navy/ Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take Off and Landing operating aboard aircraft carriers, amphibious assault ships and air capable ships. This program element includes the following:

(1) Advanced Arresting Gear
(2) Aviation Data Management and Control System
(3) Electromagnetic Aircraft Launch System
(4) Advanced Launch Control System
(5) Compact Swaging Machine
(6) Aircraft Launch & Recovery Equipment Modernization
(7) Aircraft Launch and Recovery Equipment Service Life Management program
(8) Advanced Prognostics for Steam Catapults

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	70.117	45.445	18.829	-	18.829
Current President's Budget	68.438	45.445	55.826	-	55.826
Total Adjustments	-1.679	-	36.997	-	36.997
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.300	-			
• SBIR/STTR Transfer	-1.022	-			
• Program Adjustments	-	-	36.958	-	36.958
• Rate/Misc Adjustments	-	-	0.039	-	0.039
• Congressional General Reductions Adjustments	-0.357	-	-	-	-

Change Summary Explanation

Schedule:

Aviation Data Management and Control System Blk 3 - Test dates realigned to coordinate with availability of test assets for Electromagnetic Aircraft Launch System (EMALS) and Advanced Arresting Gear.

EMALS - The Sensorless Control for Linear Motors contract awarded in Sept. 2010. Based on this award date, the program's plan of action and milestone's (POA&M) were adjusted accordingly.

Advanced Launch Control System - Program cancelled in order to fund higher priority programs within the program element.

Compact Swaging Machine - Delay in test article completion resulted in performance testing starting in 2nd Qtr FY11. The test article will be delivered in 4th Qtr 2011, with electromagnetic interference and shock vibration testing being conducted in FY12. Shipboard testing and evaluation to commence in 3rd Qtr 2013.

Aircraft Launch & Recovery Equipment Modernization Improved Fresnel Lens Optical Landing System - Due to enhanced Preliminary Design Review (PDR) requirements, the Critical Design Review (CDR) and Test Readiness Review moved from 2nd and 3rd Qtrs of FY11 to 4th Qtr FY11 and 1st Qtr of FY12. Subsequently, the integrated test period was adjusted accordingly.

Aircraft Launch & Recovery Equipment Modernization Improved Manually Operated Visual Landing Aid System - Based on enhanced PDR and CDR requirements, the program's plan of action and milestones (POA&M) were adjusted accordingly.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*

Technical: Not Applicable.

Cost: Added funding in FY 13 to the AAG effort to properly price the program. Cost increases are due to schedule delays reported in PB12.

Added funding ($9.9M) in FY 11 to properly price program (not included in above controls).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2232: *CV/CVN Launch and Recover*	68.438	45.445	55.826	-	55.826	30.354	19.458	19.696	20.087	Continuing	Continuing
Quantity of RDT&E Articles	2	0	1	0	1	0	0	0	0		

A. Mission Description and Budget Item Justification

This Navy unique project addresses the System Development and Demonstration (SDD) of all systems required to recover and launch Navy/Marine Corps Aircraft (Fixed/Rotary Wing and Vertical/Short Take-Off and Landing (V/STOL)) operating aboard aircraft carriers (CVN), amphibious assault ships and air capable ships. This program includes the following systems under Project 2232, including the funding of production representative models for:

(1). Advanced Arresting Gear (AAG): The AAG program will design, develop, test and field an aircraft arrestment system to replace the MK7 arresting gear. AAG systems will be installed on all new construction aircraft carriers. AAG will provide the U.S. Navy with improved operational capability, while reducing operating and support costs. The AAG system will recover all existing and projected carrier based tail hook-equipped air vehicles well into the 21st century. The AAG Program's SDD phase test articles will consist of a land based, single wire configured aircraft arresting system, which includes associated hardware and software needed to conduct system integrated testing by arresting both dead-loads and aircraft.

(2). Aviation Data Management and Control System (ADMACS): ADMACS will use information technology and decision support systems to automate collection and distribution of information, enabling aviation operations on board aircraft carriers to be accomplished in a more efficient and effective manner. Capability beyond ADMACS Block 3 will be developed by using an evolutionary acquisition process.
(a). ADMACS Block 2: Is a shipboard aviation information management system providing CVN aviation planning, execution and readiness assessment using integrated decision aids and supporting systems built into a highly adaptive system. ADMACS Block 2 provides a real time, fault tolerant (redundant), tactical information management system. The Block 2
test article consists of network switches, servers, workstations and affiliated database and communications software.
(b). ADMACS Block 3: ADMACS Block 3 will integrate the EMALS and AAG interfaces into its baseline as well as automation of data input and introduction of intelligent agents and decision aides.

(3). Electromagnetic Aircraft Launch System (EMALS) Technology Insertion: EMALS will be the fixed wing aircraft catapult for the CVN-78 class of aircraft carriers. The program will further the development and insertion of applicable emerging technologies into EMALS capitalizing on the full capability of the system. The test article (FY13) will be manufactured, installed at the EMALS System Functional Demonstration site and tested. The EMALS system was developed under the carrier system development program element (0603512N).

(4). Advanced Launch Control System (ALCS): ALCS will introduce control, prognostics and health monitoring technology into the steam catapult; providing a common operator interface, reduced maintenance, and enhanced availability. The insertion of an array of sensors into the steam catapult, an information technology infrastructure, algorithm

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

development, and integration with ADMACS will provide health monitoring and prognostics, as well as maintenance and workload reductions. Program cancelled in order to fund higher priority programs within the PE.

(5). Compact Swaging Machine: Funded by ONR (OSD PE# 060051D8Z) in FY 2009. The current process of pouring zinc sockets to attach the arresting gear purchase cable will be replaced with a new swaged terminal design that will be pressed on by means of a high density, compact, swaging machine.

(6). Aircraft Launch & Recovery Equipment (ALRE) Modernization:
(a). Improved Fresnel Lens Optical Landing System (IFLOLS) Phase 4: Control system processor and digital interfaces upgrades to support Built-In-Test (BIT), Aviation Data Management and Control System integration & maintenance /obsolescence reduction.
(b). Improved Manually Operated Visual Landing Aid System (IMOVLAS): IMOVLAS will be the manual backup for IFLOLS which is the primary carrier Visual Landing Aid (VLA). IMOVLAS will be used in high sea states or if IFLOLS is inoperable, and will mirror current IFLOLS configuration in size & display.

(7). ALRE Service Life Management Program (SLMP): The ALRE SLMP for Catapult and Arresting Gear Systems is required to sustain carrier aviation operations of higher energy aircraft launch and recoveries that are increasing loads on the Launcher & Arresting Systems, that are affecting availability, maintainability and cost. This program will consist of service life assessment and extension initiatives and will establish the design foundation (structural, reliability, and maintainability analyses), permit appropriate assessment, track and focus design changes where most needed.

(8). Advanced Prognostics for Steam Catapults (APSC): This program was previously funded under Office of Naval Research PE 0203761N Technology Insertion Program for Savings (TIPS). APSC Waterbrake Monitoring Systems is intended to introduce diagnostics that assess the health of the catapult water brake by leveraging lessons learned from engineering investigations and an algorithm already in development.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Advanced Arresting Gear (AAG)	54.410	29.345	44.342
Articles:	0	0	0
Description: The AAG program will design, develop, test and field an aircraft arrestment system to replace the MK7 arresting gear.			
FY 2011 Accomplishments: Continued Jet Car Track Site (JCTS) commissioning. Conducted JCTS system checkout deadloads. Initiated JCTS integrated testing/performance deadloads. Prepared Runway Arrested Landing Site (RALS) test site.			
FY 2012 Plans: Conduct and complete JCTS integrate testing/performance deadloads. Remove test system from JCTS in preparation for installation at RALS. Install, integrate and commission test system at RALS site.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct integrated testing at RALS. Conduct system maintenance demonstration at RALS. Support Initial Operational Test & Evaluation (IOT&E) efforts.			
Title: Aviation Data Management and Control System (ADMACS) Block 2	0.102	-	-
Articles:	0		
Description: Aviation Data Management and Control System Block 2 provides real time, fault tolerant (redundant), tactical information management system.			
FY 2011 Accomplishments: Completed installation onboard CVN-69. Completed Technical and Operational Evaluation.			
Title: Aviation Data Management and Control System (ADMACS) Block 3	2.058	4.712	2.313
Articles:	0	0	0
Description: ADMACS provides real time, fault tolerant (redundant), tactical information management system. ADMACS Block 3 will integrate the Electromagnetic Aircraft Launch System and Advanced Arresting Gear interfaces into its baseline as well as automation of data input and introduction of intelligent agents and decision aides.			
FY 2011 Accomplishments: Completed Systems Requirement Review (SRR). Conducted Preliminary Design Review (PDR).			
FY 2012 Plans: Conduct Critical Design Review (CDR).			
FY 2013 Plans: Conduct Test Readiness Review (TRR). Commence interface and functional qualification testing of Block 3 interfaces.			
Title: Electromagnetic Aircraft Launch Systems (EMALS) Technology Insertion	1.621	1.788	1.131
Articles:	0	0	1
Description: EMALS will be the fixed wing aircraft catapult for the CVN-78 class of aircraft carriers. The program will further the development and insertion of applicable emerging technologies into EMALS capitalizing on the full capability of the system. A test article (FY13) will be manufactured, installed at the EMALS System Functional Demonstration (SFD) site and tested.			
FY 2011 Accomplishments: Conducted Post Award Conference; Completed concurrent System Requirements Review (SRR) and System Functional Review (SFR); Initiated hardware development and integration at Advanced Linear Motor (ALM) site.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue hardware development and integration at Advanced Linear Motor (ALM) site. Construct/Test Electro Standard Laboratories Dual Test Bed. ***FY 2013 Plans:*** Conduct concurrent Preliminary and Critical Design Reviews; Procure test article for incorporation into the System Functional Demonstration site.			
Title: Advanced Launch Control System (ALCS) ***Articles:*** ***Description:*** ALCS- Introduce control, prognostics and health monitoring technology into the steam catapult, providing a common operator interface, reduced maintenance and enhanced availability. Program cancelled in order to fund higher priority programs within the PE. ***FY 2011 Accomplishments:*** Completed the functional baseline for legacy controls system, with interfaces; Completed notional architecture for ALCS; Completed draft CONOPS and draft test and evaluation strategy. Performed Diminishing Manufacturing Sources and Material Shortages (DMSMS) analysis.	1.780 0	-	-
Title: Compact Swaging Machine ***Articles:*** ***Description:*** Compact Swaging Machine - This program will replace the current process for attaching the terminal on the arresting gear purchase cable with a swaged terminal design that will be pressed on by means of a high density, compact, swaging machine. ***FY 2011 Accomplishments:*** Implemented design modifications into the test article unit and conducted performance testing, consisting of various bench testing to support entrance criteria requirements for shore based jet car track and aircraft testing. ***FY 2012 Plans:*** Conduct Electromagnetic Interference (EMI) and shock vibration testing. ***FY 2013 Plans:*** Commence shipboard test and evaluation.	1.953 1	0.500 0	0.198 0
Title: Aircraft Launch & Recovery Equipment (ALRE) Modernization ***Articles:***	3.507 1	1.600 0	0.906 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Description: Improved Fresnel Lens Optical Landing System (IFLOLS) and Improved Manually Operated Visual Landing Aid System (IMOVLAS) to improve carrier aviations operations. ***FY 2011 Accomplishments:*** IFLOLS - Completed Preliminary Design Review (PDR) and completed Critical Design Review (CDR). ***FY 2012 Plans:*** Improved Fresnel Lens Optical Landing System - Conduct Technical Readiness Review (TRR) and initiate integrated testing. Improved Manually Operated Visual Landing Aid System (IMOVLAS) - Commence Systems Design and Development (SDD). ***FY 2013 Plans:*** IMOVLAS - Conduct System Readiness Review (SRR) and Preliminary Development Review (PDR).			
Title: Aircraft Launch & Recovery Equipment (ALRE) SLMP ***Articles:*** ***Description:*** ALRE SLMP is to study the C-13 catapult and MK-7 arresting gear to determine where to design fielded equipment improvement. Address fielding of higher energy aircraft. ***FY 2011 Accomplishments:*** Completed solid modeling of the entire C13-2 Catapult and MK-7 arresting gear. Completed analysis on the MK-7 crosshead component. Completed In-Process Review (IPR) for the Catapult Water Brake. Started Analysis on the Catapult Improved Piston Assembly (IPA). ***FY 2012 Plans:*** Complete analysis on the MK-7 arresting gear and the C13-2 Catapult. Commence design, development and testing for MK-7 components and subcomponents. ***FY 2013 Plans:*** Begin modeling and analysis of the C13-1 Catapult. Commence design, development and testing for C13-2 Catapult components and subcomponents. Continue design, development and testing for MK-7 components and subcomponents.	3.007 0	5.400 0	6.177 0
Title: Advanced Prognostics for Steam Catapults (APSC) ***Articles:*** ***Description:*** APSC: This program was previously funded under Office of Naval Research PE 0203761N Technology Insertion Program for Savings (TIPS). The APSC Waterbrake Monitoring Systems WBMS is intended to introduce diagnostics that assess	- 0	2.100 0	0.759 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
the health of the catapult water brake by leveraging lessons learned from engineering investigations and an algorithm already in development. ***FY 2012 Plans:*** Commence Design and Development. ***FY 2013 Plans:*** Complete Critical Design Review (CDR) and Test Readiness Review's (TRR). Conduct land based/shipboard testing.			
Accomplishments/Planned Programs Subtotals	68.438	45.445	55.826

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4216: *Aircraft Launch & Recovery Equipment*	28.724	19.777	82.618	0.000	82.618	65.088	48.613	55.584	56.603	Continuing	Continuing
• OPN/9020: *Aircraft Launch & Recovery Equipment Spares*	0.568	0.014	3.694	0.000	3.694	0.879	0.198	0.176	0.173	0.000	8.289

D. Acquisition Strategy

Advanced Arresting Gear (AAG): The Navy competitively awarded two Cost Plus Fixed Fee Technical Development phase contracts to develop the AAG. Upon completion of the Preliminary Design and Integrated Baseline Reviews, the Navy awarded a single Cost Plus Award Fee option to General Atomics for the SDD phase to develop and demonstrate a production representative AAG at the NAVAIR Lakehurst Jet Car Track Site and Runway Arrested Landing Site. In March 2009, the AAG program awarded a SDD contract modification to General Atomics for Transition to Production planning.

Aviation Data Management and Control System (ADMACS): The Navy continues to design and develop ADMACS using commercially available servers, switches, workstations and database and communications software. One Engineering Development Model (EDM) and 2 Low Rate Initial Production (LRIP) systems have been procured from a directed 8(a) Alaskan Native Corporation source.

Electromagnetic Aircraft Launch System (EMALS): Technology Insertion: The Navy will develop emerging technologies for insertion into EMALS and has awarded a contract to develop, manufacture, and install a test article at the EMALS System Functional Demonstration (SFD) site at Lakehurst, N.J.

Compact Swaging Machine (CSM): The Navy amended an existing Small Business Technology Transfer (STTR) Phase III contract in order to build and test a prototype high density swaging machine which has been developed under Defense Acquisition Challenge Program funding (OSD PE 060051D8Z).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

Aircraft Launch & Recovery Equipment (ALRE) Modernization:
(a) Improved Fresnel Lens Optical Landing System (IFLOLS) Phase IV: The Navy will develop IFLOLS using commercial equipment racks, processors, & displays.
(b) Improved Manually Operated Visual Landing Aid System (IMOVLAS): The Navy will develop IMOVLAS using commercial equipment racks, processors, and displays.

Aircraft Launch & Recovery Equipment (ALRE) Service Life Management Program: This program will consist of Service Life Assessment and Extension initiatives and will establish the design foundation (structural, reliability, and maintainability analyses), permit appropriate assessment, track and focus design changes where most needed.

Advanced Prognostics for Steam Catapults (APSC): The Navy will design and develop the APSC system utilizing commercially available sensors, data acquisition systems and computer processors. The Navy will award a contract(s) to procure components for System Functional Demonstration (SFD) site at Lakehurst, N.J., shipboard demonstration and for final system implementation.

E. Performance Metrics

Advanced Arresting Gear will complete System Development and Demonstration integrated testing at Jet Car Track Site and Runway Arrested Landing Site. Demonstrating key performance parameters and readiness for operational test.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev-AAG	C/CPFF	Northrop Grum:Sunnyvale, CA	12.418	-		-		-		-	0.000	12.418	12.418
Primary HW Dev -AAG	C/CPAF	Gen Atomics:San Diego, CA	232.889	12.811	Dec 2011	26.686	Dec 2012	-		26.686	0.000	272.386	272.386
Award Fees-AAG	C/CPAF	Gen Atomics:San Diego, CA	2.149	5.300	Aug 2012	0.187	Aug 2013	-		0.187	0.000	7.636	15.030
Primary HW Dev-AAG	WR	NAWCAD:Lakehurst, NJ	29.051	1.240	Nov 2011	2.501	Nov 2012	-		2.501	3.430	36.222	
System Eng-AAG	WR	NAWCAD:Lakehurst, NJ	11.757	1.262	Nov 2011	2.050	Nov 2012	-		2.050	4.639	19.708	
System Eng-AAG	C/CPFF	L3 Services,Inc.:Marlton, NJ	0.351	-		-		-		-	0.000	0.351	5.700
Shipboard Intgrn-AAG	WR	NAWCAD:Lakehurst, NJ	3.309	0.264	Nov 2011	0.795	Nov 2012	-		0.795	1.992	6.360	
Systems Engineering -AAG	C/CPFF	Wyle Lab, Inc:Huntsville, AL	0.103	-		-		-		-	0.000	0.103	0.103
Primary HW Dev-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	7.034	-		-		-		-	0.000	7.034	
Product Dev-ADMACS BLK 2	C/CPFF	Specialty Sys:Tom River ,NJ	0.508	-		-		-		-	0.000	0.508	0.508
Product Dev Supt-ADMACS BLK 2	C/CPFF	Sabre Sys:Warminster, PA	3.203	-		-		-		-	0.000	3.203	3.203
Shipboard Integ-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	1.200	-		-		-		-	0.000	1.200	
Shipboard Integ-ADMACS BLK 2	WR	PSNS:Bremerton, WA	0.100	-		-		-		-	0.000	0.100	
System Eng-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	0.140	-		-		-		-	0.000	0.140	
Primary HW Dev-ADMACS BLK 3	WR	NAWCAD:Lakehurst, NJ	0.983	2.171	Nov 2011	0.775	Nov 2012	-		0.775	0.100	4.029	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Eng-ADMACS Blk 3	WR	NAWCAD:Lakehurst, NJ	0.750	1.000	Nov 2011	0.545	Nov 2012	-		0.545	0.100	2.395	
Shipboard Integration-ADMACS Blk 3	WR	NAWCAD:Lakehurst, NJ	-	-		0.200	Nov 2012	-		0.200	0.200	0.400	
Primary HW Dev-EMALS Tech Insert	C/CPFF	Electro Standards Laboratories:Cranston, RI	1.261	1.423	Dec 2011	0.750	Dec 2012	-		0.750	4.084	7.518	9.184
System Eng-EMALS Tech Insert	WR	NAWCAD:Lakehurst, NJ	0.335	0.339	Nov 2011	0.355	Nov 2012	-		0.355	0.510	1.539	
System Eng-ALCS	WR	NAWCAD:Lakehurst, NJ	1.652	-		-		-		-	0.000	1.652	
Primary HW Dev-CSM	SS/CPFF	Creare Inc.:Hanover, NH	1.604	-		-		-		-	0.000	1.604	4.300
System Eng-CSM	WR	NAWCAD:Lakehurst, NJ	0.362	0.100	Nov 2011	-		-		-	0.000	0.462	
Shipboard Integration-CSM	WR	NAWCAD:Lakehurst, NJ	-	-		0.198	Nov 2012	-		0.198	0.228	0.426	
Primary HW Dev-Modern IFLOLS	WR	NAWCAD:Lakehurst, NJ	3.393	0.300	Nov 2011	-		-		-	0.000	3.693	
System Eng-Modern IFLOLS	WR	NAWCAD:Lakehurst, NJ	1.686	-		-		-		-	0.000	1.686	
Primary HW Dev-Modern IMOVLAS	WR	NAWCAD:Lakehurst, NJ	-	-		0.720	Nov 2012	-		0.720	2.280	3.000	
System Eng-Modern IMOVLAS	WR	NAWCAD:Lakehurst, NJ	-	0.200	Nov 2011	0.096	Nov 2012	-		0.096	0.000	0.296	
Primary HW Dev-SLMP	WR	NAWCAD:Lakehurst, NJ	0.080	1.189	Nov 2011	3.290	Nov 2012	-		3.290	17.023	21.582	
Primary HW Dev-APSC	WR	NAWCAD:Lakehurst, NJ	-	2.065	Nov 2011	0.109	Nov 2012	-		0.109	0.000	2.174	
		Subtotal	316.318	29.664		39.257		-		39.257	34.586	419.825	

Remarks

Award Fee is 10% of estimated cost of SDD contract.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS-AAG	WR	NAWCAD:Lakehurst, NJ	7.977	1.505	Nov 2011	2.377	Nov 2012	-		2.377	7.540	19.399	
ILS-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	0.150	-		-		-		-	0.000	0.150	
ILS-ADMACS BLK 3	WR	NAWCAD:Lakehurst, NJ	0.325	0.341	Nov 2011	0.259	Nov 2012	-		0.259	0.100	1.025	
ILS-ALCS	WR	NAWCAD:Lakehurst, NJ	0.128	-		-		-		-	0.000	0.128	
ILS-CSM	WR	NAWCAD:Lakehurst, NJ	0.132	0.030	Nov 2011	-		-		-	0.000	0.162	
ILS-Modern IFLOLS	WR	NAWCAD:Lakehurst, NJ	0.117	0.200	Nov 2011	-		-		-	0.000	0.317	
ILS-Modern IMOVLAS	WR	NAWCAD:Lakehurst, NJ	-	-		0.090	Nov 2012	-		0.090	0.362	0.452	
ILS-SLMP	WR	NAWCAD:Lakehurst, NJ	0.092	0.094	Nov 2011	0.096	Nov 2012	-		0.096	0.510	0.792	
Studies & Analysis-SLMP	WR	NAWCAD:Lakehurst, NJ	2.313	2.417	Nov 2011	2.220	Nov 2012	-		2.220	46.945	53.895	
ILS-APSC	WR	NAWCAD:Lakehurst, NJ	-	0.035	Nov 2011	0.036	Nov 2012	-		0.036	0.200	0.271	
		Subtotal	11.234	4.622		5.078		-		5.078	55.657	76.591	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval-AAG	WR	NAWCAD:Lakehurst, NJ	9.954	0.816	Nov 2011	9.283	Dec 2012	-		9.283	7.540	27.593	
Operational T&E-AAG	WR	Various:Various	1.323	0.230	Dec 2011	0.250	Dec 2012	-		0.250	2.300	4.103	
Facility Test-JCTS/RALS AAG	WR	NAWCAD:Lakehurst, NJ	8.764	5.704	Nov 2011	-		-		-	9.650	24.118	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test Lab-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	0.450	-		-		-		-	0.000	0.450	
Integrated Test-ADMACS BLK 2	WR	NAWCAD:Lakehurst, NJ	0.235	-		-		-		-	0.000	0.235	
Dev Test Lab-ADMACS BLK 3	WR	NAWCAD:Lakehurst, NJ	-	1.200	Nov 2011	0.534	Nov 2012	-		0.534	0.151	1.885	
Dev Test & Eval-EMALS Tech Insert	WR	NAWCAD:Lakehurst, NJ	0.025	0.026	Nov 2011	0.026	Nov 2012	-		0.026	2.566	2.643	
Dev Test & Eval-ALCS	WR	NAWCAD:Lakehurst, NJ	-	-		-		-		-	0.000	0.000	
Performance Test-CSM	WR	NAWCAD:Lakehurst, NJ	1.655	0.370	Nov 2011	-		-		-	0.000	2.025	
Dev Test & Eval-Modern IFLOLS	WR	NAWCAD:Lakehurst, NJ	-	0.900	Nov 2011	-		-		-	0.000	0.900	
Integrated Testing-Modern IMOVLAS	WR	NAWCAD:Lakehurst, NJ	-	-		-		-		-	0.460	0.460	
Materials/Validation Testing-SLMP	WR	NAWCAD:Lakehurst, NJ	0.522	1.700	Nov 2011	0.570	Nov 2012	-		0.570	4.538	7.330	
Land Based/Shipboard Testing-APSC	WR	NAWCAD:Lakehurst, NJ	-	-		0.614	Nov 2012	-		0.614	0.000	0.614	
		Subtotal	22.928	10.946		11.277		-		11.277	27.205	72.356	

Management Services ($ in Millions)

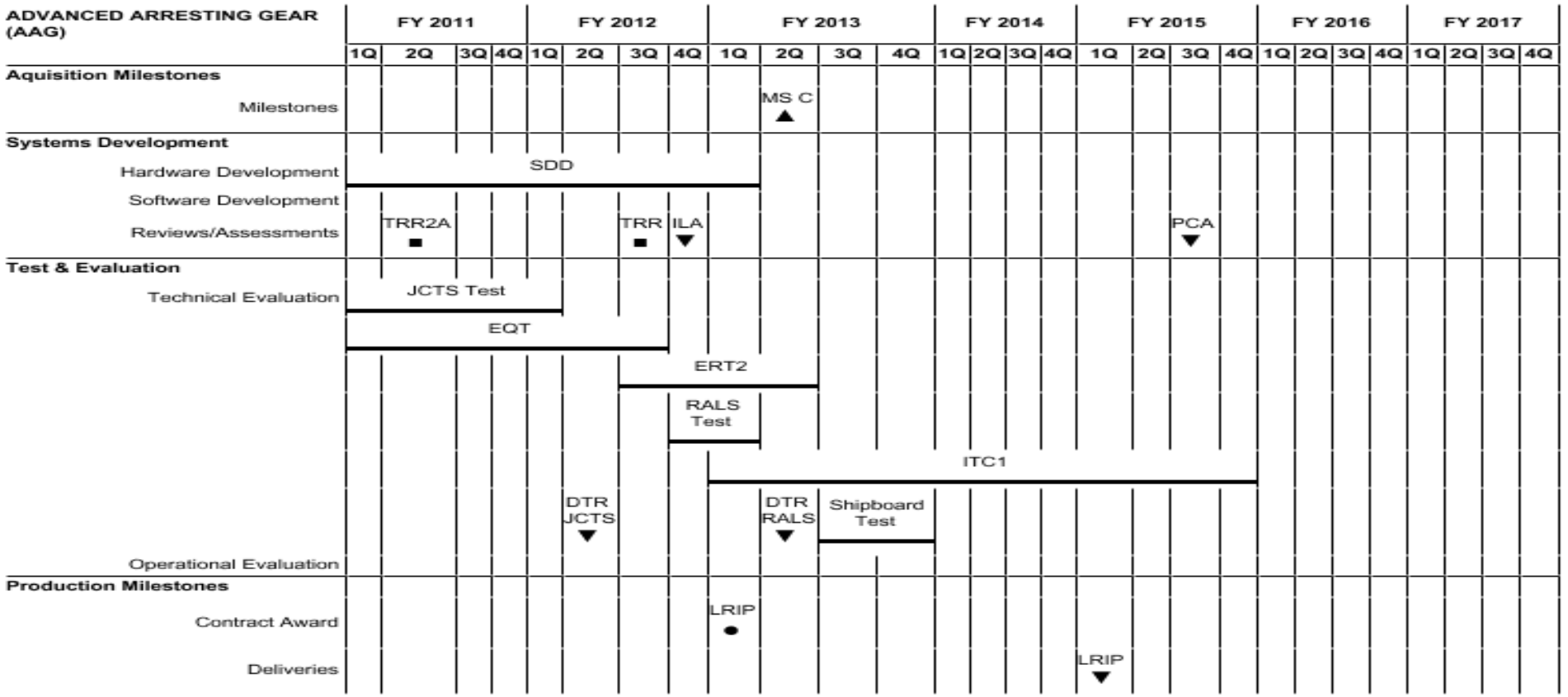
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prgm Mgnt Supt	C/CPFF	Sierra:California, MD	0.629	0.163	Dec 2011	0.170	Dec 2012	-		0.170	0.800	1.762	1.762
Travel	Reqn	NAVAIR:Pax River, MD	0.327	0.050	Nov 2011	0.044	Nov 2012	-		0.044	0.180	0.601	
		Subtotal	0.956	0.213		0.214		-		0.214	0.980	2.363	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	351.436	45.445		55.826		-		55.826	118.428	571.135	

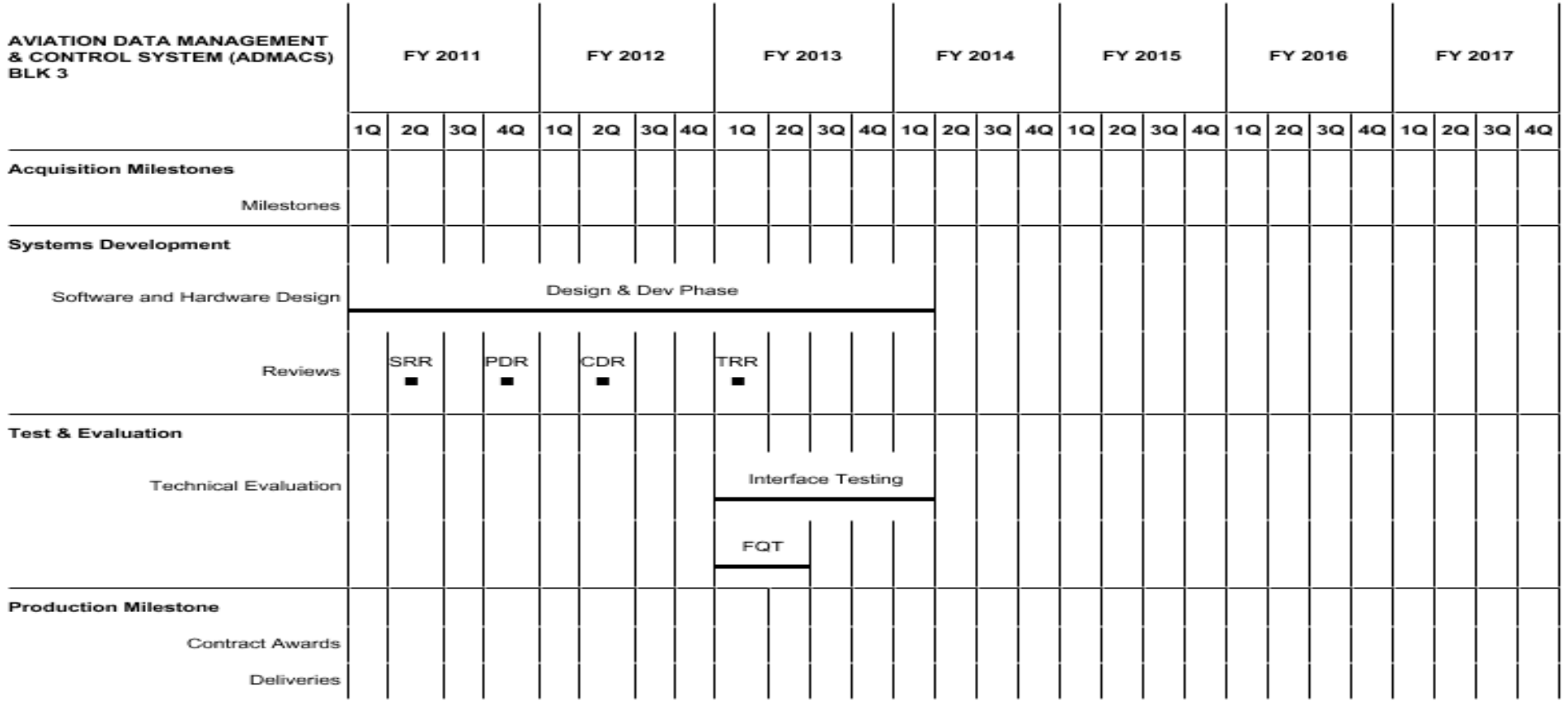
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



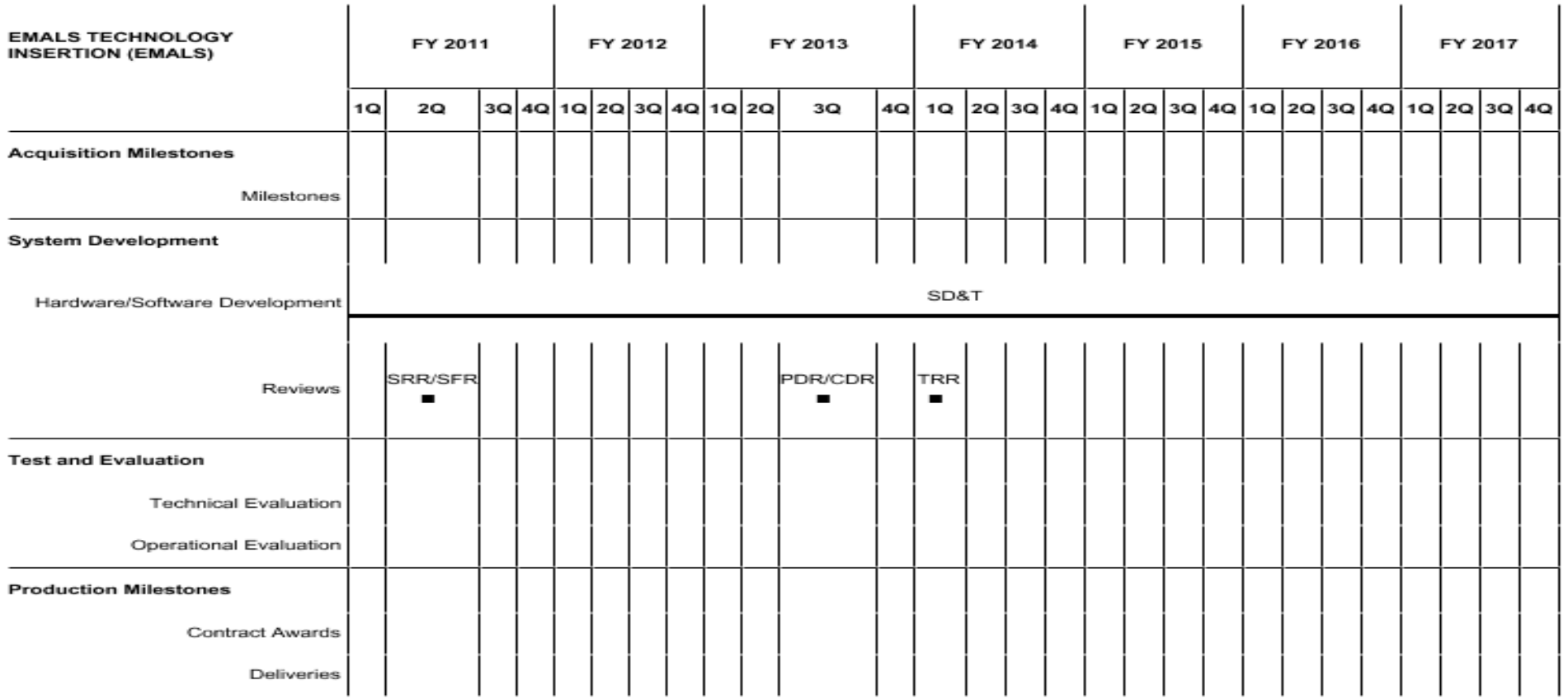
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



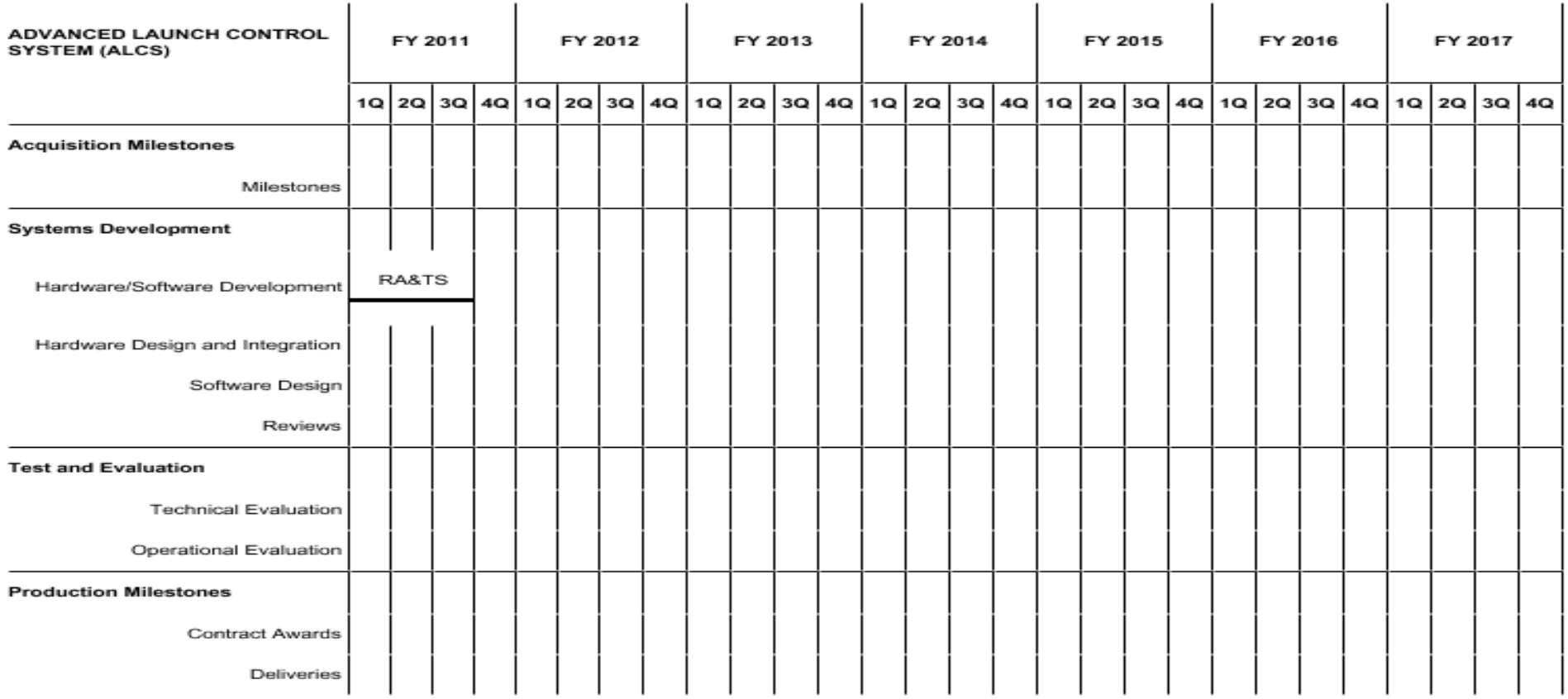
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



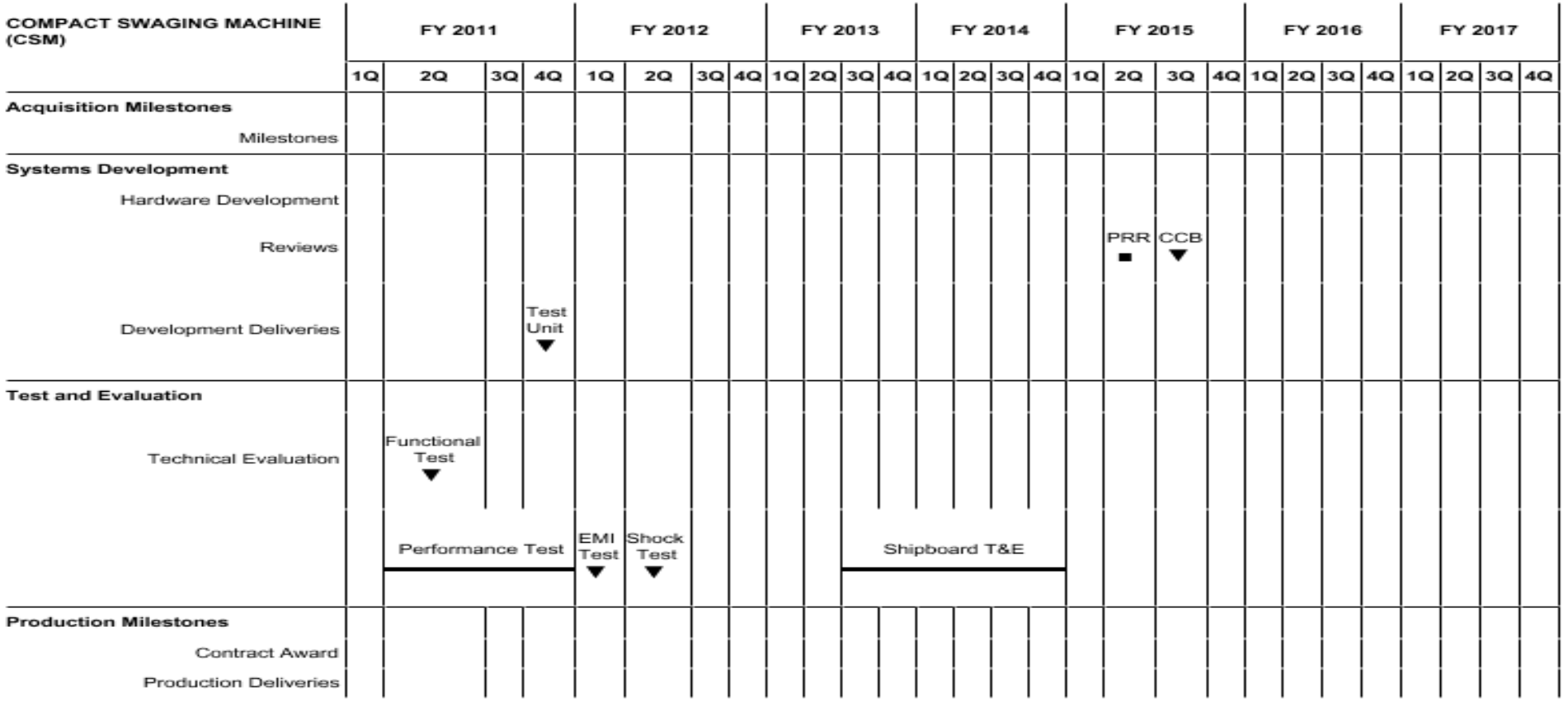
2013OSD - 0604512N - 2232

Exhibit R-4, **RDT&E Schedule Profile:** PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604512N: *Shipboard Aviation Systems*	**PROJECT** 2232: *CV/CVN Launch and Recover*



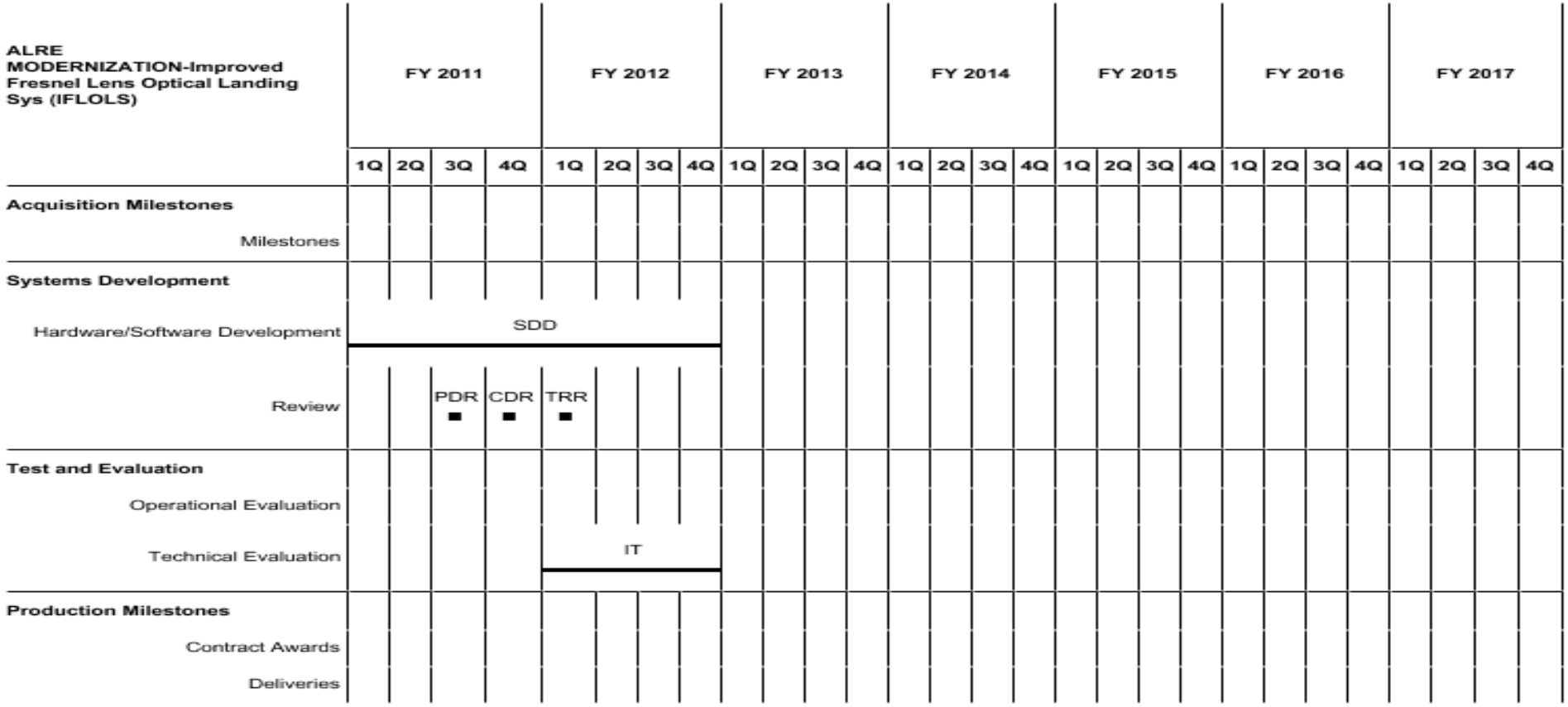
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



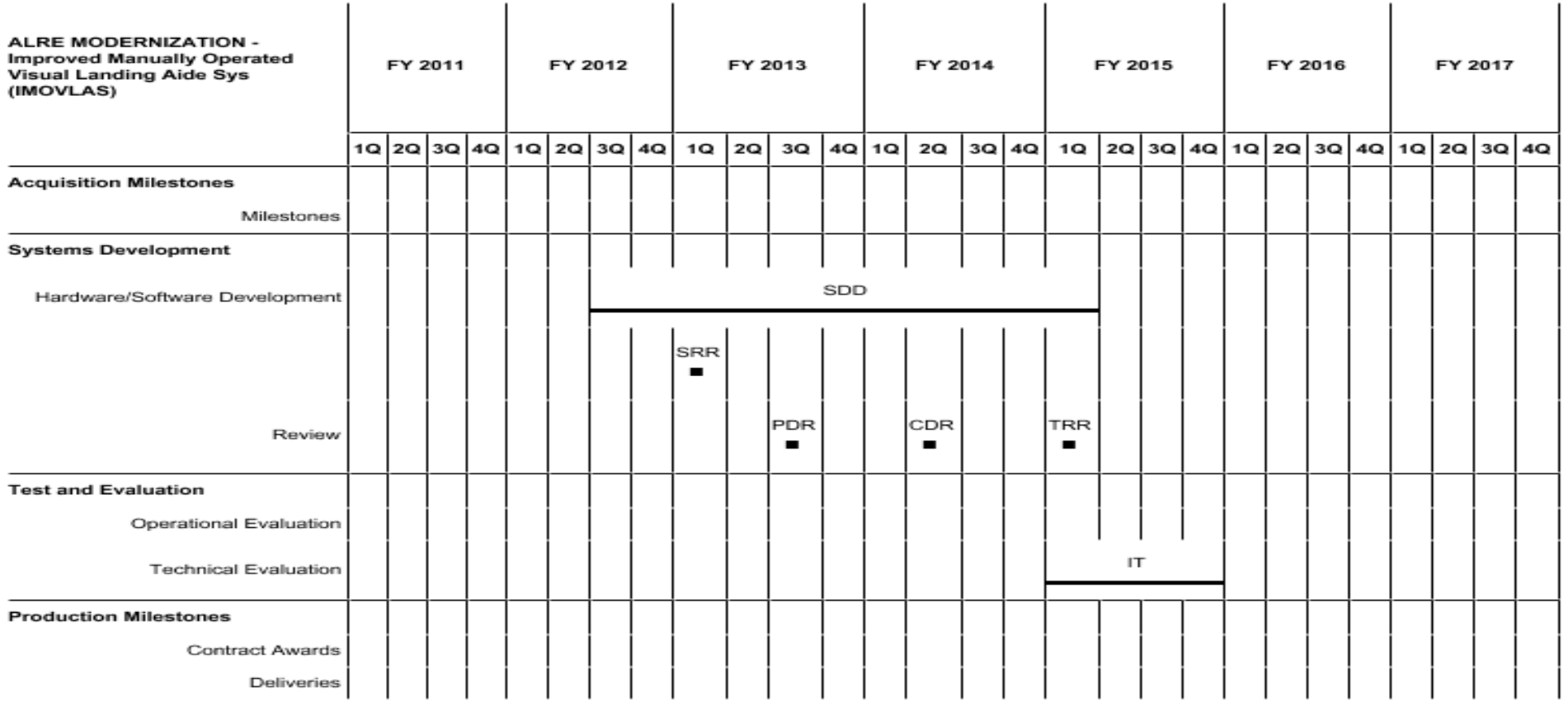
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



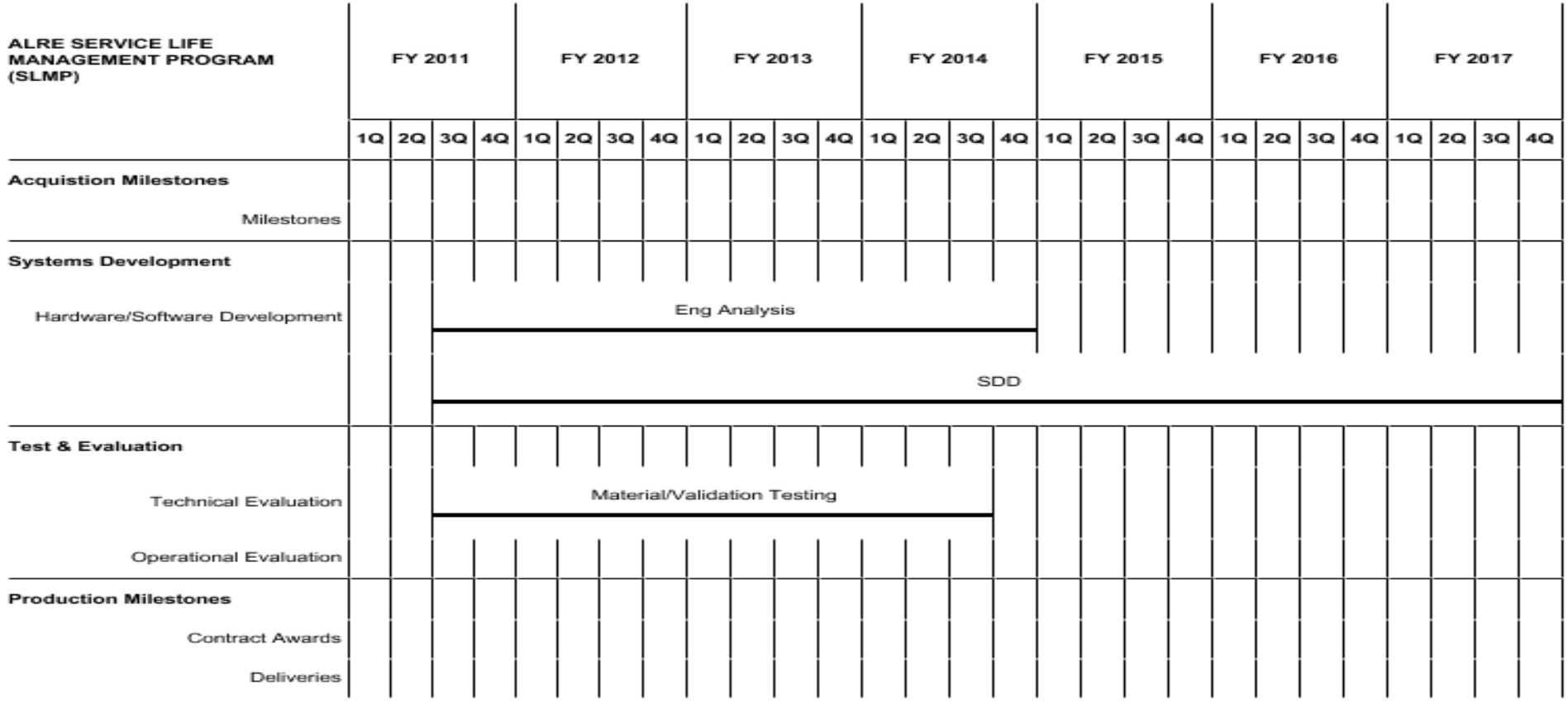
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



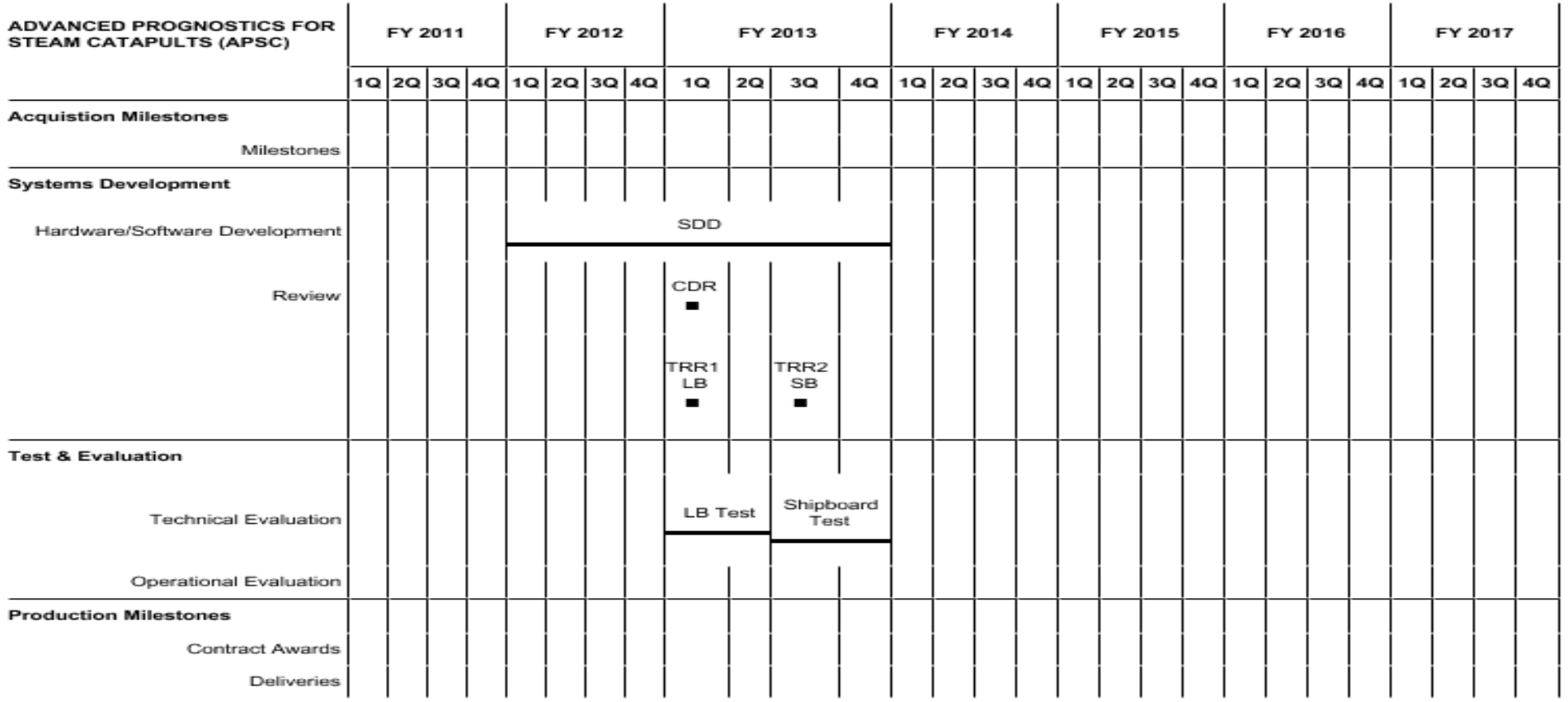
2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



2013OSD - 0604512N - 2232

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*



2013OSD - 0604512N - 2232

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604512N: *Shipboard Aviation Systems*	**PROJECT** 2232: *CV/CVN Launch and Recover*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ADVANCED ARRESTING GEAR (AAG)				
Aquisition Milestones: Milestones: Milestone C	2	2013	2	2013
Systems Development: Hardware Development: System Design & Development (SDD Phase)	1	2011	1	2013
Systems Development: Reviews/Assessments: Integrated Logistic Assessment (ILA)	4	2012	4	2012
Systems Development: Reviews/Assessments: Physical Configuration Assessment (PCA)	3	2015	3	2015
Systems Development: Reviews/Assessments: Technical Readiness Review (TRR2A) JCTS Commissioning Deadload	2	2011	2	2011
Systems Development: Reviews/Assessments: Technical Readiness Review (TRR) RALS	3	2012	3	2012
Test & Evaluation: Technical Evaluation: Jet Car Test Site (JCTS) Test	1	2011	1	2012
Test & Evaluation: Technical Evaluation: Environmental Qualification Test (EQT)	1	2011	3	2012
Test & Evaluation: Technical Evaluation: Extended Reliability Testing (ERT2)	3	2012	2	2013
Test & Evaluation: Technical Evaluation: Runway Arrested Landing Site Test (RALS)	4	2012	1	2013
Test & Evaluation: Technical Evaluation: Integrated Testing (ITC1)	1	2013	4	2015
Test & Evaluation: Technical Evaluation: Shipboard Test	3	2013	4	2013
Test & Evaluation: Technical Evaluation: JCTS Development Test Report (DTR)	2	2012	2	2012
Test & Evaluation: Technical Evaluation: RALS Development Test Report (DTR)	2	2013	2	2013
Production Milestones: Contract Award: Low Rate Initial Production (LRIP) OPN	1	2013	1	2013
Production Milestones: Deliveries: Low Rate Initial Production (LRIP) OPN Qty 3	1	2015	1	2015
AVIATION DATA MANAGEMENT & CONTROL SYSTEM (ADMACS) BLK 3				

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software and Hardware Design: Design and Development Phase	1	2011	1	2014
Systems Development: Reviews: System Requirement Review (SSR)	2	2011	2	2011
Systems Development: Reviews: Preliminary Design Review (PDR)	4	2011	4	2011
Systems Development: Reviews: Critical Design Review (CDR)	2	2012	2	2012
Systems Development: Reviews: Test Readiness Review (TRR)	1	2013	1	2013
Test & Evaluation: Technical Evaluation: Interface Testing	1	2013	1	2014
Test & Evaluation: Technical Evaluation: Functional Qualification Testing	1	2013	2	2013
EMALS TECHNOLOGY INSERTION (EMALS)				
System Development: Hardware/Software Development: System Desgin, Development and Testing	1	2011	4	2017
System Development: Reviews: System Requirements Review/System Functional Review	2	2011	2	2011
System Development: Reviews: Prelimary Design Review (PDR)/Critical Design Review (CDR)	3	2013	3	2013
System Development: Reviews: Test Readiness Review (TRR)	1	2014	1	2014
ADVANCED LAUNCH CONTROL SYSTEM (ALCS)				
Systems Development: Hardware/Software Development: Requirements Analysis & Trade Studies	1	2011	3	2011
COMPACT SWAGING MACHINE (CSM)				
Systems Development: Reviews: Program Readiness Review (PRR)	2	2015	2	2015
Systems Development: Reviews: Configuration Control Board (CCB)	3	2015	3	2015
Systems Development: Development Deliveries: Deliver Test Unit	4	2011	4	2011
Test and Evaluation: Technical Evaluation: Functional Testing	2	2011	2	2011
Test and Evaluation: Technical Evaluation: Performance Testing	2	2011	4	2011
Test and Evaluation: Technical Evaluation: Electromagnetic Interference (EMI)	1	2012	1	2012
Test and Evaluation: Technical Evaluation: Shock Vibration Test	2	2012	2	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604512N: *Shipboard Aviation Systems*	PROJECT 2232: *CV/CVN Launch and Recover*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test and Evaluation: Technical Evaluation: Shipboard Test & Eval	3	2013	4	2014
ALRE MODERNIZATION-Improved Fresnel Lens Optical Landing Sys (IFLOLS)				
Systems Development: Hardware/Software Development: Design and Development	1	2011	4	2012
Systems Development: Review: Preliminary Design Review (PDR)	3	2011	3	2011
Systems Development: Review: Critical Design Review (CDR)	4	2011	4	2011
Systems Development: Review: Test Readiness Review (TRR)	1	2012	1	2012
Test and Evaluation: Technical Evaluation: Integrated Test	1	2012	4	2012
ALRE MODERNIZATION - Improved Manually Operated Visual Landing Aide Sys (IMOVLAS)				
Systems Development: Hardware/Software Development: Design and Development	3	2012	1	2015
Systems Development: Hardware/Software Development: System Readiness Review	1	2013	1	2013
Systems Development: Review: Preliminary Design Review (PDR)	3	2013	3	2013
Systems Development: Review: Critical Design Review (CDR)	2	2014	2	2014
Systems Development: Review: Test Readiness Review (TRR)	1	2015	1	2015
Test and Evaluation: Technical Evaluation: Integrated Test	1	2015	4	2015
ALRE SERVICE LIFE MANAGEMENT PROGRAM (SLMP)				
Systems Development: Hardware/Software Development: Engineering Analysis	3	2011	4	2014
Systems Development: Hardware/Software Development: System Design and Development	3	2011	4	2017
Test & Evaluation: Technical Evaluation: Material and Validation Testing	3	2011	3	2014
ADVANCED PROGNOSTICS FOR STEAM CATAPULTS (APSC)				
Systems Development: Hardware/Software Development: System Design and Development	1	2012	4	2013
Systems Development: Review: Critical Design Review (CDR)	1	2013	1	2013
Systems Development: Review: Technical Readiness Review (TRR1) (Landbased)	1	2013	1	2013
Systems Development: Review: Technical Readiness Review (TRR2) (Shipboard)	3	2013	3	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604512N: *Shipboard Aviation Systems*	**PROJECT** 2232: *CV/CVN Launch and Recover*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: Technical Evaluation: Land-Based Test	1	2013	2	2013
Test & Evaluation: Technical Evaluation: Shipboard Test	3	2013	4	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	4.915	3.400	0.918	-	0.918	-	-	-	-	0.000	9.233
3094: *USW Decision Support*	4.915	3.400	0.918	-	0.918	-	-	-	-	0.000	9.233

A. Mission Description and Budget Item Justification

The objective of this Program Element (PE), under Project 3094, is to provide capabilities to shorten command and control (C2) decision processes for detection-to-engagement across multiple platforms, including those with low-bandwidth communications or intermittent connectivity. The Undersea Warfare Decision Support System (USW-DSS) decision support tool uses a Service Orientated Architecture (SOA) encompassing existing communication links, networks, and contact pictures comprised of sensor data from air, surface, submarine, theater, and surveillance platforms to connect sensors and weapons. The capabilities delivered by USW-DSS are critical not only for the Sea Combat Commander (SCC) but also for the Theater USW Commander (TUSWC) and Anti Submarine Warfare Commander (ASWC) to fulfill the requirement for an integrated capability to plan, conduct, and coordinate USW operations across multiple ASW platforms. USW-DSS will provide common and improved visualization, integrated USW platform sensor data sharing, reduced data entry, improved sensor performance predictions, data fusion, and reduced redundancy across USW Tactical Decision Aids (TDA). The program will provide a greater understanding of the undersea battle space by allowing the entire force (carrier/expeditionary strike group, theater, or other) to have a common and thorough understanding of the battle space with characterized uncertainties.

USW-DSS Build 2 will be hosted on the Integrated Shipboard Network System (ISNS) as one of the first Early Adopters, leveraging initial Service Oriented Architecture (SOA) Reference Implementation. USW-DSS will be hosted on the Consolidated Afloat Networks and Enterprise Services (CANES) architecture, which will be fully SOA enabled. Build 2 Release 3 (B2R3), in response to Fleet requests, will provide improved and additional functionality and increased stability/reliability.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	5.044	3.400	3.301	-	3.301
Current President's Budget	4.915	3.400	0.918	-	0.918
Total Adjustments	-0.129	-	-2.383	-	-2.383
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.103	-			
• Program Adjustments	-	-	-2.383	-	-2.383
• Congressional General Reductions Adjustments	-0.026	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*

Change Summary Explanation

Technical: Not applicable.

Schedule: Due to a reprioritization of requirements based on results of the Resources, Requirements Review Board (R3B) and the Sponsor's Program Proposal (SPP), USW-DSS will enter the sustainment phase after operational test and evaluation events in early FY13. USW-DSS B2R3 will provide an incremental update of Build 2 to field as much capability to the Fleet as possible.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*	PROJECT 3094: *USW Decision Support*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3094: *USW Decision Support*	4.915	3.400	0.918	-	0.918	-	-	-	-	0.000	9.233
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project 3094 will develop the USW-DSS that will provide ASW Control and Control capabilities which enable the CNO vision for ASW Superiority using a "coordinated, networked force of submarines, surface ships, aircraft, and Integrated Undersea Surveillance System (IUSS) assets" with "common and unambiguous views that yield operational and tactical situational awareness in the undersea environment."

USW-DSS provides capabilities to shorten C2 decision processes for detection-to-engagement across multiple platforms, including those with low-bandwidth communications or intermittent connectivity. The USW-DSS decision support tool uses a SOA encompassing existing communication links, networks, and contact pictures comprised of sensor data from air, surface, submarine, theater, and surveillance platforms to connect sensors and weapons. The capabilities delivered by USW-DSS are critical not only for the SCC but also for the TUSWC and ASWC to fulfill the requirement for an integrated capability to plan, conduct, and coordinate USW operations across multiple ASW platforms. USW-DSS will provide common and improved visualization, integrated USW platform sensor data sharing, reduced data entry, improved sensor performance predictions, data fusion, and reduced redundancy across USW TDAs. The program will provide a greater understanding of the undersea battle space by allowing the entire force (carrier/expeditionary strike group, theater, or other) to have a common and thorough understanding of the battle space with characterized uncertainties.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: USW-DSS Build 2 Development / Integration	4.465	1.565	-
Articles:	0	0	
Description: Integrate and test additional USW-DSS tools/capabilities including Common Tactical Picture, Platform Data Fusion Integration, Cross-Platform Data Fusion, Automated Asset Allocation, Asset/Threat State Information, Vulnerability Analysis enhancement, ASW Track Management, Automated Re-planning, Engagement Target Pairing and improved Theater USW capabilities and incorporate visualization/display service.			
FY 2011 Accomplishments: Provided first Fleet Active Interference Tactical Decision Aids (TDAs). Provided ASW Search and Attack templates to the Sea Combat Commander. Incorporated AN/SQQ-89 sensor tracks into USW-DSS. Reduced total bandwidth requirements for USW-DSS data transmission and provided for uni-directional interface to Tactical Digital Information Link (Link 11/16). Complete USW-DSS B2R3.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*	PROJECT 3094: *USW Decision Support*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Address software change requests from FY11/12 Developmental Tests in preparation for FY13 Operational Evaluation.			
Title: USW-DSS Build 2 Release 3 DT/OT	0.450	1.835	0.918
Articles:	0	0	0
FY 2011 Accomplishments: Completed USW-DSS Build 2 Release 3 Development Test (DT) and initiated assessment of the results.			
FY 2012 Plans: Continue analyzation of FY11 DT. Complete USW-DSS Build 2 Release 3 DTs (2) and subsequent assessments of the results.			
FY 2013 Plans: Complete USW-DSS Build 2 Release 3 Operational Evaluation and assessment.			
Accomplishments/Planned Programs Subtotals	4.915	3.400	0.918

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2176: *USW Support Equipment (Related Portion)*	2.599	3.429	2.057	0.000	2.057	2.747	2.863	2.854	2.886	Continuing	Continuing

D. Acquisition Strategy

- Hardware/Software integration contractor funded through SBIR Phase III contract.

E. Performance Metrics

- Reduce the Detect-to-Engage timeline, false contact rate, and false alarm rate by employing a service-orientated architecture between the sensors and weapons.
- ASW Search Plan/Mission Planning reduced from 6 hours to 1 hour between USW-DSS Build 1 and Build 2.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*	PROJECT 3094: *USW Decision Support*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary H/W & S/W Development	WR	NAWC/Pax River:MD	0.300	-		-		-		-	0.000	0.300	
Primary H/W & S/W Development	WR	NSWC/Dahlgren:VA	0.501	-		-		-		-	0.000	0.501	
Primary H/W & S/W Development	WR	NSWC/Carderock:MD	3.296	0.275	Nov 2011	-		-		-	0.000	3.571	
Primary H/W & S/W Development	WR	NUWC/Keyport:WA	2.962	0.175	Jan 2012	-		-		-	0.000	3.137	
Primary H/W & S/W Development	WR	NUWC/Newport:RI	9.847	0.283	Jan 2012	-		-		-	0.000	10.130	
Primary H/W & S/W Development	WR	SSC/San Diego:CA	0.850	-		-		-		-	0.000	0.850	
Primary H/W & S/W Development	WR	VAR1:VAR*	0.894	-		-		-		-	0.000	0.894	
Primary H/W & S/W Development	C/CPFF	Adaptive Methods:VA	6.263	0.275	Dec 2011	-		-		-	0.000	6.538	
Primary H/W & S/W Development	C/CPFF	JHU/APL:MD	2.725	-		-		-		-	0.000	2.725	
Primary H/W & S/W Development	C/CPFF	Progeny:VA	9.209	0.350	Jan 2012	-		-		-	0.000	9.559	
Primary H/W & S/W Development	C/CPFF	VAR2:VAR*	4.983	0.082	Jan 2012	-		-		-	0.000	5.065	
		Subtotal	41.830	1.440		-		-		-	0.000	43.270	

Remarks

*Consists of multiple performing activities with funding for each not greater than $1M per year.

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
At-Sea Test and Evaluation	WR	VAR:VAR	1.500	0.350	Nov 2012	0.375	Nov 2012	-		0.375	0.000	2.225	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604518N: *Combat Information Center Conv*	PROJECT 3094: *USW Decision Support*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
At-Sea Test and Evaluation	C/CPFF	Progeny:VA	-	0.750	Jan 2012	0.250	Dec 2012	-		0.250	0.000	1.000	
At-Sea Test and Evaluation	C/CPFF	Adaptive Methods:VA	-	0.750	Dec 2011	0.250	Dec 2012	-		0.250	0.000	1.000	
		Subtotal	1.500	1.850		0.875		-		0.875	0.000	4.225	

Remarks

*Consists of multiple performing activities with funding for each not greater than $1 million per year.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	BAE Systems:MD	1.818	0.110	Feb 2012	0.043	Dec 2012	-		0.043	0.000	1.971	
		Subtotal	1.818	0.110		0.043		-		0.043	0.000	1.971	

	Total Prior Years Cost	FY 2012 Cost	FY 2012	FY 2013 Base Cost	FY 2013 Base	FY 2013 OCO Cost	FY 2013 OCO	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	45.148	3.400		0.918		-		0.918	0.000	49.466	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604518N: *Combat Information Center Conv*	**PROJECT** 3094: *USW Decision Support*

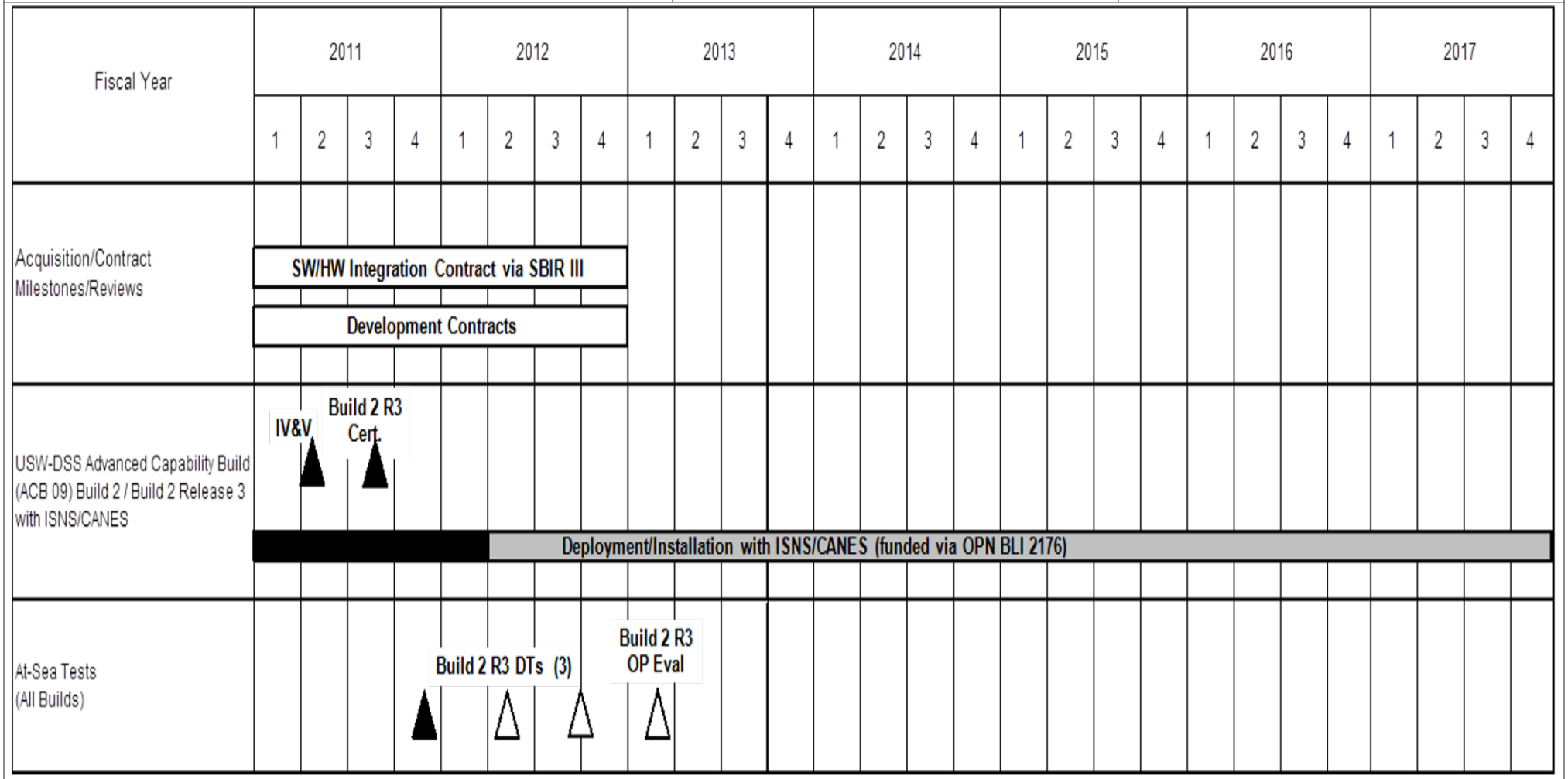


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604518N: *Combat Information Center Conv*	**PROJECT** 3094: *USW Decision Support*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3094				
USW-DSS Build 2 Deployment with ISNS Increment 1	1	2011	4	2017
USW-DSS Build 2 (Release 3) Independent Verification/Validation	2	2011	2	2011
USW-DSS Build 2 (Release 3) Certification	3	2011	3	2011
At-Sea Development Test (1)	4	2011	4	2011
At-Sea Development Test (2)	2	2012	2	2012
At-Sea Development Test (3)	3	2012	4	2012
At-Sea Operational Operational Evaluation	1	2013	1	2013

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	166.888	112.158	165.230	-	165.230	268.535	343.249	305.594	229.568	Continuing	Continuing
1947: *New Design SSN HM&E*	110.568	60.294	33.568	-	33.568	78.424	102.431	66.793	40.044	Continuing	Continuing
1950: *New Design SSN Combat Sys Dev*	34.983	33.874	29.065	-	29.065	37.585	38.424	36.474	37.080	Continuing	Continuing
3062: *Submarine Multi-Mission Team Trainer*	5.418	2.990	2.729	-	2.729	2.794	2.852	2.901	2.948	Continuing	Continuing
4500: *VIRGINIA Payload Module*	-	-	99.868	-	99.868	149.732	199.542	199.426	149.496	Continuing	Continuing
9999: *Congressional Adds*	15.919	15.000	-	-	-	-	-	-	-	0.000	30.919

A. Mission Description and Budget Item Justification

The U.S. Navy must maintain a submarine fleet that is of sufficient capability and numbers to defend American interests. The VIRGINIA Class Submarine, formerly the New Attack Submarine (New SSN), is being designed to fulfill this need. It will counter the potential threats of the next century in a multi- mission capable submarine that has the ability to provide covert, sustained combat presence in denied waters. The primary goal of the program is to develop an affordable yet capable submarine by evaluating a broad range of system and technology alternatives, and pursuing cost reduction, producibility improvement, and technical risk management. This Program Element (PE) provides the technology, prototype components, and systems engineering needed to design and construct the VIRGINIA Class Submarine and build its Command, Control, Communications, and Intelligence (C3I) System. This PE directly supports the following VIRGINIA Class Submarine missions: (1) covert strike warfare; (2) anti-submarine warfare; (3) covert intelligence collection/surveillance, indication and warning, and electronic warfare; (4) anti-surface ship warfare; (5) special warfare; (6)mine warfare; and (7) battle group support.

Project 9999: FY11 Congressional Add includes funding for Small Business Technology Insertion.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	155.489	97.235	91.818	-	91.818
Current President's Budget	166.888	112.158	165.230	-	165.230
Total Adjustments	11.399	14.923	73.412	-	73.412
• Congressional General Reductions	-	-0.077			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	15.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.300	-			
• SBIR/STTR Transfer	-3.412	-			
• Program Adjustments	-	-	73.629	-	73.629
• Rate/Misc Adjustments	-	-	-0.217	-	-0.217
• Congressional General Reductions Adjustments	-0.889	-	-	-	-
• Congressional Add Adjustments	16.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *SMALL BUSINESS TECHNOLOGY INSERTION*	15.919	-
Congressional Add: *New Design SSN SBIR (Cong)*	-	15.000
Congressional Add Subtotals for Project: 9999	15.919	15.000
Congressional Add Totals for all Projects	15.919	15.000

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1947: *New Design SSN HM&E*	110.568	60.294	33.568	-	33.568	78.424	102.431	66.793	40.044	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses all the ship system development efforts for the VIRGINIA Class Submarine and the Technology Insertion Program for reducing cost and upgrading performance of future hulls by virtue of improvements in ship systems. Technology development implementation and logistics for developmental items, and VIRGINIA Class test & evaluation are included. This project is essential for pursuit of high priority Design For Affordability (DFA) and Reduced Total Ownership Cost (RTOC) initiatives while achieving platform requirements and providing mission capability and flexibility. The thrust of these efforts will be to develop and apply multiple advanced system technologies which are integrated into the design of the VIRGINIA Class Submarine. Technologies developed in this program will be considered for applicability to the Ohio Replacement Program (ORP) for commonality opportunities. New technologies are being transitioned from industry and government research and development programs where doing so offers substantial performance improvement and/or affordability payoffs. Transition opportunities include those from the Defense Advanced Research Projects Agency (DARPA) Sensors & Payloads program and Office of Naval Research (ONR) Future Naval Capabilities Program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: New Design SSN HM&E	99.259	54.143	28.116
Articles:	0	0	0

FY 2011 Accomplishments:

Continued block upgrades of Ship Control Algorithms and software. Continued responding to SSN774 OPEVAL and TECHEVAL findings and prepared for FOT&E events. Continued software development for Advanced Electromagnetic Silencing capability. Acquired initial at-sea data. Completed prototype development testing for VIRGINIA Payload Tube and Large Aperture Bow Array. Continued design and development of Block III Cost Reduction components and technologies including, for example, Large Aperture Bow Array (LAB), payload tubes, hatches, reverse osmosis units, low cost sound isolation coupling, and Integrated Low Pressure Electrolyzer. Continued transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Continued development of concepts and technologies for Block IV Reduced Total Ownership Cost (RTOC). Addressed emergent reliability issues associated with HM&E components.

FY 2012 Plans:

Continue block upgrades of Ship Control Algorithms and software. Continue responding to SSN774 OPEVAL and TECHEVAL findings and prepare for FOT&E events. Continue software development for Advanced Electromagnetic Silencing capability. Complete design and development of Block III Cost Reduction components and technologies including, for example, LAB, payload tubes, hatches, reverse osmosis units, low cost sound isolation coupling, and Integrated Low Pressure Electrolyzer. Continue transition of products from the Office of Naval Research MANTECH Program. Continue development of concepts and

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
technologies for Block IV RTOC. Address emergent reliability issues associated with HM&E components. Initiate Obsolescence Redesign for Block IV. ***FY 2013 Plans:*** Continue block upgrades of Ship Control Algorithms and software. Continue responding to SSN774 OPEVAL and TECHEVAL findings and prepare for FOT&E events. Complete software development for Advanced Electromagnetic Silencing capability. Continue transition of products from the Office of Naval Research MANTECH Program. Continue development of concepts and technologies for Block IV RTOC and finalize Block IV technical baseline. Address emergent reliability issues associated with HM&E components. Continue Obsolescence Redesign for Block IV.			
Title: TEST AND EVALUATION	11.309	6.151	5.452
Articles:	0	0	0
FY 2011 Accomplishments: Continued block upgrades of Ship Control Algorithms and software. Continued responding to SSN774 OPEVAL and TECHEVAL findings and prepared for FOT&E events. Continued software development for Advanced Electromagnetic Silencing capability. Acquired initial at-sea data. Completed prototype development testing for VIRGINIA Payload Tube and Large Aperture Bow Array. Continued design and development of Block III Cost Reduction components and technologies including, for example, Large Area Bow Array, payload tubes, hatches, reverse osmosis units, low cost sound isolation coupling, and Integrated Low Pressure Electrolyzer. Continued transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Continued development of concepts and technologies for Block IV Reduced Total Ownership Cost (RTOC). Addressed emergent reliability issues associated with HM&E components.			
FY 2012 Plans: Continue block upgrades of Ship Control Algorithms and software. Continue responding to SSN774 OPEVAL and TECHEVAL findings and prepare for FOT&E events. Continue software development for Advanced Electromagnetic Silencing capability. Complete design and development of Block III Cost Reduction components and technologies including, for example, Large Area Bow Array, payload tubes, hatches, reverse osmosis units, low cost sound isolation coupling, and Integrated Low Pressure Electrolyzer. Continue transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Continue development of concepts and technologies for Block IV Reduced Total Ownership Cost (RTOC). Address emergent reliability issues associated with HM&E components. Initiate Obsolescence Redesign for Block IV.			
FY 2013 Plans: Continue block upgrades of Ship Control Algorithms and software. Continue responding to SSN774 OPEVAL and TECHEVAL findings and prepare for FOT&E events. Complete software development for Advanced Electromagnetic Silencing capability. Continue transition of products from the Office of Naval Research Manufacturing Technology Program (MANTECH). Continue			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
development of concepts and technologies for Block IV Reduced Total Ownership Cost (RTOC) and finalize Block IV technical baseline. Address emergent reliability issues associated with HM&E components. Initiate Obsolescence Redesign for Block IV.			
Accomplishments/Planned Programs Subtotals	110.568	60.294	33.568

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/2013: *VA CL*	5,093.294	4,682.675	4,092.479	0.000	4,092.479	4,606.642	6,282.366	5,726.766	5,528.434	13,128.469	83,608.403
• O&M,N/0204283N: *Sub Ops & Safety*	48.223	54.608	45.169	0.000	45.169	44.917	45.644	46.453	46.887	Continuing	Continuing
• OPN/0942: *VA CL Support Equipment*	129.334	93.487	79.870	0.000	79.870	57.797	51.452	35.479	43.211	Continuing	Continuing

D. Acquisition Strategy

The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing and has reduced the number of changes typically encountered during construction of the lead and early follow-on ships. In September 1997, Congress passed a law allowing Electric Boat (EB) and Northrop Grumman Newport News (NGNN), now Huntington Ingalls Industries (HII), to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, EB remained the design yard for the VIRGINIA Class Submarine and HII became a part of the IPPD process. The Program Office is managing two multi-year contracts the first is for the FY04-08 ships and the second was awarded in December 2008 for the FY09-13 ships.

E. Performance Metrics

Successful completion of Milestone III Review. Successful completion of Final Operational Test and Evaluation (FOT&E) for Technology Insertion (TI)-08 and Block III. Successful implementation of Reduced Total Ownership (RTOC) initiatives

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	WR	NSWC:Carderock, MD	216.910	15.329	Feb 2012	9.592	Nov 2012	-		9.592	98.117	339.948	
Component Development	WR	NUWC:Newport, RI	105.875	0.492	Mar 2012	0.435	Nov 2012	-		0.435	99.221	206.023	
Component Development	WR	NRL:Washington, DC	4.918	0.300	Dec 2011	0.250	Nov 2012	-		0.250	0.000	5.468	
Component Development	C/CPFF	Electric Boat:Groton, CT	572.554	18.635	Mar 2012	8.074	Nov 2012	-		8.074	368.739	968.002	
Component Development	C/CPFF	Electric Boat:Groton, CT	22.964	-		-		-		-	0.000	22.964	
Component Development	C/CPFF	Electric Boat:Groton, CT	34.245	5.574	Dec 2011	3.950	Dec 2012	-		3.950	0.000	43.769	
Component Development	PO	SUPSHIP:Groton, CT	53.747	11.803	Mar 2012	4.721	Mar 2013	-		4.721	40.512	110.783	
Component Development	SS/CPFF	Lockheed Martin:Not Specified	15.703	0.821	Dec 2011	-	Dec 2012	-		-	0.000	16.524	
Component Development	SS/CPFF	Lockheed Martin:Not Specified	2.070	-		-		-		-	0.000	2.070	
Component Development	SS/CPFF	Applied Research Laboratory:Penn State University	21.906	0.115	Dec 2011	-	Dec 2012	-		-	0.000	22.021	
Component Development	SS/FP	National Shipbuilding Research Program:Not Specified	2.454	0.574	Mar 2012	0.594	Mar 2013	-		0.594	0.000	3.622	
Component Development	Various	Micellaneous:Not Specified	14.671	-		-		-		-	0.000	14.671	
		Subtotal	1,068.017	53.643		27.616		-		27.616	606.589	1,755.865	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation - DT&E	WR	NSWC:Carderock, MD	89.433	0.810	Feb 2012	0.800	Nov 2012	-		0.800	41.056	132.099	
Test and Evaluation - LFT&E	WR	NSWC:Carderock, MD	0.650	0.420	Dec 2011	0.415	Nov 2012	-		0.415	3.350	4.835	
Test and Evaluation - DT&E	WR	NSWC:Dahlgren, VA	0.315	-		-		-		-	0.000	0.315	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation - DT&E	WR	NUWC:Newport, RI	102.175	2.304	Feb 2012	1.695	Nov 2012	-		1.695	160.009	266.183	
Test and Evaluation - OT&E	PO	COMOPTEVFOR:PD	13.428	1.000	Mar 2012	1.000	Nov 2012	-		1.000	50.560	65.988	
Test and Evaluation - LFT&E	C/CPFF	Electric Boat:Groton, CT	1.088	0.202	Dec 2011	0.100	Dec 2012	-		0.100	0.100	1.490	
Test and Evaluation - DT&E	C/CPAF	SEAPORT:Rockville, MD	18.907	0.500	Nov 2011	0.500	Nov 2012	-		0.500	3.600	23.507	
Test and Evaluation - DT&E	C/CPFF	Progeny:Manassas, VA	3.460	0.915	Dec 2011	0.942	Dec 2012	-		0.942	6.808	12.125	
Test and Evaluation - DT&E	Various	Micellaneous:Not Specified	11.842	-		-		-		-	0.000	11.842	
		Subtotal	241.298	6.151		5.452		-		5.452	265.483	518.384	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPAF	SEAPORT:Rockville, MD	19.025	0.500	Nov 2011	0.500	Nov 2012	-		0.500	7.000	27.025	
Travel	PO	Not Specified:Not Specified	1.919	-		-		-		-	0.000	1.919	
DAWDF	Various	Not Specified:Not Specified	0.597	-		-		-		-	0.000	0.597	
		Subtotal	21.541	0.500		0.500		-		0.500	7.000	29.541	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1,330.856	60.294		33.568		-		33.568	879.072	2,303.790	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 1947: *New Design SSN HM&E*

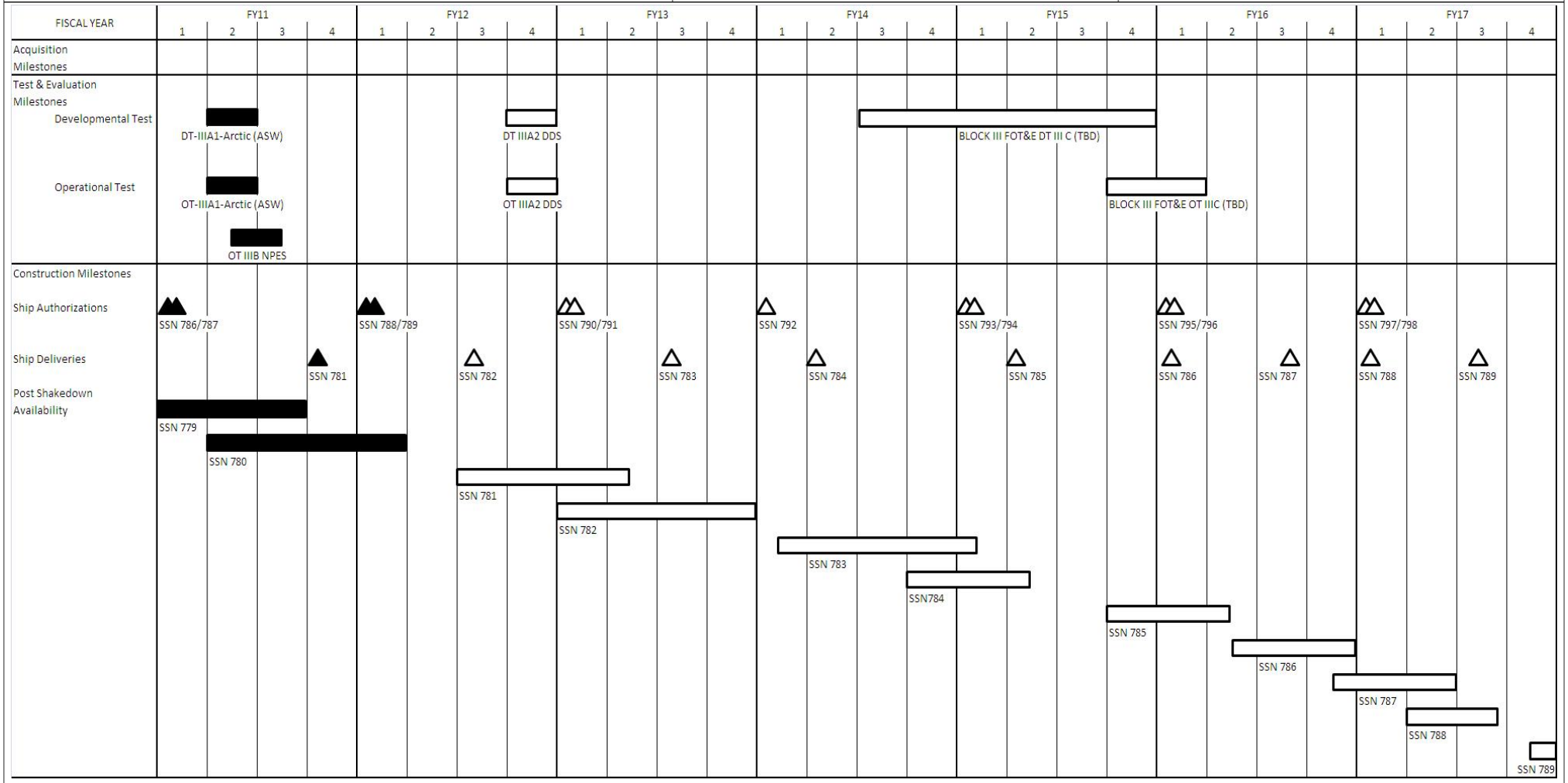


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 1947: *New Design SSN HM&E*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1947				
DT-IIIB (NPES)	1	2011	1	2011
Post Shakedown Availability (PSA SSN 779)	1	2011	4	2011
Post PSA Modernization (SSN 779)	1	2011	4	2011
Ship Authorization (786/787)	1	2011	1	2011
DT-IIIA1 (Arctic)	2	2011	2	2011
OT-IIIA1 (Arctic)	2	2011	2	2011
Post Shakedown Availability (PSA SSN 780)	2	2011	2	2012
Post PSA Modernization (SSN 780)	2	2011	2	2012
OT-IIIB (NPES)	2	2011	3	2011
Ship Delivery (SSN 781)	4	2011	4	2011
Ship Authorization (788/789)	1	2012	1	2012
DT-IIIA2 (DDS)	3	2012	4	2012
OT-IIIA2 (DDS)	3	2012	4	2012
Ship Delivery (SSN 782)	3	2012	3	2012
Post Shakedown Availability (PSA SSN 781)	2	2012	2	2013
Post PSA Modernization (SSN 781)	2	2012	2	2013
Post Shakedown Availability (PSA SSN 782)	1	2013	4	2013
Post PSA Modernization (SSN 782)	1	2013	4	2013
Ship Authorization (790/791)	1	2013	1	2013
Ship Delivery (SSN 783)	3	2013	3	2013
Ship Authorization (792)	1	2014	1	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1947: *New Design SSN HM&E*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Post Shakedown Availability (PSA SSN 783)	1	2014	1	2015
Post PSA Modernization (SSN 783)	1	2014	1	2015
Ship Delivery (SSN 784)	2	2014	2	2014
Block III FOT&E DT-III C (TBD)	3	2014	4	2015
Post Shakedown Availability (PSA SSN 784)	4	2014	2	2015
Ship Authorization (793/794)	1	2015	1	2015
Ship Delivery (SSN 785)	2	2015	2	2015
Block III FOT&E OT-III C (TBD)	4	2015	1	2016
Post Shakedown Availability (PSA SSN 785)	4	2015	2	2016
Ship Delivery (SSN 786)	1	2016	1	2016
Ship Authorization (795/796)	1	2016	1	2016
Post Shakedown Availability (SSN 786)	2	2016	4	2016
Ship Delivery (SSN 787)	3	2016	3	2016
Post Shakedown Availability (PSA SSN 787)	4	2016	2	2017
Ship Delivery (SSN 788)	1	2017	1	2017
Ship Authorization (SSNs 797/798)	1	2017	1	2017
Post Shakedown Availability (PSA SSN 788)	2	2017	4	2017
Ship Delivery (SSN 789)	3	2017	3	2017
Post Shakedown Availability (PSA SSN 789)	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1950: *New Design SSN Combat Sys Dev*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1950: *New Design SSN Combat Sys Dev*	34.983	33.874	29.065	-	29.065	37.585	38.424	36.474	37.080	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses the top level systems development, test and integration into the ship of the VIRGINIA Class Submarine C3I System, which includes multiple subsystems. The scope of the system is expanded from Sonar and Combat Control subsystems to include AN/BLQ-10 Electronic Support Measures, Exterior Communications, Submarine Regional Warfare System, Navigation, Total Ship Monitoring, Imaging, Tactical Acoustic Communications, Radar, Interior Communications, Tactical Support Devices, Fiber Optic Cable Subsystem, and Special Purpose Subsystems, such as Battle Force Team Trainer and others. VIRGINIA Class Submarine specific development efforts include requirements definition, software, hardware development, software/hardware test, prototype production, and electronic integration as well as physical integration into the platform.

The VIRGINIA Class Submarine implementation approach is based on Open System, Commercial-off-the-Shelf (COTS) Non-Developmental Items or subsystems. The program leverages on-going subsystems developments or developing new subsystems where needed to satisfy VIRGINIA Class requirements. The recurring cost of VIRGINIA Class Submarine C3I Systems is being reduced to meet the program's affordability goals. Modifications to many subsystems must be developed to: (1) reduce the shipbuilding and construction recurring costs through the use of COTS components; (2) use proven computer technologies to evolve to an Open System design; (3) enhance capabilities to support expanded operational
requirements, reduced manning, and reduced shipboard component footprint.

To meet the collective future threat, the submarine force must operate as effectively in littoral regions as it traditionally has in open ocean. Close coordination with surface battle groups and airborne units is essential to mission accomplishment. To meet the VIRGINIA Class Submarine mission, the following capabilities are provided by the
VIRGINIA Class Submarine C3I System: (1) passive and active detection of multiple contacts, including early warning threat determination through processing and analysis of sensor data; (2) classification of sensor data for the purpose of identifying contacts; (3) localization (tracking) of contacts through target motion analysis; (4) preset, launch, and control of weapons and countermeasures; (5) improved communication and connectivity with other battle group elements, airborne units, and special operations forces; (6) incorporation of vertical launch system to enhance strike warfare; and (7) more effective covert surveillance through video imaging with onboard digital enhancement capabilities, and improved electronic warfare analysis capabilities.

The F1950 project mission includes an ongoing post VIRGINIA Class TECH/OPEVAL RDT&E effort to continue the development of VIRGINIA Unique Combat System Improvements. The VIRGINIA Class C3I will continue to leverage backfit communities efforts, but even with common systems that the Navy has developed there will continue to be VIRGINIA
Unique capability improvements required. The FY09 and out funding identified is for those efforts.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 1950: *New Design SSN Combat Sys Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Sonar Combat Control and Architecture Subsystems	19.091	17.273	15.343
Articles:	0	0	0
Description: The Sonar Combat Control and Architecture (S/CC/A) Subsystems funding provides for the VIRGINIA unique efforts performed by the S/CC/A PARMs (PMS401 and PMS435 respectively). These funds also provide for the integration and test of subsystems at the VIRGINIA Class system level. This is a constant and consistent effort ongoing throughout the life of the system to maintain subsystem commonality with the submarine in-service community.			
FY 2011 Accomplishments: Continued the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
FY 2012 Plans: Continue the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
FY 2013 Plans: Continue the development of S/CC/A System Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
Title: C3I Systems Engineering	15.892	16.601	13.722
Articles:	0	0	0
FY 2011 Accomplishments: Continued the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
FY 2012 Plans: Continue the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
FY 2013 Plans: Continue the development of System Level and other subsystem Improvements to maintain VIRGINIA Class Commonality to backfit fleet.			
Accomplishments/Planned Programs Subtotals	34.983	33.874	29.065

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/2013: *VA CL*	5,093.294	4,682.675	4,092.479	0.000	4,092.479	4,606.642	6,282.366	5,726.766	5,528.434	36,203.595	106,683.529

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1950: *New Design SSN Combat Sys Dev*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• O&M,N/0204283N: *Sub Ops & Safety*	48.223	54.608	45.169	0.000	45.169	44.917	45.644	46.453	46.887	Continuing	Continuing
• OPN/0942: *VA CL Support Equipment*	129.334	93.487	79.870	0.000	79.870	57.797	51.452	35.479	43.211	Continuing	Continuing

D. Acquisition Strategy

The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing and has reduced the number of changes typically encountered during construction of the lead and early follow-on ships. In September 1997, Congress passed a law allowing Electric Boat (EB) and Northrop Grumman Newport News (NGNN), now Huntington Ingalls Industries (HII), to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, EB remained the design yard for the VIRGINIA Class Submarine and HII became a part of the IPPD process. The Program Office is managing two multi-year contracts the first is for the FY04-08 ships and the second was awarded in December 2008 for the FY09-13 ships.

E. Performance Metrics

Successful completion of Milestone III Review. Successful completion of Final Operational Test and Evaluation (FOT&E) for Technology Insertion (TI)-08 and Block III. Successful implementation of Reduced Total Ownership Costs (RTOC) initiatives.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1950: *New Design SSN Combat Sys Dev*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PTR Corrections	Various	Various:TBD	30.088	-		-		-		-	0.000	30.088	
Unique Virginia Class Improvements	Various	Various:TBD	34.299	10.317	Mar 2012	7.587	Nov 2012	-		7.587	103.037	155.240	
Advanced Display Sys (AN/UYQ-70)	SS/CPIF	Lockheed Martin:St. Paul, MN	32.143	1.059	Dec 2011	1.085	Nov 2012	-		1.085	8.025	42.312	
Photonics	C/CPIF	Kollmorgen:Northampton, MA	52.793	1.530	May 2012	1.569	May 2013	-		1.569	11.311	67.203	
Electronic Support Measures	C/FFP	Lockheed Martin:Syracuse, NY	38.067	-		-		-		-	0.000	38.067	
Platform Integration	SS/CPFF	Electric Boat:Groton, CT	45.576	1.224	Dec 2011	1.255	Nov 2012	-		1.255	9.112	57.167	
Technology Refreshment	Various	Various:TBD	20.355	-		-		-		-	0.000	20.355	
Technical Direction Agent	WR	NUWC:Newport, RI	273.505	8.160	Feb 2012	7.066	Jan 2013	-		7.066	62.048	350.779	
Technology Refreshment/Info. Assurance	C/CPFF	Progeny Systems:Manassas, VA	31.686	1.530	Dec 2011	1.568	Nov 2012	-		1.568	11.312	46.096	
Systems Engineering	WR	NSWC:Carderock, MD	9.443	0.816	Dec 2011	0.837	Nov 2012	-		0.837	6.075	17.171	
Systems Engineering	WR	SSC:Charleston, SC	6.046	0.510	Jan 2012	0.522	Nov 2012	-		0.522	3.877	10.955	
Systems Engineering	WR	NUWC:Keyport, WA	10.478	0.230	Mar 2012	0.236	Nov 2012	-		0.236	1.649	12.593	
Miscellaneous	Various	Various:TBD	125.881	5.848	Feb 2012	4.625	Nov 2012	-		4.625	42.813	179.167	
		Subtotal	710.360	31.224		26.350		-		26.350	259.259	1,027.193	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various:TBD	6.212	-		-		-		-	0.000	6.212	
		Subtotal	6.212	-		-		-		-	0.000	6.212	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1950: *New Design SSN Combat Sys Dev*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Support Services/ ETS	C/CPAF	URS:Rockville, MD	21.771	2.650	Dec 2011	2.715	Dec 2012	-		2.715	21.789	48.925	
DAWDF	Various	Various:Various	0.195	-		-		-		-	0.000	0.195	
		Subtotal	21.966	2.650		2.715		-		2.715	21.789	49.120	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	738.538	33.874		29.065		-		29.065	281.048	1,082.525	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 1950: *New Design SSN Combat Sys Dev*

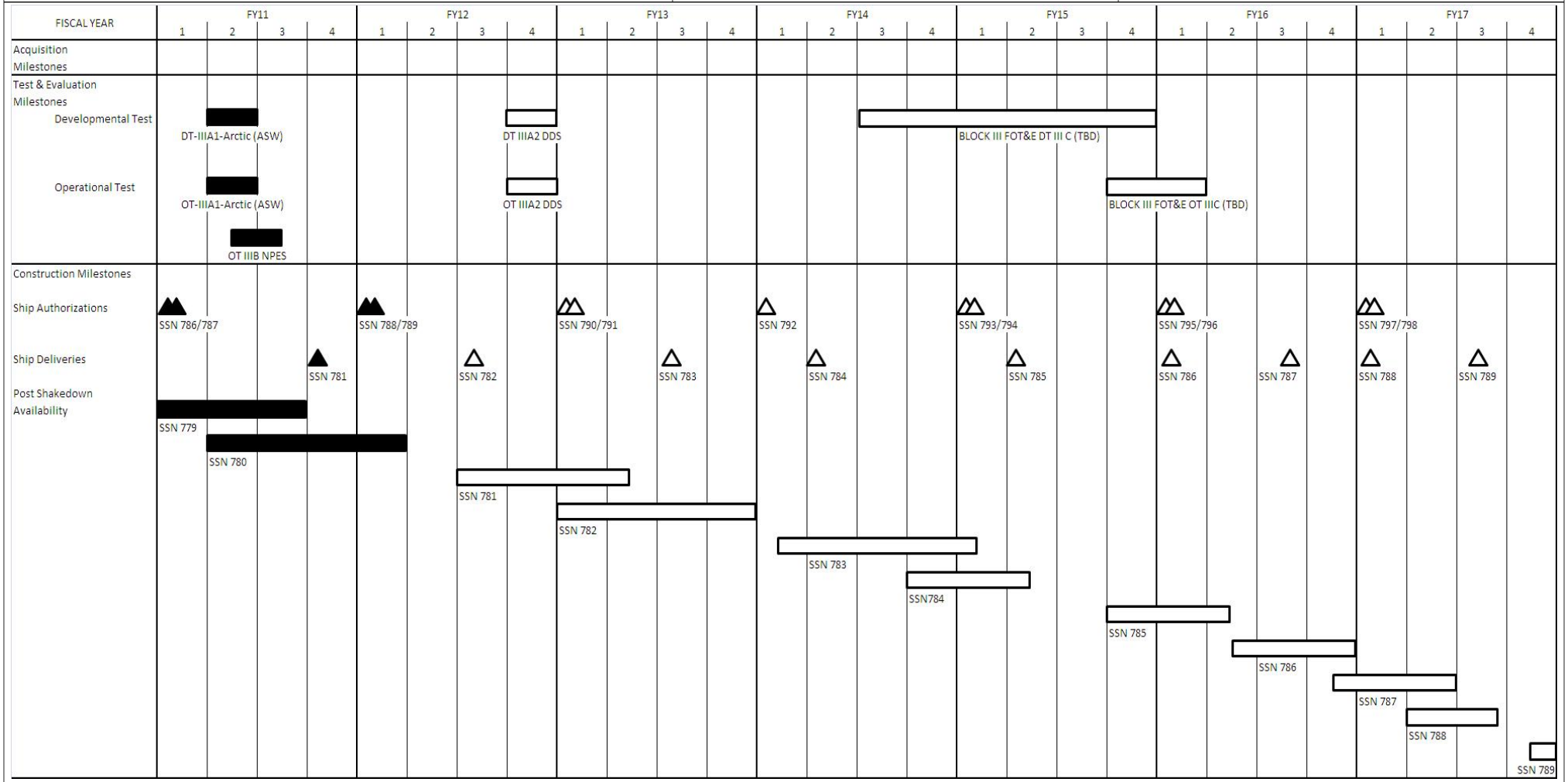


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 1950: *New Design SSN Combat Sys Dev*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1950				
DT-IIIB (NPES)	1	2011	1	2011
Post Shakedown Availability (SSN 779)	1	2011	4	2011
Post PSA Modernization (SSN 779)	1	2011	4	2011
Ship Authorization (SSN 786/787)	1	2011	1	2011
DT-IIIA1 (Arctic)	2	2011	2	2011
OT-IIIA1 (Arctic)	2	2011	2	2011
Post Shakedown Availability (PSA SSN 780)	2	2011	2	2012
Post PSA Modernization (SSN 780)	2	2011	2	2012
OT-IIIB (NPES)	2	2011	3	2011
Ship Delivery (SSN 781)	4	2011	4	2011
Ship Authorization (SSN 788/789)	1	2012	1	2012
DT-IIIA2 (DDS)	3	2012	4	2012
OT-IIIA2 (DDS)	3	2012	4	2012
Ship Delivery (SSN 782)	3	2012	3	2012
Post Shakedown Availability (PSA SSN 781)	2	2012	2	2013
Post PSA Modernization (SSN 781)	2	2012	2	2013
Post Shakedown Availability (PSA SSN 782)	1	2013	4	2013
Post PSA Modernization (SSN 782)	1	2013	4	2013
Ship Authorization (SSN 790/791)	1	2013	1	2013
Ship Delivery (SSN 783)	3	2013	3	2013
Ship Authorization (SSN 792)	1	2014	1	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 1950: *New Design SSN Combat Sys Dev*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Post Shakedown Availability (PSA SSN 783)	1	2014	1	2015
Post PSA Modernization (SSN 783)	1	2014	1	2015
Ship Delivery (SSN 784)	2	2014	2	2014
Block III FOT&E DT-III C (TBD)	3	2014	4	2015
Post Shakedown Availability (PSA SSN 784)	4	2014	2	2015
Ship Authorization (SSN 793/794)	1	2015	1	2015
Ship Delivery (SSN 785)	2	2015	2	2015
Block III FOT&E OT-III C (TBD)	4	2015	1	2016
Post Shakedown Availability (PSA SSN 785)	4	2015	2	2016
Ship Delivery (SSN 786)	1	2016	1	2016
Ship Authorization (SSN 795/796)	1	2016	1	2016
Post Shakedown Availability (SSN 786)	2	2016	4	2016
Ship Delivery (SSN 787)	3	2016	3	2016
Post Shakedown Availability (SSN 787)	4	2016	2	2017
Ship Delivery (SSN 788)	1	2017	1	2017
Ship Authorization (SSNs 797/798)	1	2017	1	2017
Post Shakedown Availability (SSN 788)	2	2017	4	2017
Ship Delivery (SSN 789)	3	2017	3	2017
Post Shakedown Availability (SSN 789)	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 3062: *Submarine Multi-Mission Team Trainer*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3062: *Submarine Multi-Mission Team Trainer*	5.418	2.990	2.729	-	2.729	2.794	2.852	2.901	2.948	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shore based Combat System Team Trainers capable of training personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment. The Combat Control System (CCS) MK1, CCS MK2, and AN/BYG-1, along with sonar systems AN/BSY-1, AN/BQQ-5, and AN/BQQ-10 are installed on SSN and SSGN Class submarines. These tactical systems are planned for future upgrades with the next hardware and software revisions which will provide enhanced war fighter capabilities. The Tactical Acoustic Rapid COTS (commercial-off-the-shelf) Insertion (ARCI) Phased upgrades are also being installed with future revisions. The Advanced Processing Builds (APB) and Technical Insertion (TI) sensors, which feed technology insertion into the CCS/Acoustic development, directly impact the trainers.

The Submarine Multi-Mission Team Trainer (SMMTT) supports operator, employment, strike, and Battle Group training for enlisted and officer pipelines. The SMMTT providesoperators and combat teams the opportunity to train ashore, prior to, and between deployments. The shore based training provides a means of maintaining team proficiency in stand alone or in combined team mode prior to ship deployment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Submarine Multi-Mission Team Trainer	5.418	2.990	2.729
Articles:	0	0	0
Description: To achieve desired submarine force readiness levels, it is necessary to construct highly sophisticated shore based Combat System Team Trainers capable of training personnel in all aspects of submarine approach, attack and surveillance operations in a controlled, simulated environment.			
FY 2011 Accomplishments: FY11 Develops implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. This effort includes new sensor developments and simulation to match advancements in tactical systems supported by SMMTT. This effort also accomplishes the integration and development of APB 09.			
FY 2012 Plans: FY12 Develops implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. This effort includes new sensor developments and simulations to match advancements in tactical systems supported by SMMTT. This effort also develops the APB and starts the new Low Cost Conformal Array (LCCA) sensor development.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 3062: *Submarine Multi-Mission Team Trainer*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY13 Develops implementation of latest Advanced Processor Build (APB), Technical Insertion (TI) and associated training displays. This effort includes new sensor developments and simulations to match advancements in tactical systems supported by SMMTT. This effort also integrates the APB into the SMMTT baseline along with completing and integrating the LCCA sensor.			
Accomplishments/Planned Programs Subtotals	5.418	2.990	2.729

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/5661: *Submarine Training Device Mods*	26.416	30.286	16.440	0.000	16.440	20.199	16.488	16.862	17.261	Continuing	Continuing

D. Acquisition Strategy

The SMMTT program software development is accounted for in this RDT&E line. All production kits are procured in OPN PE 0804731N BLI 566100, cost code TD009.

E. Performance Metrics

Within 90 days of introduction to the Fleet, this RDTEN project shall develop required changes to the Control's & Display's Documentation and Interface Description Language (IDL) Interfaces for the initial development for new sensors that are required to simulate/stimulate that TI/APB for the AN/BQQ-5 and AN/BYG-1 in the Submarine Multi-Mission Team Trainer.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 3062: *Submarine Multi-Mission Team Trainer*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	Reqn	NSWC/CD:Bethesda, MD	20.001	2.590	Dec 2011	2.373	Dec 2012	-		2.373	Continuing	Continuing	Continuing
Component Development	C/CPFF	ARL:UT Austin	1.555	0.400	Jan 2012	0.356	Jan 2013	-		0.356	Continuing	Continuing	Continuing
		Subtotal	21.556	2.990		2.729		-		2.729			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	21.556	2.990		2.729		-		2.729			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 3062: *Submarine Multi-Mission Team Trainer*

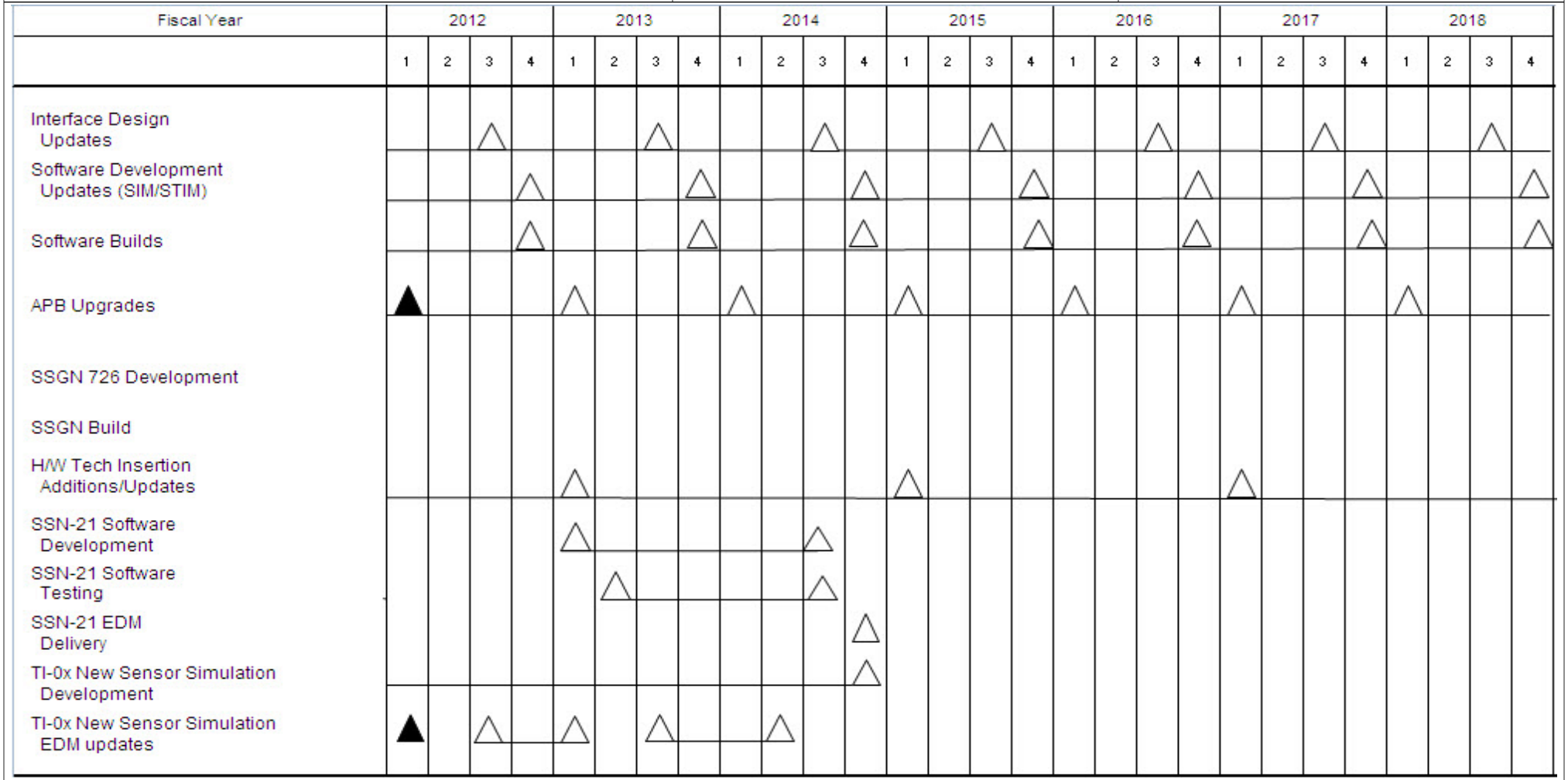


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604558N: *New Design SSN*	**PROJECT** 3062: *Submarine Multi-Mission Team Trainer*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3062				
Interface Design Updates	1	2012	4	2017
Software Development Updates (SIM/STIM)	1	2012	4	2017
Software Builds	1	2012	4	2017
Advanced Processing Build (APB) Upgrades	1	2012	1	2017
Hard Ware Tech Insertion Updates	1	2012	1	2017
SSN 21 Software Development	1	2013	3	2014
SSN 21 Software Testing	2	2013	3	2014
SSN 21 EDM Delivery	4	2014	4	2014
TI-0x New Sensor Simulation Development	1	2012	4	2014
TI-0x New Sensor Simulation EDM Updates	1	2012	2	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 4500: *VIRGINIA Payload Module*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
4500: *VIRGINIA Payload Module*	-	-	99.868	-	99.868	149.732	199.542	199.426	149.496	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses Navy RDT&E efforts required to incorporate a modular design for future VIRGINIA Class Submarines (VCS) which integrates strike payload capacity for Tomahawk Land Attack and follow on missiles. The design is targeted for VCS Block V (FY19-23 ships).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: VIRGINIA Payload Module	-	-	99.868
Articles:			0
FY 2013 Plans: Develop engineering changes to baseline design to incoporate VPM. Perform engineering analysis to evaluate the design changes to meet VCS requirements. Develop detailed schedule for design completion and construction integration.			
Accomplishments/Planned Programs Subtotals	-	-	99.868

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The VIRGINIA Class Submarine Program has implemented Integrated Product and Process Development (IPPD). The traditional distinct phasing of the design process has been replaced with the continuous concurrent engineering IPPD process. The IPPD approach has facilitated a smoother transition from design to manufacturing and has reduced the number of changes typically encountered during construction of the lead and early follow-on ships. In September 1997, Congress passed a law allowing Electric Boat (EB) and Huntington Ingalls Newport News (HINN) to team for production of the first four VIRGINIA Class Submarines. Under the teaming agreement, EB remained the design yard for the VIRGINIA Class Submarine and HINN became a part of the IPPD process. The Program Office is managing two multi-year procurement contracts, one is for the FY04-08 ships and the most recent awarded in December 2008 for the FY09-13 ships. Developmental efforts will begin in FY13 and will be executed via current Lead Design Yard Agent contract with Electric Boat.

E. Performance Metrics

Completion of engineering changes to baseline to incorporate VPM design attributes.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 4500: *VIRGINIA Payload Module*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Component Development	WR	NSWC:Carderock, MD	-	-		11.350	Nov 2012	-		11.350	79.350	90.700	
Component Development	WR	NUWC:Newport, RI	-	-		6.188	Nov 2012	-		6.188	43.261	49.449	
Component Development	C/CPFF	Electric Boat:Groton, CT	-	-		75.103	Nov 2012	-		75.103	525.058	600.161	
Component Development	Various	Various:Various	-	-		6.977	Nov 2012	-		6.977	48.777	55.754	
		Subtotal	-	-		99.618		-		99.618	696.446	796.064	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPAF	URS:Rockville, MD	-	-		0.250	Nov 2012	-		0.250	1.750	2.000	
		Subtotal	-	-		0.250		-		0.250	1.750	2.000	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		99.868		-		99.868	698.196	798.064	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 4500: *VIRGINIA Payload Module*

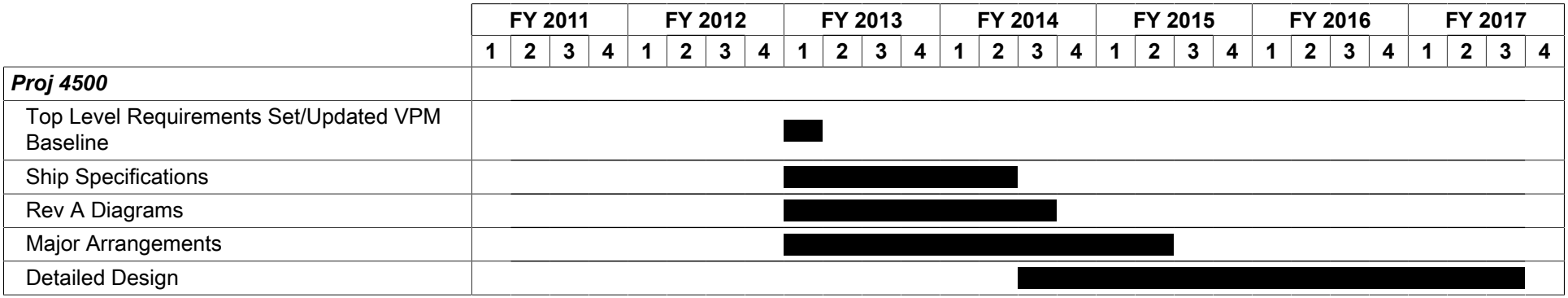


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 4500: *VIRGINIA Payload Module*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4500				
Top Level Requirements Set/Updated VPM Baseline	1	2013	1	2013
Ship Specifications	1	2013	2	2014
Rev A Diagrams	1	2013	3	2014
Major Arrangements	1	2013	2	2015
Detailed Design	3	2014	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604558N: *New Design SSN*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	15.919	15.000	-	-	-	-	-	-	-	0.000	30.919
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Adds.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: SMALL BUSINESS TECHNOLOGY INSERTION ***FY 2011 Accomplishments:*** N/A	15.919	-
Congressional Add: New Design SSN SBIR (Cong) ***FY 2012 Plans:*** N/A	-	15.000
Congressional Adds Subtotals	15.919	15.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Congressional Adds.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	48.269	48.466	49.141	-	49.141	49.371	48.280	46.450	46.247	Continuing	Continuing
0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	48.269	48.466	49.141	-	49.141	49.371	48.280	46.450	46.247	Continuing	Continuing

A. Mission Description and Budget Item Justification

Project Unit 0236: This program develops Commercial-Off-The-Shelf (COTS) based software and hardware upgrades to integrate improved tactical and weapons control capabilities for multiple submarine Classes (SSN-688, SSGN, SEAWOLF, and VIRGINIA (Post Shakedown Availability)). The AN/BYG-1 is the combat control system common across submarine platforms which incorporates tactical control, weapon control, and tactical Local Area Network (LAN) functions into a single development program. The hardware upgrades, Technology Insertions (TI) are developed on a biennial basis to provide improved capability and address COTS obsolescence. Funding also accommodates the biennial integration of software Advanced Processing Builds (APB) for both tactical control (APB(T)) and weapon control (APB(W)) subsystems. The tactical control integration effort incorporates the integration of other sensor (ESM, sonar, radar, etc.) inputs to provide a common operational picture and improved situational awareness in an information assurance (IA) compliant environment. The weapon control development effort provides improvements to the weapons control subsystem based on improvements to missiles and torpedoes. AN/BYG-1 allows the submarine Navy to rapidly update the ship safety tactical picture, integrate the common tactical picture into the battlegroup, improve torpedo interfaces, and provide Tactical TOMAHAWK (TOMAHAWK Block IV) capability.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	50.537	48.466	49.451	-	49.451
Current President's Budget	48.269	48.466	49.141	-	49.141
Total Adjustments	-2.268	-	-0.310	-	-0.310
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.800	-			
• SBIR/STTR Transfer	-1.211	-			
• Program Adjustments	-	-	-0.220	-	-0.220
• Rate/Misc Adjustments	-	-	-0.090	-	-0.090
• Congressional General Reductions Adjustments	-0.257	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	48.269	48.466	49.141	-	49.141	49.371	48.280	46.450	46.247	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Project Unit 0236: This program develops Commercial-Off-The-Shelf (COTS) based software and hardware upgrades to integrate improved tactical and weapons control capabilities for multiple submarine Classes (SSN 688, SSGN, SEAWOLF, and VIRGINIA (Post Shakedown Availability)). The AN/BYG-1 is the combat control system common across submarine platforms which incorporates tactical control, weapon control, and tactical Local Area Network (LAN) functions into a single development program. The hardware upgrades Technology Insertions (TI) are developed on a biennial basis to provide improved capability and address COTS obsolescence. Funding also accommodates the biennial integration of software Advanced Processing Builds (APBs) for both tactical control (APB(T)) and weapon control (APB(W)) subsystems. The tactical control integration effort incorporates the integration of other sensor (ESM, sonar, radar, etc.) inputs to provide a common operational picture and improved situational awareness in an information assurance (IA) compliant environment. The weapon control development effort provides improvements to the weapons control subsystem based on improvements to missiles and torpedoes. AN/BYG-1 allows the submarine Navy to rapidly update the ship safety tactical picture, integrates the common tactical picture into the battlegroup, improves torpedo interfaces and provides Tactical TOMAHAWK (TOMAHAWK Block IV) capability.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Advanced Processor Builds	23.110	21.079	22.663
Articles:	0	0	0
FY 2011 Accomplishments: Continue development of APB-11 into AN/BYG-1 baseline.			
FY 2012 Plans: Complete APB-11 integration into AN/BYG-1 (TI-12) baseline. Support development of APB-13 into AN/BYG-1 baseline.			
FY 2013 Plans: Continue development of APB-13 into AN/BYG-1 baseline.			
Title: AN/BYG-1 TI-10	6.616	3.320	-
Articles:	0	0	
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue development, integration, and test of the next generation AN/BYG-1 (TI-10) for SSN 688/SSGN/VA Class submarines. ***FY 2012 Plans:*** Complete development, integration, and test of the next generation AN/BYG-1 (TI-10) for SSN 688/SSGN/VA Class submarines.			
Title: AN/BYG-1 TI-12	6.001	10.533	4.426
Articles:	0	0	0
FY 2011 Accomplishments: Continue development, integration, and test of the next generation AN/BYG-1 (TI-12) for SSN 688/SSGN/VA Class submarines. ***FY 2012 Plans:*** Continue development, integration, and test of the next generation AN/BYG-1 (TI-12) for SSN 688/SSGN/VA Class submarines. ***FY 2013 Plans:*** Continue development, integration, and test of the next generation AN/BYG-1 (TI-12) for SSN 688/SSGN/VA Class submarines.			
Title: AN/BYG-1 TI-14	-	3.178	7.118
Articles:		0	0
FY 2012 Plans: Begin engineering development process for selection and prototyping of new technologies. ***FY 2013 Plans:*** Continue development, integration and test of the next generation AN/BYG-1 (TI-14) for SSN 688/SSGN/VA Class submarines.			
Title: AN/BYG-1 TI-16	-	-	3.030
Articles:			0
FY 2013 Plans: Begin engineering development process for selection and prototyping of new technologies.			
Title: Testing	6.000	4.000	5.340
Articles:	0	0	0
FY 2011 Accomplishments: Complete DT/OT for AN/BYG-1 APB-09 on 688 Class/SSGN/Seawolf/VA Class submarines. Begin DT/OT for AN/BYG-1 TI-10 on SSN 688/SSGN/Seawolf/VA Class submarines. ***FY 2012 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete DT/OT for AN/BYG-1 TI-10 on SSN 688/SSGN/Seawolf/VA Class submarines. Begin DT/OT for AN/BYG-1 APB-11 on SSN 688/SSGN/Seawolf/VA Class submarines. ***FY 2013 Plans:*** Complete DT/OT for AN/BYG-1 APB-11 on SSN 688/SSGN/Seawolf/VA Class submarines. Begin DT/OT for AN/BYG-1 TI-12 on SSN 688/SSGN/Seawolf/VA Class submarines.			
Title: Information Assurance (IA) ***Articles:*** ***FY 2011 Accomplishments:*** Complete integration of IA Toolkit and continue IA Certification Testing on BYG-1 TI-10. ***FY 2012 Plans:*** Develop and integrate IA Toolkit and conduct IA Certification Testing on BYG-1 TI-12. ***FY 2013 Plans:*** Complete integration of IA Toolkit and continue IA Certification Testing on BYG-1 TI-12	6.542 0	6.356 0	6.564 0
Accomplishments/Planned Programs Subtotals	48.269	48.466	49.141

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

This budget integrates APBs developed by the advanced development community.
This program has been tailored in accordance with the new DoD5000 directive to incorporate annual MDA production reviews.
Advanced Processing Builds (APB) products associated with AN/BYG-1 Release-To- Fleet 3Q 2011, 3Q 2013, 3Q 2015 and 3Q 2017.

E. Performance Metrics

AN/BYG-1 Submarine Combat and Weapon Control System performance metrics for each Advanced Processor Build (APB) and Technology Insertion (TI) cycle are contained in the classified Capability Production Document (CPD) annex to the overarching system requirements as laid out in the Capabilities Development Document (CDD). Each APB cycle receives an updated CPD based on fleet required capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/BYG-1 TECH INSERTION	C/CPIF	GENERAL DYNAMICS (GDAIS):FAIR LAKES, VA	66.532	6.338	Oct 2011	6.446	Oct 2012	-		6.446	Continuing	Continuing	Continuing
AN/BYG-1 TECH INSERTION	C/CPIF	GENERAL DYNAMICS (GDAIS):PITTSFIELD, MA	17.629	8.847	Oct 2011	8.997	Oct 2012	-		8.997	Continuing	Continuing	Continuing
GOVERNMENT ENGINEERING	WR	NUWC:NEWPORT, RI	73.994	2.653	Oct 2011	2.698	Oct 2012	-		2.698	Continuing	Continuing	Continuing
INFORMATION ASSURANCE	C/CPAF	PROGENY:MANASSAS, VA	12.642	6.356	Oct 2011	6.564	Oct 2012	-		6.564	Continuing	Continuing	Continuing
AN/BYG-1 TECH INSERTION	C/CPAF	RAYTHEON:PORTSMOUTH, RI	53.350	-		-		-		-	0.000	53.350	53.350
MULTI TUBE WEAPON SIMULATOR	Various	PROGENY:Not Specified	2.635	-		-		-		-	0.000	2.635	2.635
AN/BYG-1 TECH INSERTION	Various	MITRE:Not Specified	2.429	-		-		-		-	0.000	2.429	2.429
AN/BYG-1 TECH INSERTION	C/CPIF	ANTEON:Not Specified	6.000	-		-		-		-	0.000	6.000	6.000
COTS HARDWARE & SOFTWARE	C/CPAF	DDL OMNI:Not Specified	8.500	-		-		-		-	0.000	8.500	8.500
COMMON WEAPON LAUNCHER	C/CPAF	PROGENY:Not Specified	38.329	-		-		-		-	0.000	38.329	38.329
		Subtotal	282.040	24.194		24.705		-		24.705			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
APB SOFTWARE INTEGRATION	C/CPIF	GENERAL DYNAMICS (GDAIS):FAIRLAKES, VA	50.890	3.570	Oct 2011	3.576	Oct 2012	-		3.576	Continuing	Continuing	Continuing
APB SOFTWARE INTEGRATION	C/CPIF	GENERAL DYNAMICS:PITTSFIELD, MA	9.135	4.590	Oct 2011	4.613	Oct 2012	-		4.613	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
APF SOFTWARE INTEGRATION	WR	NUWC:NEWPORT, RI	35.198	5.382	Oct 2011	5.103	Oct 2012	-		5.103	Continuing	Continuing	Continuing
SOFTWARE DEVELOPMENT	Various	VARIOUS:Not Specified	40.315	4.286	Oct 2011	3.794	Oct 2012	-		3.794	Continuing	Continuing	Continuing
APB SOFTWARE INTEGRATION	C/CPAF	RAYTHEON:PORTSMOUTH, RI	44.466	-		-		-		-	0.000	44.466	44.466
		Subtotal	180.004	17.828		17.086		-		17.086			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DEVELOPMENT TEST & EVALUATION	WR	NUWC:NEWPORT, RI	27.614	2.599	Oct 2011	3.116	Oct 2012	-		3.116	Continuing	Continuing	Continuing
TEST & EVALUATION	Various	VARIOUS:Not Specified	4.495	1.401	Oct 2011	2.224	Oct 2012	-		2.224	Continuing	Continuing	Continuing
OPERATIONAL TEST & EVALUATION	WR	COMOPTEVFOR:Not Specified	16.169	-		-		-		-	0.000	16.169	16.169
		Subtotal	48.278	4.000		5.340		-		5.340			

Management Services ($ in Millions)

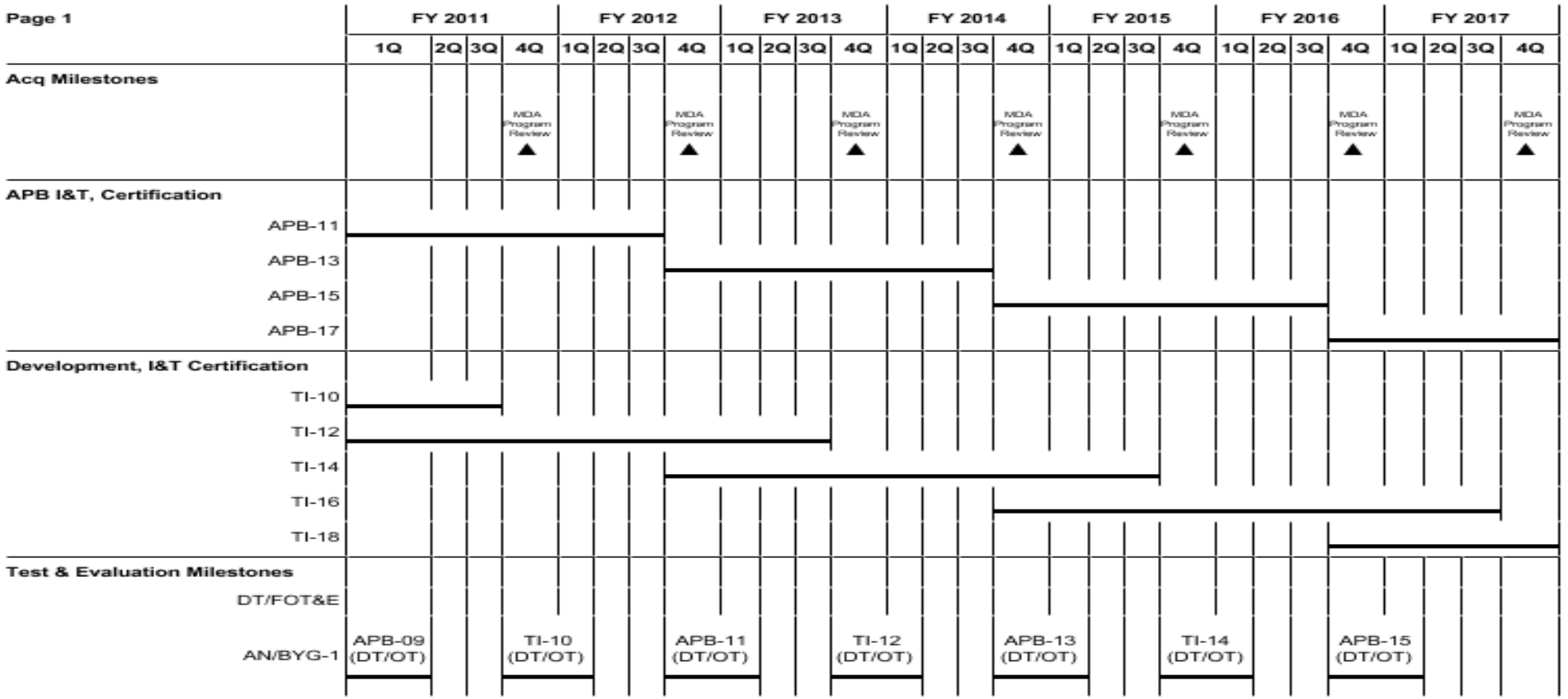
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PROGRAM MANAGEMENT SUPPORT	C/CPFF	URS:ARLINGTON, VA	14.035	2.184	Oct 2011	2.010	Oct 2012	-		2.010	Continuing	Continuing	Continuing
TRAVEL	WR	NAVSEA:ARLINGTON, VA	0.620	0.260	Oct 2011	-		-		-	Continuing	Continuing	Continuing
ACQUISITION WORKFORCE	Various	Not Specified:Not Specified	-	-		-		-		-	0.000	0.000	0.282
		Subtotal	14.655	2.444		2.010		-		2.010			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	524.977	48.466		49.141		-		49.141			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*



2013DON - 0604562N - 0236

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604562N: *Submarine Tactical Warfare System*	**PROJECT** 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Page 1				
Acq Milestones: Annual MDA Program Review - FY11	4	2011	4	2011
Acq Milestones: Annual MDA Program Review - FY12	4	2012	4	2012
Acq Milestones: Annual MDA Program Review - FY13	4	2013	4	2013
Acq Milestones: Annual MDA Program Review - FY14	4	2014	4	2014
Acq Milestones: Annual MDA Program Review - FY15	4	2015	4	2015
Acq Milestones: Annual MDA Program Review - FY16	4	2016	4	2016
Acq Milestones: Annual MDA Program Review - FY17	4	2017	4	2017
APB I&T, Certification: APB-11: APB-11	1	2011	3	2012
APB I&T, Certification: APB-13: APB-13	4	2012	3	2014
APB I&T, Certification: APB-15: APB-15	4	2014	3	2016
APB I&T, Certification: APB-17: APB-17	4	2016	4	2017
Development, I&T Certification: TI-10: TI-10	1	2011	3	2011
Development, I&T Certification: TI-12: TI-12	1	2011	3	2013
Development, I&T Certification: TI-14: TI-14	4	2012	3	2015
Development, I&T Certification: TI-16: TI-16	4	2014	3	2017
Development, I&T Certification: TI-18: TI-18	4	2016	4	2017
Test & Evaluation Milestones: AN/BYG-1: APB-09 DT/OT	1	2011	1	2011
Test & Evaluation Milestones: AN/BYG-1: TI-10 DT/OT	4	2011	1	2012
Test & Evaluation Milestones: AN/BYG-1: APB-11 DT/OT	4	2012	1	2013
Test & Evaluation Milestones: AN/BYG-1: TI-12 DT/OT	4	2013	1	2014
Test & Evaluation Milestones: AN/BYG-1: APB-13 DT/OT	4	2014	1	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604562N: *Submarine Tactical Warfare System*	PROJECT 0236: *SSN Comb Cont Sys Imprvmnt (ENG)*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Test & Evaluation Milestones: AN/BYG-1: TI-14 DT/OT	4	2015	1	2016
Test & Evaluation Milestones: AN/BYG-1: APB-15 DT/OT	4	2016	1	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	157.828	121.089	196.737	-	196.737	184.183	95.939	52.980	51.997	Continuing	Continuing
1803: *Ship Contract Design*	13.882	18.642	17.876	-	17.876	22.189	19.724	18.150	18.971	Continuing	Continuing
2465: *LHA(R) FLT Design and Total Ship Integration*	10.031	26.702	33.729	-	33.729	31.202	17.937	6.550	6.753	Continuing	Continuing
3133: *Ship to Shore Connectors Contract Design*	19.896	2.468	0.876	-	0.876	0.070	3.793	3.600	3.664	Continuing	Continuing
3137: *SSC Construction*	77.889	52.466	130.394	-	130.394	111.076	34.134	4.373	2.810	Continuing	Continuing
3179: *CVN-79 Total Ship Integration*	20.538	19.166	11.187	-	11.187	15.978	16.567	15.224	15.489	Continuing	Continuing
4007: *CVN 21 LFT&E*	2.658	1.645	2.675	-	2.675	3.668	3.784	5.083	4.310	Continuing	Continuing
9999: *Congressional Adds*	12.934	-	-	-	-	-	-	-	-	0.000	12.934

A. Mission Description and Budget Item Justification

This Program Element (PE) directly supports the Navy's Shipbuilding Plan by providing for the development of engineering, programmatic and acquisition documentation including ship specifications (including performance specifications) and contractual documentation associated with acquisition of Navy ships. This PE also supports the Congressionally mandated Live Fire Test and Evaluation (LFT&E) program for new ship designs.

Contract Design has traditionally been the engineering development of the technical and contractual definition of the ship design (including ship specifications and drawings) to a level of detail sufficient for shipbuilders to make a sound estimate of the construction cost and schedule. Additionally, the contract design package developed under this PE has provided the technical baseline from which the Navy selects the shipbuilder who then develops the detail design package required to support the construction and eventual delivery of the ship. This PE also supports the development of design methodologies/tools which facilitate and optimize the transition from ship design documents to efficient production of new ships and ship conversions, and supports engineering planning and ship affordability studies.

Under Acquisition Reform for new design ships, traditional distinct phasing of the design process has been replaced with a continuous concurrent engineering Integrated Product and Process Development (IPPD) process extending through and after contract award. This serves to maintain the focus of multi-discipline teams consisting of the government,
shipbuilder, system programs, and suppliers. Government/Industry Integrated Product Team(s) (IPTs) will utilize the IPPD process to develop the design in an Integrated Product and Data Environment (IPDE). The design approach is part of an acquisition strategy that is based on commercial practices and incorporates a phased technical definition.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	153.686	161.099	190.301	-	190.301
Current President's Budget	157.828	121.089	196.737	-	196.737
Total Adjustments	4.142	-40.010	6.436	-	6.436
• Congressional General Reductions	-	-0.010			
• Congressional Directed Reductions	-	-40.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-3.973	-			
• SBIR/STTR Transfer	-4.021	-			
• Program Adjustments	-	-	6.577	-	6.577
• Rate/Misc Adjustments	-	-	-0.141	-	-0.141
• Congressional General Reductions Adjustments	-0.864	-	-	-	-
• Congressional Add Adjustments	13.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *DD(X) FSST*	12.934	-
Congressional Add Subtotals for Project: 9999	12.934	-
Congressional Add Totals for all Projects	12.934	-

Change Summary Explanation

Decreased funding in FY 13 to reflect delay in CVN 80 total ship integration requirements. Added funding in FY 13 to properly price the first Ship to Shore Connector (SSC) and reflect the Department's decision to fund the second SSC in RDTEN (versus SCN) to support IOT&E testing.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 1803: *Ship Contract Design*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1803: *Ship Contract Design*	13.882	18.642	17.876	-	17.876	22.189	19.724	18.150	18.971	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

CG and DDG Modernization:

The major effort is the engineering development of the technical and contractual definition of the ship's design (e.g. ship specifications and drawings), with sufficient details for the planning yard to make a sound estimate of cost and schedule. It also serves as the technical definition from which the planning yard develops the detailed design and testing package required to build and test the ship. It provides the Navy with a digital, ship design knowledge base, including lessons learned, required to ensure that a proper development, analysis and evaluation can be conducted of any current or future planned.

Another area this project funds is the development of specific Navy ship criteria and standards for newly developed technologies. Additionally, as new laws are passed, new safety regulations and environmental criteria are developed and other legal/Congressional requirements identified, this project funds the translation into Navy ship design criteria

and standards. This project also funds the translation of the traditional Ship Specifications into performance-based criteria, which supports the development of design methodologies/tools which facilitate and optimize the transition from ship design documents to ship alterations. This project also supports ship survivability studies, superstructure integrity analysis, developmental and operational testing, gun weapon system software integration and next generation Machinery Control System (MCS) software integration.

DON Energy Initiative - Hybrid Electric Drive

This project includes an increment for the DON Energy Initiative related to the DDG 51 Hybrid Electric Drive to reduce DDG 51 Class ship energy consumption and increase mission effectiveness through longer time on station. This project supports propulsion at low ship speeds without the need for LM 2500 main engines. Fuel savings from the Hybrid Electric Drive system will be achieved by utilizing fewer gas turbines for propulsion and ship service power generation while also loading gas turbines generators at a more efficient operating load. Provides critical foundation for SECNAV and CNO objectives to achieve greater Navy-wide energy security.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Ship Contract Design	1.236	4.074	4.826
Articles:	0	0	0
FY 2011 Accomplishments: For Cruisers & DDGs, specific efforts include, but are not limited to Technical Data Package development, Detailed Design Products, Engineering Analysis, operational testing, feasibility studies, and topside analysis, related to the next generation Advanced Capability Build (ACB-12).			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 1803: *Ship Contract Design*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
For DDGs, specific efforts include, but are not limited to Technical Data Package development, Detailed Design Products, Engineering Analysis, feasibility studies, and topside analysis, related to the next generation Advanced Capability Build, and next generation MCS software integration. For CG's, specific efforts include, but are not limited to, developmental and operational test event planning, feasibility studies, and detailed design products to facilitate the CG class reaching expected service life. ***FY 2013 Plans:*** For DDGs, specific efforts include, but are not limited to Technical Data Package development, Detailed Design Products, Engineering Analysis, developmental and operational test events and planning, feasibility studies, and topside analysis, related to the next generation Advanced Capability Build and next generation MCS software integration. For CG's, specific efforts include aluminum cracking studies, superstructure repair planning, sustainment studies and new alteration development to ensure CGs are able to reach expected service life.			
Title: DON Energy Initiative ***Articles:*** ***Description:*** Beginning in FY 2011, this project includes an increment for the DON Energy Initiative related to the DDG 51 Hybrid Electric Drive (HED) to reduce DDG 51 Class ship energy consumption and increase mission effectiveness through longer time on station. ***FY 2011 Accomplishments:*** Completion of HED Proof of Concept (POC) land based testing, trade study, spec development, RFP release, and source selection activities. ***FY 2012 Plans:*** Contract award for detailed design including Machinery Control System (MCS) integration and long-lead-time-material for the EDMs. ***FY 2013 Plans:*** Two EDMs further MCS integration development, initiate environmental qualification testing, initiate training, Integrated Logistic Support (ILS), and ship integration design development.	12.646 0	14.568 0	13.050 2
Accomplishments/Planned Programs Subtotals	13.882	18.642	17.876

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 1803: *Ship Contract Design*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 0900: *DDG Modernization*	288.118	117.522	452.371	0.000	452.371	288.134	516.908	469.812	529.385	Continuing	Continuing
• OPN 0960: *CG Modernization*	348.934	573.349	101.000	0.000	101.000	22.000	79.000	0.000	0.000	0.000	1,440.994
• WPN 4223: *CG Modernization*	50.347	50.013	1.591	0.000	1.591	2.044	0.000	0.000	0.000	0.000	155.064
• OPN 0140: *Hybrid Electric Drive*	0.000	0.000	0.000	0.000	0.000	17.000	46.000	47.000	47.846	Continuing	Continuing

D. Acquisition Strategy

A full and open competition with a Fixed Price Incentive Fee Contract awarded for the development, qualification, and delivery of the Engineering Development Models (EDM) Hybrid Electric Drive (HED) Electric Propulsion System (EPS), and the initial HED EPS production shipsets for the DDG 51 Fleet Modernization Program.

E. Performance Metrics

CG/DDG Modernization:
Aluminum sensitization study to determine the lifetime until sensitization for aluminum alloys and stress and buckling analysis of the CG 52 Class ship structure, and develop proposed fatigue fixes in the high stress areas to produce a technical report with modifications or improvements to the ship that may be necessary to preclude cracking in the areas of concern. Evaluation of composite patch and development of composite patch installation procedures as a method for repairing cracks. Development of ultrasonic impact treatment guidance as a method for repairing cracks. Evaluation of different coating that can prevent cracking and different aluminum alloys that are sensitization resistant. DT/OT for ACB12/TI12 DDGM.

Additional efforts for DDG Mod include design and development for next generation MCS software integration.

Hybrid Electric Drive (HED) DON Energy Initiative: Successful completion of Engineering Development Model (EDM) and complete fielding of First Article (FA) including contract award, design, manufacturing, and delivery. Successful completion of Factory Acceptance Test (FAT) and performance testing in Land Based Engineering Site (LBES). Commencement, completion, delivery and installation of Low Rate Initial Production (LRIP) units.
Achieve fuel efficiency and increase on-station time.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 1803: *Ship Contract Design*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CG Mod Electronics Systems Eng	C/CPAF	Lockheed:Martin, Moorestown, NJ	17.413	-		-		-		-	Continuing	Continuing	Continuing
DON Energy Initiative - OEM	C/FPIF	TBD:TBD	9.746	13.568	Apr 2012	12.550	Apr 2013	-		12.550	Continuing	Continuing	Continuing
DON Energy Initiative	WR	NSWC/ SSES:Philadelphia, PA	2.400	0.500	Apr 2012	0.500	Dec 2012	-		0.500	0.000	3.400	
		Subtotal	29.559	14.068		13.050		-		13.050			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DDG/CGM Program / Engineering Spt	WR	NSWC/DD:Dahlgren, VA	4.016	1.330	Feb 2012	-		-		-	Continuing	Continuing	Continuing
DDGM Program/ Engineering Spt / HED	Various	SUPSHIP/BATH:Bath, ME	2.011	-		0.216	Dec 2012	-		0.216	Continuing	Continuing	Continuing
DDG/CGM Program / Engineering Spt	C/CPAF	CSC/BAE:Hampton, VA	4.713	-		-		-		-	Continuing	Continuing	Continuing
DDG/CGM Program / Engineering Spt	WR	SPAWARSYSCEN:Charleston, SC	1.397	-		0.100	Dec 2012	-		0.100	Continuing	Continuing	Continuing
CGM Program / Engineering Spt	WR	NRL:Washington, DC	0.617	-		-		-		-	Continuing	Continuing	Continuing
CGM Program / Engineering Spt	C/CPAF	JJMA/ ALION:Washington, DC	2.428	0.519	Feb 2012	-		-		-	Continuing	Continuing	Continuing
DDG/CGM Program / Engineering Spt	WR	NSWC/PHD:Port Hueneme, CA	1.560	1.329	Feb 2012	-		-		-	Continuing	Continuing	Continuing
DDG/CGM Program / Engineering Spt	WR	NSWC/ BETHESDA:Bethesda, MD	2.690	0.448	Feb 2012	1.780	Dec 2012	-		1.780	Continuing	Continuing	Continuing
CGM Program / Engineering Spt	Various	SUPSHIP/ PASCAGOULA:Pascagoula, MS	3.437	0.448	Feb 2012	0.100	Dec 2012	-		0.100	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 1803: *Ship Contract Design*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
CGM/DDG Program / Engineering Spt	WR	COMOPTEVFOR:Norfolk, VA	0.030	-		2.130	Dec 2012	-		2.130	Continuing	Continuing	Continuing
DDG/CGM/HED Program / Engineering Spt	WR	NSWC/ SSES:Philadelphia, PA	4.400	0.500	Feb 2012	0.500	Dec 2012	-		0.500	Continuing	Continuing	Continuing
CGM Program / Engineering Spt	C/CPAF	L3:New York, NY	1.048	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	28.347	4.574		4.826		-		4.826			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Defense Acqusition Workforce	Various	Not Specified:Not Specified	0.023	-		-		-		-	0.000	0.023	
		Subtotal	0.023	-		-		-		-	0.000	0.023	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	57.929	18.642		17.876		-		17.876			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 1803: *Ship Contract Design*

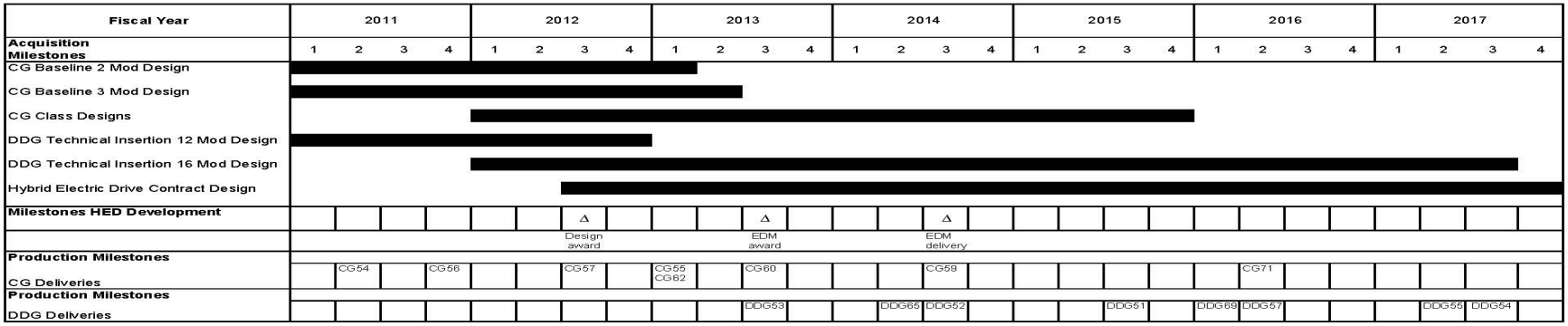


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 1803: *Ship Contract Design*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1803				
CGM Baseline 2 Mod Design	1	2011	1	2013
CGM Baseline 3 Mod Design	1	2011	2	2013
CG Class Design	1	2012	4	2015
DDG Technical Insertion 12 Mod Design	1	2011	4	2012
DDG Technical Insertion 16 Mod Design	1	2012	3	2017
Hybrid Electric Drive Contract Design	3	2012	4	2017
Hybrid Electric Drive Engineering Development Model Contract Award	3	2013	3	2013
Hybrid Electric Drive Engineering Development Model Delivery	3	2014	3	2014
CGM Deliveries (CG 54,56 ,57,55,62,60,59,71)	2	2011	2	2016
DDGM Deliveries (DDG53,65,52,51,69,57,55,54)	3	2013	3	2017
Hybrid Electric Drive Contract Design Award	3	2012	3	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2465: *LHA(R) FLT Design and Total Ship Integration*	10.031	26.702	33.729	-	33.729	31.202	17.937	6.550	6.753	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project provides the contract design, development and testing efforts for the Amphibious Assault Ship Replacement Program LHA(R). The LHA (R) is a ship construction program designed to: (1) provide a functional replacement for the Amphibious Assault Ships which begin reaching the end of their extended service lives after FY11 (2) be a key platform in the Amphibious Readiness Group (ARG) of the future and (3) provide for an affordable and sustainable amphibious ship development program. LHA(R) ships will provide forward presence and power projection as an integral part of Joint, inter-agency, and multi-national maritime expeditionary forces. Additionally, LHA(R) will be designed to operate for sustained periods in transit to and operations in an Amphibious Objective Area to include the embarkation, deployment, and landing of a Marine Landing Force in an assault by helicopters and tilt rotors (MV-22) supported by Joint Strike Fighters (F-35B).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: LHA (R) FLT Design and Total Ship Integration - LHA 6	4.600	2.508	4.319
Articles:	0	0	0
FY 2011 Accomplishments: LHA 6 Continued Development Testing (DT) and Operational Test and Evaluation (OT&E) preparations. LHA 6 Continued updating the Live Fire Test and Evaluation (LFT&E) Management Plan. LHA 6 Finalized the Initial Vulnerability Assessment Report (VAR). LHA 6 Continued updating the Test and Evaluation Master Plan (TEMP). LHA 6 Continued evaluating the interoperability data supporting Key Performance Parameters (KPP).			
FY 2012 Plans: LHA 6 Continue Development Testing (DT) and Operational Test and Evaluation (OT&E) preparations. LHA 6 Initiate Final Vulnerability Assessment Report (VAR). LHA 6 Continue updating the Test and Evaluation Master Plan (TEMP). LHA 6 Continue evaluating the interoperability data supporting Key Performance Parameters (KPP). LHA 6 Initiate Total Ship Survivability Trial (TSST) preparations.			
FY 2013 Plans: LHA 6 Continue Development Testing (DT)and Operational Test and Evaluation (OT&E) preparations. LHA 6 Continue Final Vulnerability Assessment Report (VAR). LHA 6 Continue updating the Test and Evaluation Master Plan (TEMP).			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
LHA 6 Continue evaluating the interoperability data supporting Key Performance Parameters (KPP). LHA 6 Continue Total Ship Survivability Trial (TSST) preparations.			
Title: LHA (R) FLT Design and Total Ship Integration - LHA 8	5.431	24.194	29.410
Articles:	0	0	0
FY 2011 Accomplishments: LHA 8 Began Trade Studies and Preliminary Design efforts. LHA 8 Began Capability Development Document (CDD) and Concepts of Operations (CONOPS) preparations.			
FY 2012 Plans: LHA 8 Continue Preliminary Design efforts. LHA 8 Finalize Capability Development Document (CDD) and Concepts of Operations (CONOPS)preparations. LHA 8 Initiate development of Milestone Documents. LHA 8 Initiate Operational Test and Evaluation (OT&E) preparations.			
FY 2013 Plans: LHA 8 Complete Preliminary Design. LHA 8 Initiate Contract Design. LHA 8 Continue development of Milestone Documents. LHA 8 Continue Operational Test and Evaluation (OT&E) preparations. LHA (R) Concept studies including Modeling and Simulation Study for Marine Corps.			
Accomplishments/Planned Programs Subtotals	10.031	26.702	33.729

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/3041: *LHA(R) Ships*	937.630	1,999.191	0.000	0.000	0.000	0.000	78.500	240.353	2,097.171	2,001.976	10,698.721
• SCN/5300: *Completion of Prior Year Shipbuilding Programs*	0.000	0.000	156.685	0.000	156.685	0.000	0.000	0.000	0.000	0.000	170.995

D. Acquisition Strategy

Acquisition strategy signed February 7, 2005 approved strategy for sole source to Northrop Grumman Shipbuilding (NGSB) to incorporate previous LHD engineering, design and producibility lessons-learned into LHA(R). Advanced Procurement (AP) contract for Long Lead-Time Material (LLTM) procurement and engineering support awarded July 05 with continuation of these efforts in FY06 prior to award of Detail Design and Construction (DD&C)contract on 1 June 2007.The Advance Procurement contract was subsumed by the FPI DD&C contract.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*

USD (AT&L) signed ADM on 31 March 2010 to authorize the Navy to spend Advance Procurement funds for the LHA 7. An Advance Procurement (AP) contract was awarded to Northrop Grumman Shipbuilding (NGSB) on 30 June 2010. RFP for the LHA 7 DD&C contract was issued on 20 July 2010.

E. Performance Metrics

Successfully achieve Initial Operational Capability, successfully complete Operational Test and Milestone Reviews.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ship Design	WR	NSWC:Various	93.309	4.616	Feb 2012	-		-		-	0.000	97.925	
Ship Design	C/CPFF	HII:Pascagoula, MS	4.819	0.200	Feb 2012	-		-		-	0.000	5.019	
Ship Design	TBD	TBD:Various	-	12.002	Dec 2011	21.061	Dec 2012	-		21.061	0.000	33.063	
Special Studies	WR	NSWC:Panama City, FL	2.700	-		2.500	Dec 2012	-		2.500	11.100	16.300	
		Subtotal	100.828	16.818		23.561		-		23.561	11.100	152.307	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	JITC:Fort Huachuca, AZ	3.303	0.290	Feb 2012	0.331	Dec 2012	-		0.331	0.607	4.531	
Operational Test & Evaluation	WR	OPTEVFOR/ MCOTEA:Norfolk, VA/ Quantico, VA	6.955	1.890	Dec 2011	1.193	Dec 2012	-		1.193	11.474	21.512	
Live Fire Test & Evaluation	WR	NSWC:Carderock, MD	43.863	4.650	Dec 2011	6.295	Dec 2012	-		6.295	8.291	63.099	
		Subtotal	54.121	6.830		7.819		-		7.819	20.372	89.142	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	C/CPFF	Alion:Washington, DC	7.830	2.954	Jun 2012	2.249	Dec 2012	-		2.249	14.556	27.589	
Travel	Various	Navsea Travel:Washington, DC	0.332	0.100	Feb 2012	0.100	Dec 2012	-		0.100	0.300	0.832	
Defense Acquisition Workforce	Various	Various:Various	0.011	-		-		-		-	0.000	0.011	
		Subtotal	8.173	3.054		2.349		-		2.349	14.856	28.432	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	163.122	26.702		33.729		-		33.729	46.328	269.881	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 2465: *LHA(R) FLT Design and Total Ship Integration*

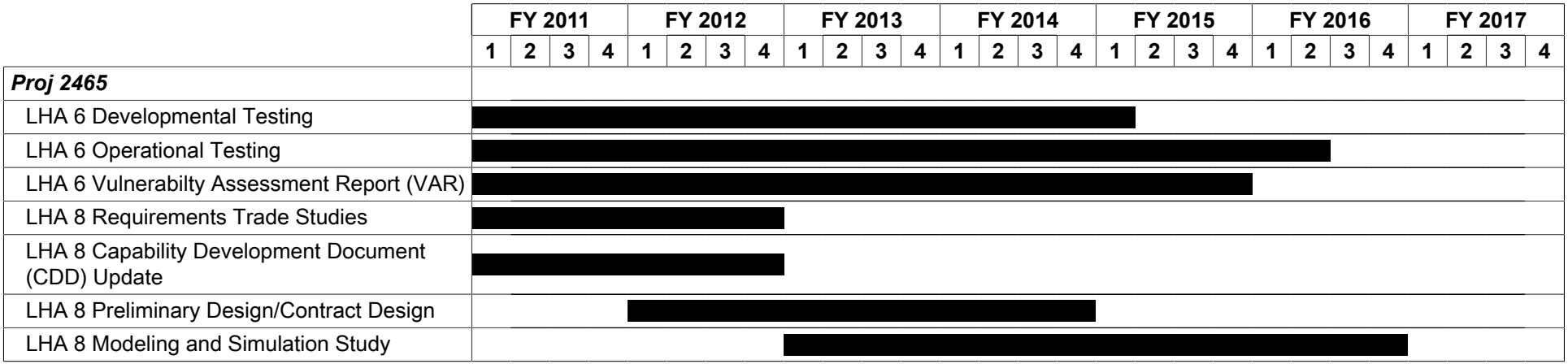


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 2465: *LHA(R) FLT Design and Total Ship Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2465				
LHA 6 Developmental Testing	1	2011	1	2015
LHA 6 Operational Testing	1	2011	2	2016
LHA 6 Vulnerabilty Assessment Report (VAR)	1	2011	4	2015
LHA 8 Requirements Trade Studies	1	2011	4	2012
LHA 8 Capability Development Document (CDD) Update	1	2011	4	2012
LHA 8 Preliminary Design/Contract Design	1	2012	4	2014
LHA 8 Modeling and Simulation Study	1	2013	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3133: *Ship to Shore Connectors Contract Design*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3133: *Ship to Shore Connectors Contract Design*	19.896	2.468	0.876	-	0.876	0.070	3.793	3.600	3.664	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Ship to Shore Connector (SSC) - This project provides the Preliminary and Contract design and Class test efforts for the SSC Program. The SSC program provides the capability to rapidly move assault forces within the littoral operational environment to accomplish Unified Command Plan (UCP) missions and ensures the Joint Force Commander's (JFCDR's) ability to conduct amphibious operations and operate over the high water mark, including movement over ice, mud, rivers, swamps, and marshes. This project provides for the Systems Development and Demonstration package required for the solicitation for Detail Design and Construction and test of the initial article. Class Test and evaluation of components and systems will also be completed under this project. SSC provides the functional replacement for the LCAC Class of ships, which begin reaching extended service life in 2015. This project also encompasses those tasks required to develop the contract and technical data package necessary to support the procurement of the SSC Test and Training craft, including, but not limited to engineering support, programmatic and program support, logistics support, manpower and program related studies. The Test and Training craft and first production craft, which will be operationally fielded, are funded in RDT&E under this PE, Project 3137.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Sea Base to Shore Connectors (Contract Des)	19.896	2.468	0.876
Articles:	0	0	0
FY 2011 Accomplishments: Continued Acquisition and Milestone B Planning. Continued Class Test and Evaluation program.			
FY 2012 Plans: Continue Class Test and Evaluation program including Test Planning and Coordination, Interoperability Testing, Vulnerability Assessment Report (VAR), Live Fire Test and Evaluation (LFT&E) Paper Studies, Surrogate tests, and LFT&E Document Coordination.			
FY 2013 Plans: Continue Class Test and Evaluation program including Test Planning and Coordination, Interoperability Testing, Vulnerability Assessment Report (VAR), Live Fire Test and Evaluation (LFT&E) Paper Studies, Surrogate tests, conduct Technical Readiness Review (TRR) and Operational Assessment (OA), TEMP and LFT&E Management plan updates and LFT&E Document Coordination.			
Accomplishments/Planned Programs Subtotals	19.896	2.468	0.876

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3133: *Ship to Shore Connectors Contract Design*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN 5112: *SSC Construction*	0.000	0.000	0.000	0.000	0.000	0.000	128.988	267.079	287.446	Continuing	Continuing

D. Acquisition Strategy

The Test and Training craft and first production craft will be procured and constructed with RDT&E funds. The Test and Training craft Detail Design contract will include options for construction of the T&T craft and additional production craft.

E. Performance Metrics

Begin Test and Evaluation Master Plan (TEMP) updates. Begin Developmental Testing Phase B and Operational Testing Phase B.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3133: *Ship to Shore Connectors Contract Design*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ship Design	C/CPFF	CSC:Washington, DC	14.330	-		-		-		-	0.000	14.330	
Preliminary/Contract Design	Various	Various:Various	31.140	-		-		-		-	0.000	31.140	
System Engineering	Various	Various:Various	6.241	-		-		-		-	0.000	6.241	
		Subtotal	51.711	-		-		-		-	0.000	51.711	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Support	WR	NSWC PCD:Panama City, FL	4.636	-		-		-		-	0.000	4.636	
Software Development	Various	Various:Various	2.219	-		-		-		-	0.000	2.219	
Integrated Logistics Support	WR	NSWC:Various	3.365	-		-		-		-	0.000	3.365	
Studies & Analyses	TBD	Various:Various	5.775	0.154	Dec 2011	0.055	Oct 2012	-		0.055	Continuing	Continuing	Continuing
		Subtotal	15.995	0.154		0.055		-		0.055			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various:Various	0.033	-		-		-		-	0.000	0.033	
Operational Test & Evaluation	Various	Various:Various	1.601	0.333	Dec 2011	0.505	Nov 2012	-		0.505	Continuing	Continuing	Continuing
Live Fire Test & Evaluation	Various	Various:Various	3.834	1.377	Dec 2011	0.316	Nov 2012	-		0.316	Continuing	Continuing	Continuing
		Subtotal	5.468	1.710		0.821		-		0.821			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3133: *Ship to Shore Connectors Contract Design*

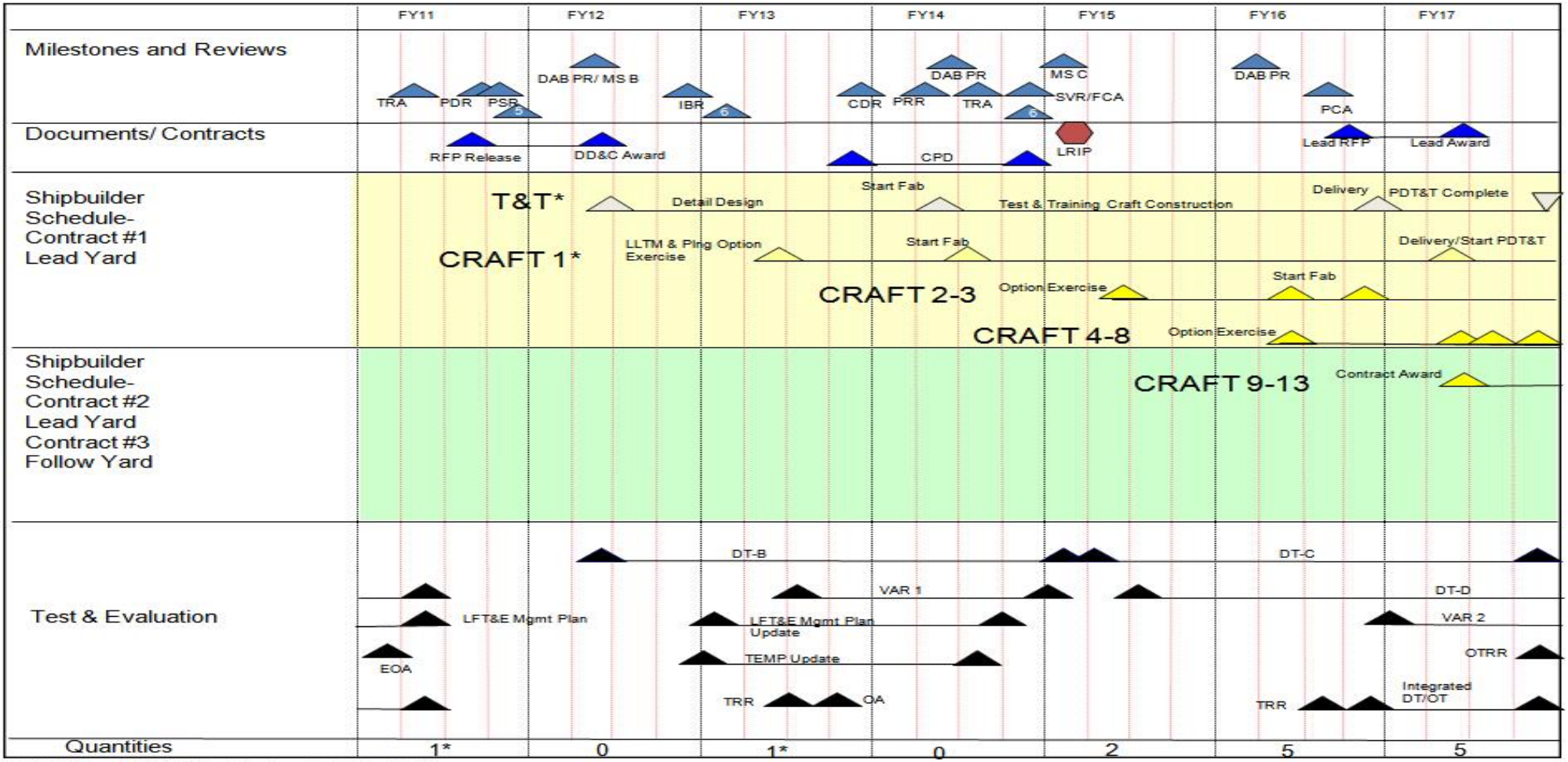
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	C/CPFF	CSC/Alion:Washington, DC	9.323	0.454	Jul 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC:Various	3.689	-		-		-		-	0.000	3.689	
Program Management Support	Various	Various:Various	6.480	-		-		-		-	0.000	6.480	
Travel	Various	NAVSEA Travel:Washington, DC	0.150	0.150	Mar 2012	-		-		-	0.000	0.300	
Defense Acquisition Workforce	Various	Various:Various	0.126	-		-		-		-	0.000	0.126	
		Subtotal	19.768	0.604		-		-		-			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	92.942	2.468		0.876		-		0.876			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3133: *Ship to Shore Connectors Contract Design*



*FY11 and FY13 Craft is funded with R&D

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 3133: *Ship to Shore Connectors Contract Design*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3133				
Early Operational Assessment (EOA)	1	2011	1	2011
Defense Acquisition Board (DAB) Review (FY12)	2	2012	2	2012
Detail Design & Construction (DD&C) Award	2	2012	2	2012
Acquisition Milestone B	2	2012	2	2012
Development Test/Operational Test B (DT/OT-B)	2	2012	1	2015
Critical Design Review (CDR)	4	2013	4	2013
Operational Assessment (OA)	4	2013	4	2013
Capabilities Production Document (CPD)	4	2013	4	2014
Defense Acquisition Board (DAB) Review (FY14)	2	2014	2	2014
Low Rate Iniital Production (LRIP) Approval	1	2015	1	2015
Acquisition Milestone C	1	2015	1	2015
Development Test/Operational Test C (DT/OT-C)	2	2015	4	2017
Defense Acquisition Board (DAB) Review (FY16)	1	2016	1	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3137: *SSC Construction*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3137: *SSC Construction*	77.889	52.466	130.394	-	130.394	111.076	34.134	4.373	2.810	Continuing	Continuing
Quantity of RDT&E Articles	1	0	1	0	1	0	0	0	0		

A. Mission Description and Budget Item Justification

This project funds the Ship to Shore Connector (SSC) Engineering & Manufacturing Development phase which includes Detail Design and Construction, Integrated Logistics Support (ILS), Government Furnished Equipment (GFE), Program support, and Outfitting and Post Delivery for the first two crafts. The lead craft will be maintained as a test and training platform throughout its life cycle. The second craft (Craft 101) will be available to support IOT&E as needed, but will be a fleet asset after delivery. The SSC program provides the capability to rapidly move assault forces within the littoral operational environment to accomplish Unified Command Plan (UCP) missions, and ensures the Joint Force Commander's (JFCDR's) ability to conduct amphibious operations and operate over the high water mark, including movement over ice, mud, rivers, swamps and marshes. The SSC program provides the functional replacement for the LCAC Class of ships, which begin reaching extended service life in 2015.

TEST AND TRAINING CRAFT:
Plans:
TOTAL 39.1 (FY13 0.0)
Basic Construction:
TOTAL 187.5 (FY13 62.5)
Change Orders:
TOTAL 18.7 (FY13 5.3)
Electronics
TOTAL 8.3 (FY13 1.3)
HM&E:
TOTAL 31.0 (FY13 15.2)
Other Support:
TOTAL 46.6 (FY13 16.1)
Ordnance
Total 0.0 (FY13 0.0)
Post Delivery/Outfitting:
TOTAL 4.5 (FY13 0.0)
Ship Total:
TOTAL 335.7 (FY13 100.4)

CRAFT 101:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 3137: *SSC Construction*

Basic Construction
TOTAL 47.5 (FY13 26.0)
Change Orders:
TOTAL 2.3 (FY13 0.9)
Electronics:
TOTAL: 2.2 (FY13 2.2)
HM&E
TOTAL: 4.9 (FY13 0.9)
Other Support
TOTAL: 18.6 (FY13 0.0)
Ordnance
TOTAL 0.0 (FY13 0.0)
Post Delivery/Outfitting
TOTAL 2.1 (FY13 0.0)
Ship Total:
TOTAL 77.6 (FY13 30.0)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SSC Construction	77.889	52.466	130.394
Articles:	1	0	1
FY 2011 Accomplishments: Initiated critical Government Furnished Information (GFI) development. Continued Acquisition and Milestone B planning.			
FY 2012 Plans: Milestone B approval; Award Detail Design and Construction Contract; Begin Detail Design and Construction planning efforts including software development and procurement of Contractor Furnished Equipment (CFE) Long Lead Time Material (LLTM) for the test and training craft.			
FY 2013 Plans: Continue Detail Design and Construction planning efforts; award contract option for Craft 101 and begin LLTM procurement and production planning.			
Accomplishments/Planned Programs Subtotals	77.889	52.466	130.394

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3137: *SSC Construction*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN 5112: *SSC Construction*	0.000	0.000	0.000	0.000	0.000	0.000	128.988	267.079	287.446	Continuing	Continuing

D. Acquisition Strategy

The first two SSCs will be designed and constructed with RDT&E funds. The Test and Training craft Detail Design and Construction contract will include options for follow craft to be procured with SCN funds.

E. Performance Metrics

Award Detail Design and Construction contract for Test and Training craft with options for follow on test and training craft and follow on SCN funded craft.
Deliver test and training craft
Deliver Craft 101

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3137: *SSC Construction*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Trng Craft Ship Design	C/CPFF	Alion:Washington, DC	0.683	7.070	Dec 2011	7.000	Oct 2012	-		7.000	0.000	14.753	
Test & Trng Craft Detail Design	C/FPIF	TBD:TBD	24.600	12.180	Mar 2012	-		-		-	0.000	36.780	
Test & Trng Craft Construction	C/FPIF	TBD:TBD	45.145	8.566	Mar 2012	62.471	Oct 2012	-		62.471	0.000	116.182	
Test & Trng Craft Government Furnished Equipment (GFE)	Various	TBD:TBD	0.100	5.520	Mar 2012	1.400	Oct 2012	-		1.400	0.000	7.020	
Test & Trng Craft Change Orders	C/FPIF	TBD:TBD	-	0.600	Mar 2012	5.300	Oct 2012	-		5.300	0.000	5.900	
Craft 101 LLTM & Construction Planning	C/FPIF	TBD:TBD	-	-		25.990	Mar 2013	-		25.990	0.000	25.990	
Craft 101 Government Furnished Equipment	Various	TBD:TBD	-	-		3.110	Mar 2013	-		3.110	0.000	3.110	
Craft 101Change Orders	C/FPIF	TBD:TBD	-	-		0.900	Mar 2013	-		0.900	0.000	0.900	
		Subtotal	70.528	33.936		106.171		-		106.171	0.000	210.635	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Trng Craft Integrated Logistics Support	WR	NSWC:Various	0.263	4.660	Dec 2011	5.410	Oct 2012	-		5.410	0.000	10.333	
Studies and Analysis	Various	Various:Various	4.868	3.280	Dec 2011	6.275	Oct 2012	-		6.275	0.000	14.423	
		Subtotal	5.131	7.940		11.685		-		11.685	0.000	24.756	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Trng Craft Construction Test Program	Various	Various:Various	-	1.190	Dec 2011	1.850	Oct 2012	-		1.850	0.000	3.040	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3137: *SSC Construction*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	1.190		1.850		-		1.850	0.000	3.040	

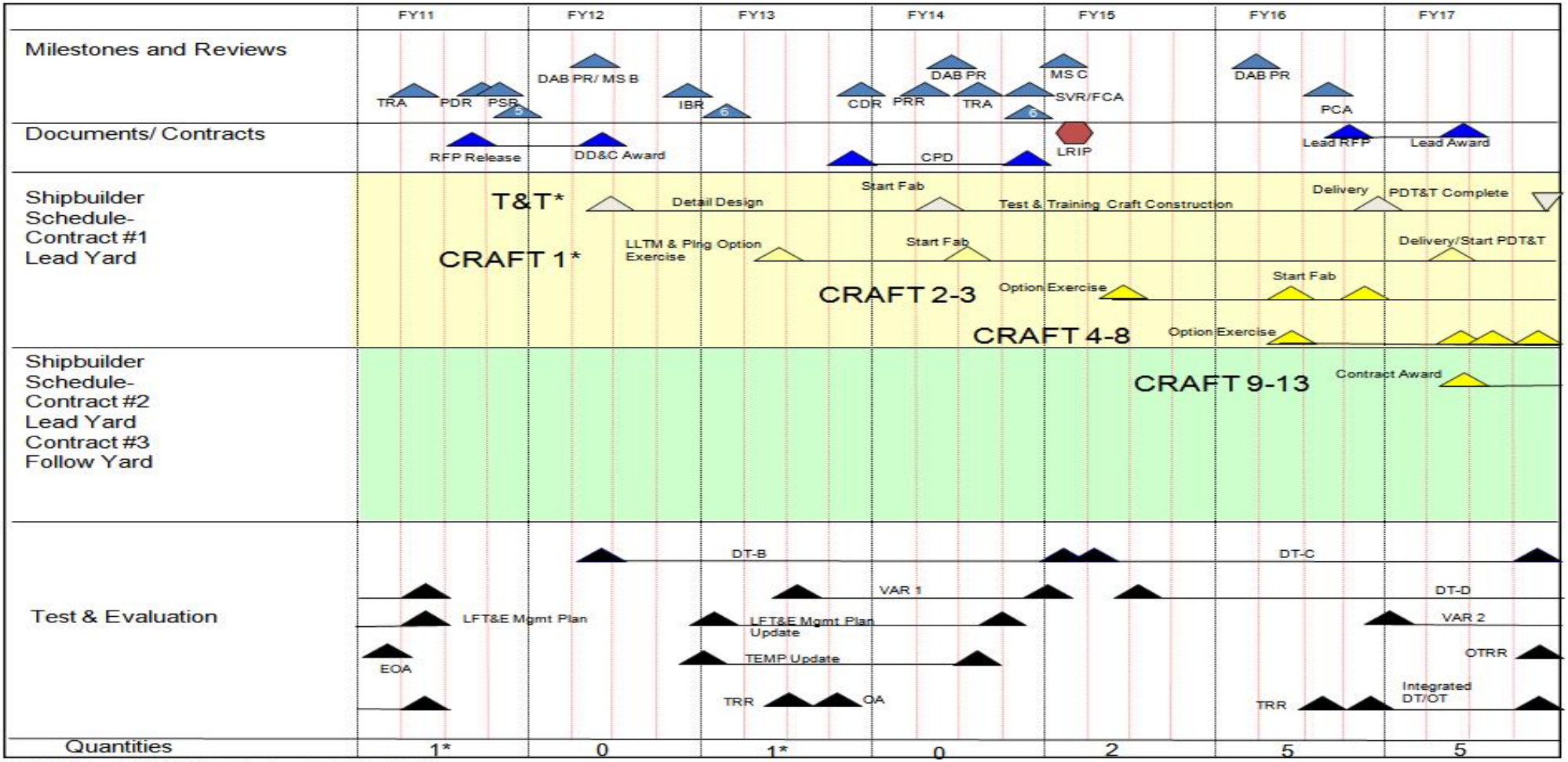
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Trng Craft Contractor Engineering Support	C/CPFF	CSC/Alion:Washington, DC	0.500	5.730	Dec 2011	5.753	Jun 2013	-		5.753	0.000	11.983	
Test & Trng Craft Government EngineeringSupport	WR	NSWC:Various	1.730	3.670	Dec 2011	4.935	Oct 2012	-		4.935	0.000	10.335	
		Subtotal	2.230	9.400		10.688		-		10.688	0.000	22.318	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	77.889	52.466		130.394		-		130.394	0.000	260.749	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3137: *SSC Construction*



*FY11 and FY13 Craft is funded with R&D

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 3137: *SSC Construction*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3137				
Defense Acquisiton Board (DAB) Review/Acquisition Milestone B	2	2012	2	2012
Test and Training Craft DD&C Contract Award	2	2012	2	2012
Test and Training Craft Detail Design	2	2012	2	2014
Craft 101 Option Award	2	2013	2	2013
Craft 101 LLTM & Plng	2	2013	3	2014
Critical Design Review (CDR)	4	2013	4	2013
Capabilities Production Document (CPD)	4	2013	4	2014
Production Readiness Review (PRR)	2	2014	2	2014
Defense Acquisition Board (DAB) Review (FY14)	2	2014	2	2014
Test and Training Craft Construction	2	2014	4	2016
Craft 101 Construction	3	2014	2	2017
Low Rate Initial Production (LRIP) Approval	1	2015	1	2015
Acquisition Milestone C	1	2015	1	2015
Defense Acquisition Board (DAB) Review (FY16)	1	2016	1	2016
Test and Training Craft Delivery	4	2016	4	2016
Test and Training Craft Post Delivery Test and Trials (PDT&T)	4	2016	4	2017
Craft 101 Delivery	2	2017	2	2017
Craft 101 Post Delivery Test and Trials (PDT&T)	2	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3179: *CVN-79 Total Ship Integration*	20.538	19.166	11.187	-	11.187	15.978	16.567	15.224	15.489	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Development and related testing of CVN 78 Class aircraft carrier specific technologies, the infusion of the ship technology base into existing and future aircraft carriers, and the potential realization of subsystem design capabilities not currently feasible. This project also funds the Contract Design efforts for the CVN 79. This project transitions the minimum sustaining technologies required to address obsolescence, critical survivability shortfalls as identified in CVN 78 Class testing, future requirements, and technologies which did not mature in time to support the CVN 78. All systems developed in this project have the potential to support emerging requirements and other promising systems technologies for insertion into new aircraft carrier designs. The emphasis is directed toward developing ship hull, mechanical, propulsion, electrical, aviation, warfare systems, and combat support systems, sub-systems and components to maintain aircraft carrier affordability, manpower requirements, survivability, and operational capabilities and to meet the requirements of existing and pending regulations and statutes critical to the operation of future aircraft carriers. This project also encompasses those tasks required to develop the contract data package necessary to support CVN 79 procurement, including, but not limited to engineering support, programmatic and program support, logistics support, modeling and simulation, manpower and program related studies, and design support systems, such as the Integrated Digital Environment.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: CVN-79 Total Ship Integration	20.538	19.166	11.187
Articles:	0	0	0

FY 2011 Accomplishments:

Plans include further HII development and submission of BCA items to reduce CVN 79 acquisition cost. Further development and implementation of previous and new items yet to be determined will occur during the fiscal year. Some of the efforts that are being considered include, but are not limited to, Tandem Arc Welding, Machinery Control & Monitoring System reduction, Final Assembly Platen rolling roof covers, Steel Fabrication nesting improvements, Cable Pulling process enhancements, Pipe Shop consolidation, Sea Chest produce ability, other spare circuit breaker reductions, and Weapons Elevator door redesign. Additionally, ongoing efforts will be continued, including CVN 78 Class shock, vibration and EMI analysis, obsolescence analysis, and HSI.

FY 2012 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Plans include further HII development and submission of BCA items to reduce CVN 79 acquisition cost. Further development and implementation of previous and new items yet to be determined will occur during the fiscal year. Additionally, the continuation of on-going efforts, including CVN 78 Class shock, vibration and EMI analysis, obsolescence analysis, and HSI are planned. ***FY 2013 Plans:*** Plans include further HII development and submission of BCA items to reduce CVN 79 acquisition and total ownership cost. Due to design maturity, a gradual shift from development towards implementation is expected as BCAs mature. Additionally, the continuation of ongoing efforts, including CVN 78 Class shock, vibration and EMI analysis, obsolescence analysis, and HSI are planned.			
Accomplishments/Planned Programs Subtotals	20.538	19.166	11.187

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0605312N: *2208, 4004*	89.579	50.235	97.534	0.000	97.534	60.780	40.125	40.790	41.515	0.000	1,828.476
• 0603570N: *CVN 21 (PU 2692)*	66.304	65.808	62.020	0.000	62.020	57.493	56.469	0.000	0.000	0.000	1,526.644
• BLI 200100: *Carrier Replacement Program*	2,615.756	554.798	608.195	0.000	608.195	666.129	2,999.085	1,662.208	2,867.641	13,154.068	36,797.394
• BLI 530000: *Completion of Prior Year Shipbuilding Programs*	0.000	0.000	0.000	0.000	0.000	449.000	362.000	0.000	0.000	0.000	811.000

D. Acquisition Strategy

The CVN 80 is the third ship of the CVN 78 Class of aircraft carriers designed to replace USS ENTERPRISE and the ships of the NIMITZ Class Carriers. CVN 79 is a modified repeat of the CVN 78, which features the new nuclear propulsion and electrical generation / distribution system, electromagnetic aircraft launch system (EMALS), advanced arresting gear (AAG) system, electric auxiliaries, warfare system improvements, survivability enhancements, improved weapons handling, and improved aircraft servicing. These design features will result in lower manpower and total ownership costs as compared to the NIMITZ Class. Additionally, the following war fighting benefits will be realized: increased sortie generation rate, improved ship self defense capability, increased launch and recovery capability / flexibility, increased operational availability, and increased flexibility to support future upgrades. CVN 79 will use late integration of Government-Furnished Equipment to provide the latest combat system and C4I suite applications within the planned system baseline. CVN 79 will improve upon processes used on CVN 78 to gain efficiencies during the CVN 79 Construction Preparation and Construction periods.

E. Performance Metrics

Successfully complete system development efforts for designated new and modified shipboard system, including developmental test and evaluation documents. Successfully complete design related activities associated with integration of new and modified shipboard systems into the ship, including developmental test and

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*

evaluation documentation. Successfully perform system design and analysis studies. Successfully support design integration and analysis. Successfully complete or support feasibility and tradeoff studies on new and modified shipboard systems, technologies, and proposed modifications. Studies shall include requirements and engineering analysis; identification of subsystem, integration, and logistics impacts; cost estimates; analysis of construction schedule impacts; and conduct/ support of shipchecks. Successfully provide Manpower Workload Analysis associated with design and policy activities, and with integration of new and modified system/equipment. Successfully complete the development of multiple Business Case Analyses (BCAs) that demonstrate technology, process, requirements and/or infrastructure improvements that will reduce the man hours (or equivalent material costs) for CVN 79 Construction.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Total Ship Integration	C/CPAF	HII:VA	70.123	12.337	Dec 2011	5.230	Dec 2012	-		5.230	Continuing	Continuing	Continuing
Total Ship Integration	WR	NSWC Carderock:MD	10.290	1.091	Nov 2011	1.356	Oct 2012	-		1.356	Continuing	Continuing	Continuing
Total Ship Integration	WR	NSWC Dahlgren:VA	7.646	1.052	Nov 2011	1.052	Oct 2012	-		1.052	Continuing	Continuing	Continuing
Total Ship Integration	WR	NAWCAD Pax River:MD	2.954	0.892	Nov 2011	0.793	Oct 2012	-		0.793	Continuing	Continuing	Continuing
Total Ship Integration	WR	SPAWAR:SD	2.435	0.496	Nov 2011	0.494	Oct 2012	-		0.494	Continuing	Continuing	Continuing
Total Ship Integration	C/CPFF	NAVSEA SEAPORT:DC	11.567	1.323	Nov 2011	0.517	Nov 2012	-		0.517	Continuing	Continuing	Continuing
Total Ship Integration	C/CPAF	Raytheon:MA	4.325	1.558	Dec 2011	1.548	Dec 2012	-		1.548	Continuing	Continuing	Continuing
Total Ship Integration	WR	SSC Charleston:SC	0.233	-		-		-		-	Continuing	Continuing	Continuing
Total Ship Integration	C/CPFF	SAIC:VA	0.551	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	110.124	18.749		10.990		-		10.990			

Remarks

Northrop Grumman spun off its shipbuilding sector and effective 14 April 2001 officially became Huntington Ingalls Industries (HII).

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	COMOPTEVFOR:VA	-	0.181	Oct 2011	0.186	Oct 2012	-		0.186	0.000	0.367	
Developmental Test & Evaluation	WR	CARDEROCK:MD	4.491	0.236	Oct 2011	0.011	Oct 2012	-		0.011	0.000	4.738	
Developmental Test & Evaluation	WR	NUWC NEWPORT:RI	0.123	-		-		-		-	0.000	0.123	
		Subtotal	4.614	0.417		0.197		-		0.197	0.000	5.228	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Defense Acquisition Workforce	Various	Various:Mis	0.181	-		-		-		-	0.000	0.181	
		Subtotal	0.181	-		-		-		-	0.000	0.181	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	114.919	19.166		11.187		-		11.187			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*

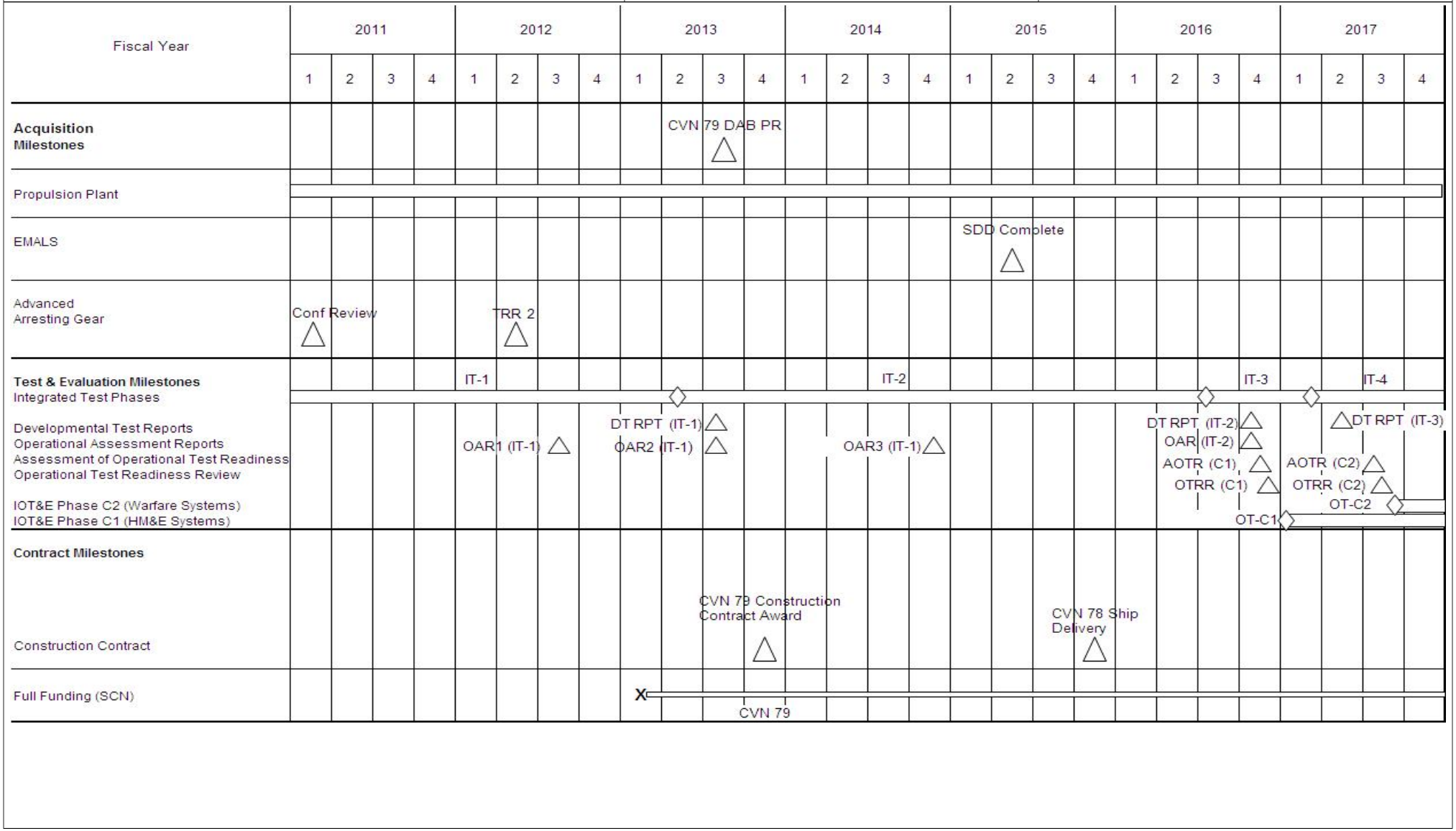


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 3179: *CVN-79 Total Ship Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3179				
CVN 79 DAB PR	3	2013	3	2013
Propulsion Plant	1	2011	4	2017
EMALS SDD Complete	2	2015	2	2015
AAG Config Review	1	2011	1	2011
AAG TRR 2 (IT)	2	2012	2	2012
Integrated Test 1 (IT-1)	1	2011	2	2013
Integrated Test 2 (IT-2)	2	2013	3	2016
Integrated Test 3 (IT-3)	3	2016	1	2017
Integrated Test 3 (IT-4)	1	2017	4	2017
Operational Assessment Report 1 (OAR1 IT-1)	3	2012	3	2012
Operational Assessment Report 2 (OAR2 IT-1)	3	2013	3	2013
Developmental Test Report (DT RPT IT-1)	3	2013	3	2013
Operational Assessment Report 3 (OAR3 IT-1)	4	2014	4	2014
Developmental Test Report (DT RPT IT-2)	4	2016	4	2016
Operational Assessment Report (OAR IT-2)	4	2016	4	2016
Assessment of Operational Test Readiness - Phase C1 (AOTR-C1)	4	2016	4	2016
Operational Test Readiness Review - Phase C1 (OTRR-C1)	4	2016	4	2016
Developmental Test Report (DT RPT IT-3)	2	2017	2	2017
Assessment of Operational Test Readiness - Phase C1 (AOTR-C2)	3	2017	3	2017
Operational Test Readiness Review - Phase C1 (OTRR-C2)	3	2017	3	2017
Operational Test Phase 1 (OT-C1)	1	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 3179: *CVN-79 Total Ship Integration*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Operational Test Phase 2 (OT-C2)	3	2017	4	2017
CVN 79 Construction Contract Award	4	2013	4	2013
CVN 79 SCN Full Funding	1	2013	4	2017
CVN 78 Ship Delivery	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 4007: *CVN 21 LFT&E*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
4007: *CVN 21 LFT&E*	2.658	1.645	2.675	-	2.675	3.668	3.784	5.083	4.310	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses Live Fire Test and Evaluation (LFT&E) efforts for the CVN 78 Class. Title 10, US Code, Section 2366, CVN 21 Operational Requirements Document (ORD) and the CVN 78 Class Test and Evaluation Master Plan (TEMP) 1610, prescribe requirements for LFT&E. The purpose of LFT&E is to evaluate covered systems in a realistic combat environment before proceeding beyond low-rate initial production. Since the application of the survivability testing required by 10USC2366 to a CVN 78 Class ship would be unreasonably expensive and impractical, the Secretary of Defense waived the live-fire testing requirement in 2004 and submitted a certification of that determination to Congress. The CVN 21 LFT&E Management Plan details testing, modeling and simulation, and engineering analyses that are being used to determine whether the CVN 78 Class ships will be able to survive and carry out their missions against the threat weapons identified in the Capstone Ship Threat Assessment (CSTA) that are likely to be encountered in combat. The results of these tests and analyses are documented in periodic Vulnerability Assessment Reports (VARs).

VAR 3 was completed in the summer of 2007 and VAR 4 is scheduled to be completed in FY 14.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: CVN 21 LFT&E	2.658	1.645	2.675
Articles:	0	0	0
FY 2011 Accomplishments: Updated CVN 78 Class Management Plan Revision B to account for emergent changes in the CVN 78 Class LFT&E program. Continued CVN 78 VAR 4 efforts by: finalizing the survivability models; completing the susceptibility model analyses for hit point selection; beginning the first Damage Based Engineering Analyses (DSBEA), performing the Fire and Smoke Simulator (FSSIM) analyses for the first DSBEA, beginning the Ship Vulnerability Model (SVM) analyses, completing verification and validation (V&V) analyses and documentation of DYSMAS to support VAR 4. Completed the CVN 78 surrogate magazine fire suppression system and conducted a proof test of the combined detection/suppression system on ex-USS Shadwell.			
FY 2012 Plans: Continue the SVM analyses and DSBEAs for VAR 4. Begin documentation of the analyses for VAR 4.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 4007: *CVN 21 LFT&E*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete the DSBEAs and continue the SVM analyses and documentation for CVN 78 VAR 4. Work with Huntington Ingalls Industries to refine the developed Finite Element Model (FEM) of the as-built CVN 78 structure to include vital systems and selected equipment.			
Accomplishments/Planned Programs Subtotals	2.658	1.645	2.675

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• BLI 200100: *Carrier Replacement Program*	2,615.756	554.798	608.195	0.000	608.195	666.129	2,999.085	1,662.208	2,867.641	13,154.058	36,797.384
• 0603570N: *CVN 21 (PU 2692)*	66.304	65.808	62.020	0.000	62.020	57.493	56.469	0.000	0.000	0.000	1,526.644
• 0603512N: *2208, 4004*	89.579	50.235	97.534	0.000	97.534	60.780	40.125	40.790	41.515	0.000	1,828.476
• BLI 530000: *Completion of Prior Year Shipbuilding*	0.000	0.000	0.000	0.000	0.000	449.000	362.000	0.000	0.000	0.000	811.000

D. Acquisition Strategy

The CVN 78 is the first ship of the CVN 78 Class of aircraft carriers designed to replace USS ENTERPRISE and the ships of the NIMITZ Class. The CVN 78 will feature a new nuclear propulsion and electrical generation/distribution system, new electromagnetic aircraft launching system (EMALS), advanced arresting gear (AAG) system, all electric auxiliaries, warfare system improvements, survivability enhancements, improved weapons handling, and improved aircraft servicing. These design features will result in lower manpower and total ownership costs as compared to the NIMITZ Class. Additionally, the following warfighting benefits will be realized: increased sortie generation rate, improved ship self-defense capability, increased launch and recovery capability/flexibility, increased operational availability, and increased flexibility to support future upgrades.

E. Performance Metrics

Successfully complete CVN 78 fire test effort in support of magazine fire protection system. Complete update of the LFT&E Management Plan Revision B to account for emergent changes in the CVN 78 Class LFT&E program. Successfully complete Vulnerability Assessment Report (VAR) 4.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 4007: *CVN 21 LFT&E*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Live Fire Test & Evaluation	WR	NSWC Carderock:MD	42.849	1.101	Oct 2011	2.222	Oct 2012	-		2.222	Continuing	Continuing	Continuing
Live Fire Test & Evaluation	C/CPAF	HII:VA	7.961	0.544	Nov 2011	0.453	Nov 2012	-		0.453	Continuing	Continuing	Continuing
		Subtotal	50.810	1.645		2.675		-		2.675			

Remarks

Northrop Grumman spun off its shipbuilding sector and effective 14 April 2001 officially became Huntington Ingalls Industries (HII).

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Defense Acquisition Workforce	TBD	Various:Various	0.010	-		-		-		-	0.000	0.010	
		Subtotal	0.010	-		-		-		-	0.000	0.010	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	50.820	1.645		2.675		-		2.675			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 4007: *CVN 21 LFT&E*

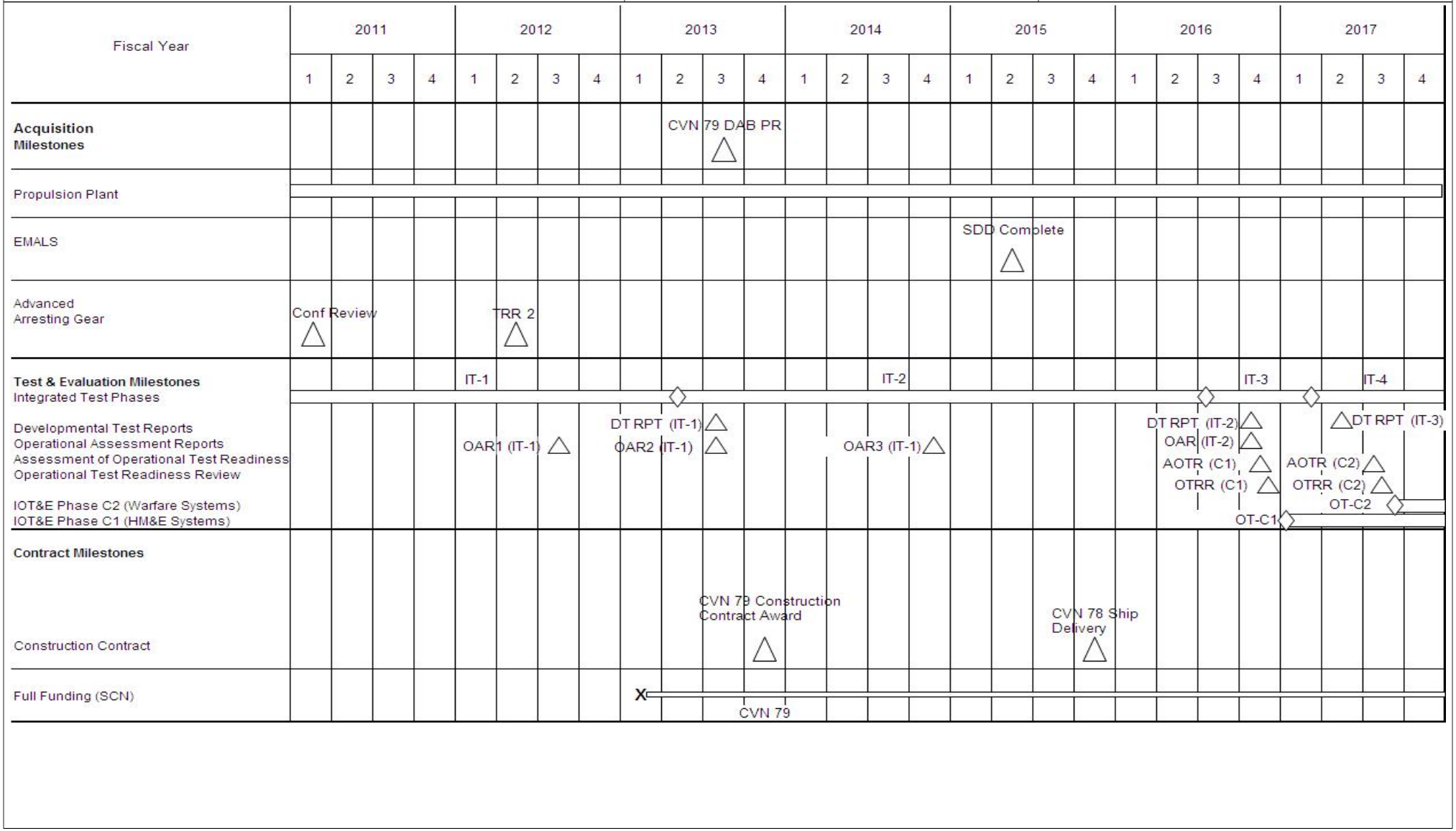


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604567N: *Ship Contract Design/ Live Fire T&E*	**PROJECT** 4007: *CVN 21 LFT&E*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4007				
CVN 79 DAB PR	3	2013	3	2013
Propulsion Plant	1	2011	4	2017
EMALS SDD Complete	2	2015	2	2015
AAG Config Review	1	2011	1	2011
AAG TRR 2 (IT)	2	2012	2	2012
Integrated Test 1 (IT-1)	1	2011	2	2013
Integrated Test 2 (IT-2)	2	2013	3	2016
Integrated Test 3 (IT-3)	3	2016	1	2017
Integrated Test 3 (IT-4)	1	2017	4	2017
Operational Assessment Report 1 (OAR1 IT-1)	3	2012	3	2012
Operational Assessment Report 2 (OAR2 IT-1)	3	2013	3	2013
Developmental Test Report (DT RPT IT-1)	3	2013	3	2013
Operational Assessment Report 3 (OAR3 IT-1)	4	2014	4	2014
Developmental Test Report (DT RPT IT-2)	4	2016	4	2016
Operational Assessment Report (OAR IT-2)	4	2016	4	2016
Assessment of Operational Test Readiness - Phase C1 (AOTR-C1)	4	2016	4	2016
Operational Test Readiness Review - Phase C1 (OTRR-C1)	4	2016	4	2016
Developmental Test Report (DT RPT IT-3)	2	2017	2	2017
Assessment of Operational Test Readiness - Phase C1 (AOTR-C2)	3	2017	3	2017
Operational Test Readiness Review - Phase C1 (OTRR-C2)	3	2017	3	2017
Operational Test Phase 1 (OT-C1)	1	2017	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 4007: *CVN 21 LFT&E*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Operational Test Phase 2 (OT-C2)	3	2017	4	2017
CVN 79 Construction Contract Award	4	2013	4	2013
CVN 79 SCN Full Funding	1	2013	4	2017
CVN 78 Ship Delivery	4	2015	4	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604567N: *Ship Contract Design/ Live Fire T&E*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	12.934	-	-	-	-	-	-	-	-	0.000	12.934
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: DD(X) FSST	12.934	-
FY 2011 Accomplishments: Provides funding to develop a common, affordable technically acceptable Navy-wide alternative to replace Full Ship Shock Trials (FSST) for surface ships. FSSTs are required for all new ship classes and flights to confirm design and construction shock hardness requirements.		
Congressional Adds Subtotals	12.934	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Congressional Add

E. Performance Metrics

Congressional Add

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	4.420	3.848	3.889	-	3.889	3.958	4.474	4.547	4.627	Continuing	Continuing
1353: *Standard Hardware*	4.420	3.848	3.889	-	3.889	3.958	4.474	4.547	4.627	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Common Processing System (CPS) and Common Display System (CDS) programs are being executed to bring open architecture hardware and technology utilization into a common configuration in a competitive sourcing environment. CPS provides the computer processing and memory, data storage and extraction, and Input/Output (I/O) interface to support hosting Navy combat system software applications and management of computing resources in support of the AEGIS Modernization program, the CVN 78 program and other SSDS MK 2 ships. CDS provides common human machine interface (Combat Information Center (CIC) consoles) to the AEGIS Open Architecture (OA) computing environment and provides war fighter team situational awareness in support of the AEGIS Modernization program. CDS also provides the same capabilities to DDG 1000, SSDS MK 2 ships (CVN, LHD, LHA, LSD). CPS provides technical replacements of obsolete processing equipment (such as AN/UYQ-70 and Mission Critical Enclosure (MCE)) supporting multiple platforms including AEGIS new construction Destroyers and Cruisers/Destroyers undergoing modernization, the CVN 78 program and other SSDS MK 2 ships.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	4.443	3.848	3.899	-	3.899
Current President's Budget	4.420	3.848	3.889	-	3.889
Total Adjustments	-0.023	-	-0.010	-	-0.010
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Rate/Misc Adjustments	-	-	-0.010	-	-0.010
• Congressional General Reductions Adjustments	-0.023	-	-	-	-

Change Summary Explanation

Technical:
FY12 - 10% general reduction.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*	PROJECT 1353: *Standard Hardware*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1353: *Standard Hardware*	4.420	3.848	3.889	-	3.889	3.958	4.474	4.547	4.627	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Common Processing System (CPS) and Common Display System (CDS) programs are being executed to bring open architecture hardware and technology utilization into a common configuration in a competitive sourcing environment. CPS provides the computer processing and memory, data storage and extraction, and I/O interface to support hosting Navy combat system software applications and management of computing resources in support of the AEGIS Modernization program, the CVN 78 program and other SSDS MK 2 ships. CDS provides common human machine interface CIC consoles) to the AEGIS Open Architecture (OA) computing environment and provides war fighter team situational awareness in support of the AEGIS Modernization program. CDS also provides the same capabilities to DDG 1000, SSDS MK 2 ships (CVN, LHD, LHA, LSD). CPS provides technical replacements of obsolete processing equipment (such as AN/UYQ-70 and Mission Critical Enclosure (MCE)) supporting multiple platforms including AEGIS new construction Destroyers and Cruisers/Destroyers undergoing modernization, the CVN 78 program and other SSDS MK 2 ships.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Systems Engineering	4.420	3.848	3.889
Articles:	0	0	0
FY 2011 Accomplishments: - Completed development of CDS to support multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, CVN 78 and other SSDS MK 2 ships. Perform technology refresh of CDS equipment. - Completed development of CPS to support multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, CVN 78 and other SSDS MK 2 ships. Perform technology refresh of CPS equipment.			
FY 2012 Plans: - Continue fielding and in-service support of CDS Baseline 1 in multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, DDG restart, AEGIS Ashore, CVN CV-TSC, DDG 1000, CVN/Amphib SSDS and other ships. Perform design and qualification of technology insertion of CDS Baseline 2 equipment including recompete of CDS contract. - Continue fielding and in-service support CPS baseline 1 equipment in multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, DDG restart, AEGIS Ashore, CVN CV-TSC, and CVN/Amphib SSDS installation and other ships. Continue development of technology insertion of CPS Baseline 2 equipment.			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*	PROJECT 1353: *Standard Hardware*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continue in-service support of CDS Baseline 1 in multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, DDG restart, AEGIS Ashore, CVN CV-TSC, DDG 1000, CVN/Amphib SSDS and other ships. Begin technology insertion through production of CDS Baseline 2 equipment under new contract. - Continue fielding of CPS Baseline 1 to support multiple platforms including AEGIS Destroyers and Cruisers undergoing modernization, DDG restart, AEGIS Ashore, CVN CV-TSC, and CVN/Amphib SSDS installation and other ships. Complete development and qualification and begin production of technology insertion for CPS Baseline 2 equipment.			
Accomplishments/Planned Programs Subtotals	4.420	3.848	3.889

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Contracts:
CDS Indefinite Delivery Indefinite Quantity (IDIQ) Production continues FY11-FY16.
CPS IDIQ Production continues FY11-FY16.

E. Performance Metrics

CDS Performance Metrics

FY11 Funding:
- Successfully completed CDS Tech Refresh/Tech Insertion (TR/TI) Systems Requirements Review (SRR), as required.
- Conducted quarterly CDS TR/TI Working Group (WG) Mtgs with prime contractors and the users to identify technology refresh priorities, user requirements, future technology trends, and obsolescence problems.
- Conducted CDS Technical Interface Meetings (TIMs) on an as-needed basis to explore and resolve emergent technical design issues.
- Successfully completed CDS TREQ testing, as required.
- Continued researching requirements and possible solutions to minimize obsolescence issues during next Tech Refresh.
- Developed required documentation to achieve ACAT Program of Record (POR) status.
- Successfully completed required Tech Refresh research for build recompete.

FY12 Funding:
- Conduct quarterly CDS TR/TI WG meetings with prime contractors and users to identify technology refresh priorities, user requirements, future technology trends, and obsolescence problems.
- Conduct CDS TIMs on an as-needed basis to explore and resolve emergent technical design issues.
- Successfully complete CDS TREQ testing, as required.

- Successfully complete required Tech Refresh research for CDS contract recompete November 2012.

FY13 Funding:
- Successfully complete CDS Baseline 2 Preliminary Design Review (PDR).
- Successfully complete CDS Baseline 2 Critical Design Review (CDR).
- Successfully complete CDS Baseline 2 Test Readiness Review (TRR).
- Conduct TIMs on an as-needed basis to explore and resolve emergent technical design issues.
- Successfully complete CDS Baseline 2 Production Readiness Review (PRR).
- Successfully complete CDS TR/TI SRR, as required.
- Conduct quarterly CDS TR/TI WG Mtgs with prime contractors and users to identify technology refresh priorities, user requirements, future technology trends and obsolescence problems.

CPS Performance Metrics

FY11 Funding:
- Successfully completed CPS PRR.
- Successfully completed CPS TR/TI SRR, as required.
- Conducted Quarterly CPS TR/TI WG meetings with prime contractors and customers to identify technology refresh priorities, customer requirements, future technology trends, and obsolescence problems.
- Conducted CPS TIMs to explore and resolve emergent technical design issues.
- Successfully completed CPS TREQ testing, as required.
- Continued researching requirements and possible solutions to minimize obsolescence issues during next Tech Refresh.
- Developed required documentation to achieve POR status.
- Successfully completed CPS Environmental Qualification Testing (EQT), as required.

FY12 Funding:
- Successfully complete CPS TR/TI PDR, as required.
- Conduct Quarterly CPS TR/TI WG meetings with prime contractors and customers to identify technology refresh priorities, customer requirements, future technology trends, and obsolescence problems.
-Conduct CPS TIMs to explore and resolve emergent technical design issues.

FY13 Funding:
- Conduct quarterly CPS TR/TI WG Mtgs with prime contractors and users to identify technology refresh priorities, user requirements, future technology trends and obsolescence problems.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*	PROJECT 1353: *Standard Hardware*

- Technical Insertion and Milestones as required.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*	PROJECT 1353: *Standard Hardware*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC:PHD	0.180	0.050	Nov 2011	0.039	Nov 2012	-		0.039	0.000	0.269	
Systems Engineering	WR	NSWC:Dahlgren	4.177	0.968	Jan 2012	0.847	Nov 2012	-		0.847	0.000	5.992	
Systems Engineering	WR	NSWC:Crane	0.799	-		-		-		-	0.000	0.799	
Systems Engineering	C/CPFF	General Dynamics:Fairfax, VA	2.750	2.000	Jan 2012	1.585	Jan 2013	-		1.585	Continuing	Continuing	Continuing
Systems Engineering	C/CPFF	DRS Technologies:Gaithersburg, MD	0.478	-		-		-		-	0.000	0.478	
Systems Engineering	C/CPIF	Global Technical Systems:Virginia Beach, VA	2.401	0.500	Feb 2012	1.234	Jan 2013	-		1.234	Continuing	Continuing	Continuing
Systems Enginering	Various	Various:Various	0.097	-		-		-		-	0.000	0.097	
		Subtotal	10.882	3.518		3.705		-		3.705			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Services	Various	Various:Various	0.309	0.330	Feb 2012	0.184	Dec 2012	-		0.184	0.100	0.923	
		Subtotal	0.309	0.330		0.184		-		0.184	0.100	0.923	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	11.191	3.848		3.889		-		3.889			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604574N: *Navy Tactical Computer Resources*	PROJECT 1353: *Standard Hardware*

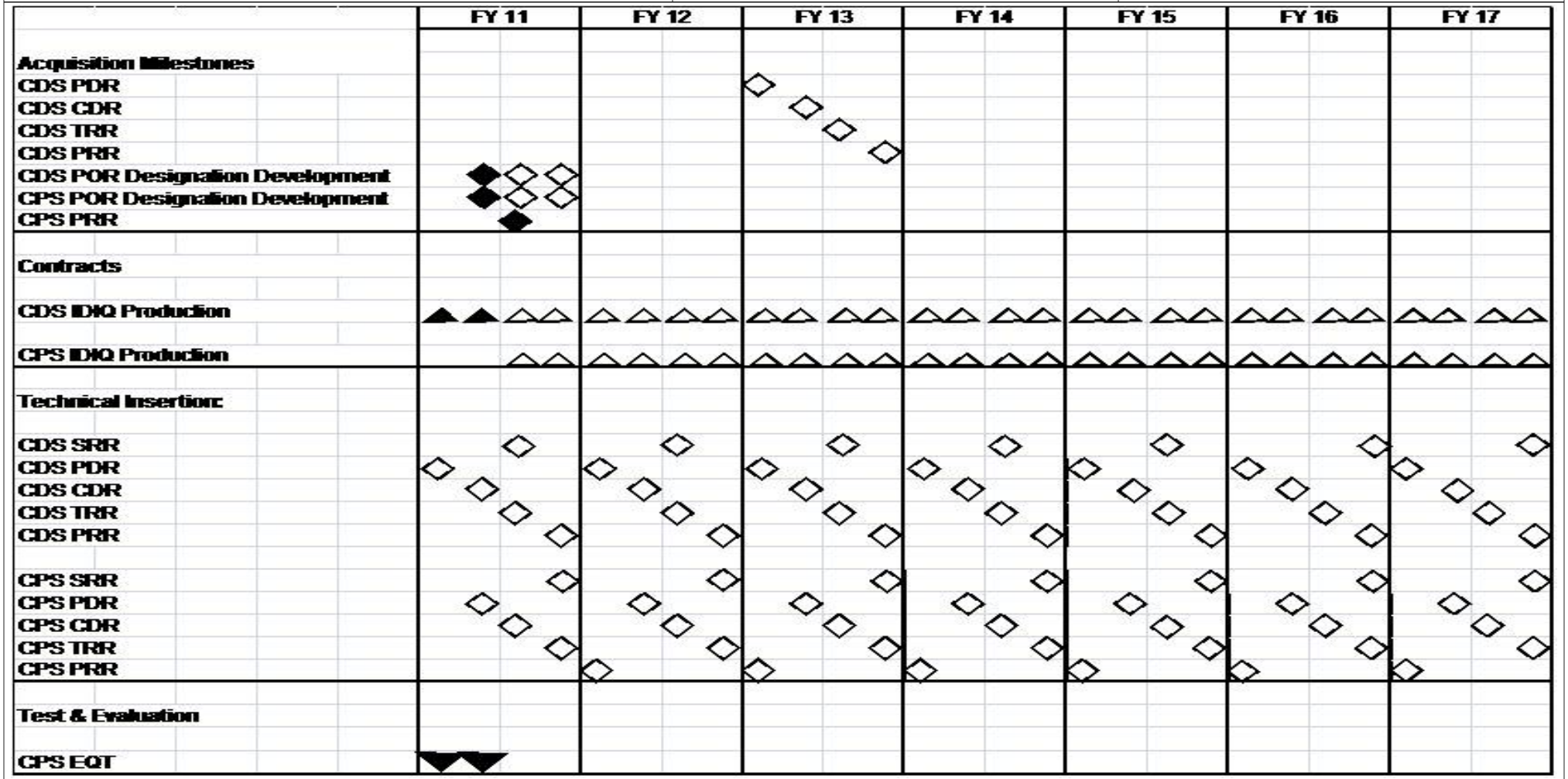


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604574N: *Navy Tactical Computer Resources*	**PROJECT** 1353: *Standard Hardware*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1353				
Develop Required Documentation to Support CDS POR Designation	2	2011	4	2011
Develop Required Documentation to Support CPS POR Designation	2	2011	4	2011
Acquisition Milestones CDS PDR	1	2013	1	2013
Acquisition Milestones CDS CDR	2	2013	2	2013
Acquisition Milestones CDS TRR	3	2013	3	2013
Acquisition Milestones CDS PRR	4	2013	4	2013
Acquisition Milestones CPS PRR	3	2011	3	2011
Common Display System (CDS) IDIQ Production	1	2011	4	2017
CPS Indefinite Delivery/Indefinite Quantity (IDIQ) Production	3	2011	4	2017
Technical Insertion CDS SRR, as required	3	2011	4	2017
Technical Insertion CDS PDR, as required	1	2011	1	2017
Technical Insertion CDS CDR, as required	2	2011	2	2017
Technical Insertion CDS TRR, as required	3	2011	3	2017
Technical Insertion CDS PRR, as required	4	2011	4	2017
Technical Insertion CPS SRR, as required	4	2011	4	2017
Technical Insertion CPS PDR, as required	2	2011	2	2017
Technical Insertion CPS CDR, as required	3	2011	3	2017
Technical Insertion CPS TRR, as required	4	2011	4	2017
Technical Insertion CPS PRR, as required	1	2012	1	2017
CPS Environmental Qualification Testing (EQT)	1	2011	2	2011

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing
0267: *Mine Improvements*	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project is the only R&D program for mine systems, and is the sole support for the capability to maintain the effectiveness of mines facing new threat targets and increasing emphasis on major regional conflicts and littoral warfare in shallow water. Project tasks are grouped into several areas: (1) Threat Modeling/Analysis, which collects, analyzes, and develops digital models of data on current priority threat target characteristics to support computer simulations; (2) Target Detection and Response, which uses target models to develop optimal mine designs, settings, and firing algorithms; and (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields.

Data Recorders: Mine data recorders record mine target detection and mine fire data during in-water reliability testing. Current recorders are no longer supportable and cannot be used with the Quickstrike Mod 3. New recorders will work with the programmable Target Detecting Device MK 71 used in the Mod 3. They will support in-water testing of all in-service Quickstrike Mods (0, 1, and 3).

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	5.455	3.933	3.450	-	3.450
Current President's Budget	4.399	3.933	8.335	-	8.335
Total Adjustments	-1.056	-	4.885	-	4.885
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.850	-			
• SBIR/STTR Transfer	-0.178	-			
• Program Adjustments	-	-	4.900	-	4.900
• Rate/Misc Adjustments	-	-	-0.015	-	-0.015
• Congressional General Reductions Adjustments	-0.028	-	-	-	-

Change Summary Explanation

Program Adjustments: FY13 +$4,885K in Total Adjustments: Increase for Mine Warfare Wing Kit Demonstration proving Stand Off delivery and associated Aircraft Certification aboard the F/A-18 and B-52 (+$4,912K), and Decrease for Misc Adjustments (-$0.027K).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0267: *Mine Improvements*	4.399	3.933	8.335	-	8.335	5.071	4.124	3.670	3.737	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project is the only R&D program for mine systems, and is the sole support for the capability to maintain the effectiveness of mines facing new threat targets and increasing emphasis on major regional conflicts and littoral warfare in shallow water. Project tasks are grouped into several areas: (1) Threat Modeling/Analysis, which collects, analyzes, and develops digital models of data on current priority threat target characteristics to support computer simulations; (2) Target Detection and Response, which uses target models to develop optimal mine designs, settings, and firing algorithms; and (3) Developing and upgrading Tactical Decision Aids (TDAs) to assist the warfighter in planning and placing more effective minefields.

Data Recorders: Mine data recorders record mine target detection and mine fire data during in-water reliability testing. Current recorders are no longer supportable and cannot be used with the Quickstrike Mod 3. New recorders will work with the programmable Target Detecting Device MK 71 used in the Mod 3. They will support in-water testing of all in-service Quickstrike Mods (0, 1, and 3).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Product Development	2.825	2.299	4.144
Articles:	0	0	0
FY 2011 Accomplishments: Software Development: Modified existing algorithms to implement improvements. Prepared data for minefield planners to use against additional threats. Continued analysis of Quickstrike effectiveness against future threats. Gave presentation to joint Navy and Air force fuze safety board, and respond to action items from the board. Began design modifications of mine data recorders used for in-water reliability testing for use with Quickstrike MK62/63 Mod 3. Conducted a feasibility study for Quickstrike MK 65 Mod 4.			
FY 2012 Plans: Software Development: Modify algorithms based on testing results. Begin generating operational data (OPDATA) for the Fast Patrol Boat, Air Cushioned Vehicle, and large ship algorithms. Continue to work action items assigned by Navy and Air Force fuze safety boards. Continue modifications to mine data recorder design. Work with P-8 Aircraft mission planning software designers to include transfer of MEDAL data to their system.			
FY 2013 Plans: Software Development: Modify algorithms based on testing results. Continue generating OPDATA for fast patrol boat, air cushioned vehicle, and large ship algorithms. Continue to work action items assigned by Navy and Air Force fuse safety boards.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete modification to mine data recorder design. Continue to work with P-8 Aircraft mission planning software designers to include transfer of MEDAL data to their system. Perform trade study for mine standoff delivery (Wing Kit Development) capability and develop modification to existing system.			
Title: Support	0.012	0.050	0.100
Articles:	0	0	0
FY 2011 Accomplishments: Integrated Logistics Support			
FY 2012 Plans: Integrated Logistics Support			
FY 2013 Plans: Integrated Logistics Support			
Title: Test and Evaluation	1.315	1.328	3.591
Articles:	0	0	0
FY 2011 Accomplishments: Conducted one in-water tests of developed algorithms and begin analysis. Provided engineering and material support to NAVAIR and Air Force for analysis and testing of mines with Quickstrike MK62/63 Mod 3.			
FY 2012 Plans: Conduct second in-water tests of developed algorithms and begin analysis. Continue Aircraft certification.			
FY 2013 Plans: Conduct one in-water test to determine baseline reliability of the Quickstrike MK 65 Mod 3 system. Continue Aircraft certification (to include F/A-18 and B-52). Perform test and evaluation on the MINES standoff (Wing Kit) capabiltiy.			
Title: Management:	0.247	0.256	0.500
Articles:	0	0	0
FY 2011 Accomplishments: Program Management Support and Travel.			
FY 2012 Plans: Program Management Support and Travel			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Program Management Support and Travel			
Accomplishments/Planned Programs Subtotals	4.399	3.933	8.335

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN 3231: *Quickstrike Mine*	6.808	5.770	6.852	0.000	6.852	9.625	9.397	9.526	9.694	0.000	62.338

D. Acquisition Strategy

Procurement of Target Detecting Device (TDD) Mk 71 and associated components.

E. Performance Metrics

Successfully develop new mine data recorders to work with the programmable TDD MK 71 used in the Mod 3.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NSWC PC:WX	112.801	0.653	Nov 2011	2.844	Nov 2012	-		2.844	Continuing	Continuing	Continuing
Ancillary Hardware Development	C/CPAF	Various:Various	2.658	0.500	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Ship Suitability	WR	NSWC PC:WX	2.467	-		-		-		-	Continuing	Continuing	Continuing
GFE	C/CPAF	Various:Various	4.790	-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPAF	Various:WX	15.449	1.146	Nov 2011	1.100	Nov 2012	-		1.100	0.000	17.695	
Future Mines	C/CPAF	Various:Various	-	-	Nov 2011	-		-		-	0.000	0.000	
		Subtotal	138.165	2.299		4.144		-		4.144			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NSWC PC:WX	0.572	0.050	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
		Subtotal	0.572	0.050		0.100		-		0.100			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NSWC PC:WX	20.231	1.328	Nov 2011	3.591	Nov 2012	-		3.591	0.000	25.150	
		Subtotal	20.231	1.328		3.591		-		3.591	0.000	25.150	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*

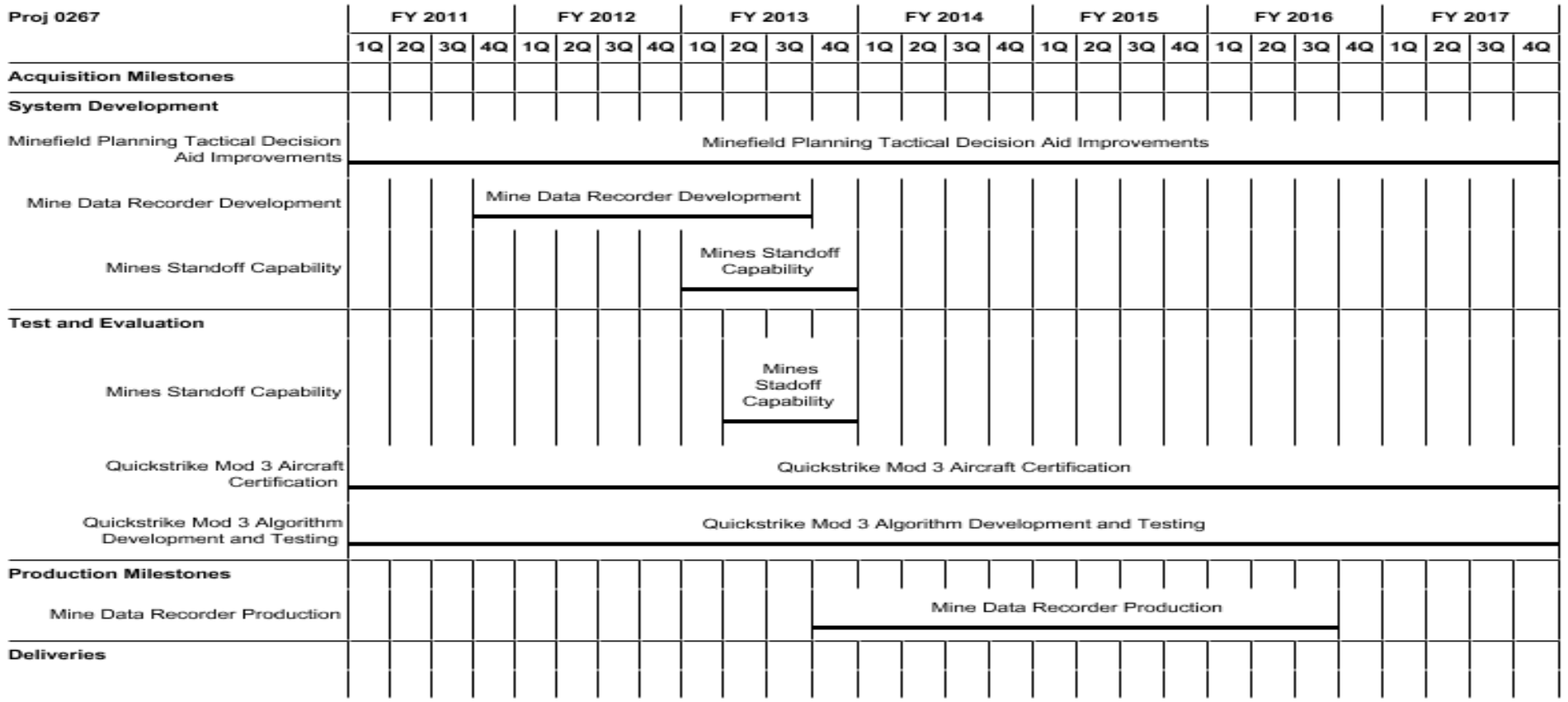
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Support	C/CPAF	Various:Various	35.831	0.240	Nov 2011	0.500	Nov 2012	-		0.500	0.000	36.571	
Program Management Support	C/CPAF	Various:Various	0.728	-	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Travel	Various	NAVSEA:PD	0.058	0.016	Nov 2011	-	Nov 2012	-		-	Continuing	Continuing	Continuing
DAWDF	Various	Various:Various	0.010	-	Nov 2011	-		-		-	0.000	0.010	
		Subtotal	36.627	0.256		0.500		-		0.500			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	195.595	3.933		8.335		-		8.335			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*



2013PB - 0604601N - 0267

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604601N: *Mine Development*	PROJECT 0267: *Mine Improvements*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0267				
System Development: Minefield Planning Tactical Decision Aid Improvements:	1	2011	4	2017
System Development: Mine Data Recorder Development:	4	2011	3	2013
System Development: Mines Standoff Capability:	1	2013	4	2013
Test and Evaluation: Mines Standoff Capability:	2	2013	4	2013
Test and Evaluation: Quickstrike Mod 3 Aircraft Certification:	1	2011	4	2017
Test and Evaluation: Quickstrike Mod 3 Algorithm Development and Testing:	1	2011	4	2017
Production Milestones: Mine Data Recorder Production:	4	2013	3	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	25.852	32.592	49.818	-	49.818	38.249	21.533	19.809	20.320	Continuing	Continuing
2234: *Lightweight Hybrid Torpedo*	25.852	32.592	49.818	-	49.818	38.249	21.533	19.809	20.320	Continuing	Continuing

A. Mission Description and Budget Item Justification

Lightweight Torpedo program designs, integrates and tests the Lightweight Torpedo (LWT, MK54). The LWT provides performance improvements in shallow water, counter-measure environments. The Engineering Development Model (EDM) contract was awarded to Raytheon Systems Company in June 1996. The EDM contract has delivered twenty-one EDM units to support the in-water test program. Initial Operating Capability (IOC) of the MK 54 Mod 0 achieved in 2004. IOC of the MK 54 equipped VLA was achieved in 2010.

Budget supports Pre-Planned Product Improvement (P3I) Program using an incremental developmental acquisition approach combining hardware and Advanced Processor Build (APB) software upgrades to enable rapid fielding of improvements to the Fleet. The P3I program will focus on common LWT and Heavyweight Torpedo (HWT) hardware and software architecture enhancements that will provide re-architecture, broadband array improvements, and Block Upgrade (BUG) and APB software improvements. Future APB software builds will utilize the common torpedo software to deliver software and tactics to both the MK 48 ADCAP and MK 54 Lightweight torpedoes. The P3I program will also support development of enhanced weapon delivery methods, including the high altitude launch of the MK 54 from Maritime Patrol Aircraft (MPA) with the High Altitude Anti-Submarine Warfare Weapon Capability (HAAWC).

FY 2011: Continue development of hardware/software improvements for P3I program. Continue development of MK54 high altitude launch capability from MPA.

A modification to the MK54 P3I program was directed by CNO to address a Fleet Urgent Operational Need (UON), which enables the early fielding of specific BUG capabilities. The development of these changes are being accomplished under the software program and are referred to as the Torpedo UON Rapid Fielding (TURF) effort. TURF development and testing, which will be accomplished through a Quick Reaction Assessment (QRA), will result in TURF fleet release in late FY11. A modification to the MK54 P3I program was directed to accomplish a technical feasibility demonstration of the MK 54 as an Anti-Torpedo (ATT). These efforts were initiated in FY11 and scheduled to conclude in FY12.

FY 2012: Continue development of hardware/software improvements for P3I program. Continue development of MK54 high altitude launch capability from MPA.
Complete demonstration of the MK 54 as an Anti-Torpedo (ATT).
Conduct Block Upgrade testing.
Complete TURF efforts.

FY 2013: Continue development of hardware/software improvements for P3I program. Continue development of MK 54 high altitude launch capability from MPA.
Achievement of Production Readiness Review (PRR) of hardware improvements (112 element array) on MK 54 Mod 0 in 2013.
Complete Block Upgrade testing; and field BUG.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	25.282	32.592	32.546	-	32.546
Current President's Budget	25.852	32.592	49.818	-	49.818
Total Adjustments	0.570	-	17.272	-	17.272
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	1.037	-			
• SBIR/STTR Transfer	-0.338	-			
• Program Adjustments	-	-	17.438	-	17.438
• Rate/Misc Adjustments	-	-	-0.166	-	-0.166
• Congressional General Reductions Adjustments	-0.129	-	-	-	-

Change Summary Explanation

Technical:

High Altitude ASW Weapon Capability to fund the AIR 4.2 cost estimate, fielding HAAWC in FY16. (+$8.0)

MK54 Increment 1 & 2 Fielding to Provide multi-band capability with 112-element array and algorithms developed as part of the ONR Lightweight Torpedo (LTT) Future Naval Capability (FNC). (+$9.9M)

Schedule:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2234: *Lightweight Hybrid Torpedo*	25.852	32.592	49.818	-	49.818	38.249	21.533	19.809	20.320	Continuing	Continuing
Quantity of RDT&E Articles	17	16	20	0	20	0	0	0	0		

A. Mission Description and Budget Item Justification

The program designs, integrates and tests the LWT, MK54. The LWT provides performance improvements in shallow water, counter-measure environments. The Engineering Development Model (EDM) contract was awarded to Raytheon Systems Company in June 1996. The EDM contract has delivered twenty-one EDM units to support the in-water test program. Initial Operating Capability (IOC) of the MK54 Mod 0 achieved in 2004. IOC of MK 54 equipped VLA MK 54 MOD 1 achieved in 2010.

FY 2011 delivery includes 17 POD units.
FY 2012 delivery includes 8 TI-1 POM units.
FY 2012 achievement of BUG/TURF IOC.
FY 2012 achievement of Anti-Torpedo Demo.
FY 2013 delivery includes 20 HAAWC POD units.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: MK54 Pre-Planned Product Improvement (incl.MK54 VLA Integr & HAAWC prog)	25.852	32.592	49.818
Articles:	17	16	20
FY 2011 Accomplishments:			
Continue development of hardware/software improvements for P3I program BUG and APB ($13.846M)			
Continue development of hardware/software for the new array ($5.267M)			
Continue development of MK 54 high altitude launch capability from MPA ($2.439M)			
Initiate demonstration of the MK 54 as an Anti-Torpedo Torpedo (ATT) ($4.300M)			
APB 5 and new array will be developed concurrently. BUG and APB improvements include UON execution.			
FY 2012 Plans:			
Continue development of hardware/software improvements for P3I program and BUG/CAT and APB ($3.228M)			
Continue development of hardware/software for the new array ($3.237M)			
Continue development of MK 54 high altitude launch capability from MPA ($26.127M)			
Complete demonstration of the MK 54 as an Anti-Torpedo (ATT).			
FY 2013 Plans:			
Continue development of hardware/software improvements for P3I program and APB ($9.286M)			
Continue development of hardware/software for the new array ($8.044M)			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue development of MK 54 high altitude launch capability from MPA ($32.488M)			
Accomplishments/Planned Programs Subtotals	25.852	32.592	49.818

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN/3215: *MK54 Torpedo Mods*	41.921	76.605	74.487	0.000	74.487	126.710	141.494	198.227	201.852	Continuing	Continuing

D. Acquisition Strategy

The EDM contract is held by Raytheon Systems Company. The contract was awarded as a Cost-Plus-Award Fee in June 1996 and was converted to Cost-Plus-Incentive Fee in December 1998. Sole Source Production Contract awarded in FY 2004 for MK48 ADCAP MODS/CBASS and MK54 Lightweight Torpedoes. P3I spiral acquisition strategy is to award EDM contracts among qualified producers.

E. Performance Metrics

Milestone Reviews.
System Engineering Technical Review.
Earned Value Management Reviews.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware Development	WR	NUWC:Newport/ Keyport	37.948	11.210	Oct 2011	11.618	Oct 2012	-		11.618	Continuing	Continuing	Continuing
Hardware Development	C/CPAF	Raytheon:Not Specified	3.530	-		-		-		-	0.000	3.530	
Hardware Development	WR	NSWC:Indian Head, MD	0.882	0.200	Oct 2011	0.200	Oct 2012	-		0.200	Continuing	Continuing	Continuing
Systems Engineering	WR	NUWC:Newport/ Keyport	18.489	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering	SS/FP	Lockheed Martin - VLA:Akron, OH	2.501	-		-		-		-	0.000	2.501	
Systems Engineering	WR	PEO-IWS 3,:Dahlgren, VA	2.882	-		-		-		-	0.000	2.882	
Systems Engineering	WR	PEO-IWS 5,:Dahlgren, VA	2.223	-		-		-		-	0.000	2.223	
Systems Engineering	WR	NSWC PMA 290:Paxtuxent, MD	5.167	2.500	Oct 2011	2.500	Oct 2012	-		2.500	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCWD:China Lake	1.173	-		-		-		-	0.000	1.173	
Systems Engineering	SS/FP	SPA Inc.:Not Specified	0.640	-		-		-		-	0.000	0.640	
Hardware Development	SS/FP	Progeny Systems:Not Specified	24.394	-		-		-		-	0.000	24.394	
Hardware Development	C/CPAF	TBD for HAAWC:Not Specified	22.278	15.524	Oct 2011	23.941	Feb 2013	-		23.941	Continuing	Continuing	Continuing
Software Development	WR	NUWC:Newport/ Keyport	18.313	1.669	Oct 2011	5.943	Oct 2012	-		5.943	Continuing	Continuing	Continuing
Systems Engineering	WR	Naval Operational Logistics Support Center (NOLSC):Not Specified	0.025	-		0.309	Mar 2013	-		0.309	0.000	0.334	
Systems Enginnering	C/CPFF	John Hopkins University:Baltimore, MD	0.050	-		-		-		-	0.000	0.050	
Software Development	C/CPFF	MIT:Boston, MA	-	0.300	Oct 2011	-		-		-	0.000	0.300	
		Subtotal	140.495	31.403		44.511		-		44.511			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test and Evaluation	WR	NUWC:Newport/ Keyport	20.847	-	Oct 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	20.847	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	WR	NSWC:NSWC Carderock	0.090	-		-		-		-	0.000	0.090	
System Test and Evaluation	WR	OPTEVFOR:Not Specified	1.272	0.043	Oct 2011	1.000	Oct 2012	-		1.000	Continuing	Continuing	Continuing
System Test and Evaluation	WR	NUWC:Newport/ Keyport	13.832	0.400	Oct 2011	3.583	Oct 2012	-		3.583	Continuing	Continuing	Continuing
		Subtotal	15.194	0.443		4.583		-		4.583			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	Alion Science:Not Specified	1.905	0.462	Dec 2011	0.462	Feb 2013	-		0.462	Continuing	Continuing	Continuing
Travel	WR	NAVSEA:Not Specified	0.308	0.058	Nov 2011	0.058	Feb 2013	-		0.058	Continuing	Continuing	Continuing
Acquisition Workforce Fund	Various	Various:Various	0.226	-		-		-		-	0.000	0.226	
Program Management Support	Various	ARL/PSU:Philadephia, PA	-	0.161	Jan 2012	0.166	Feb 2013	-		0.166	0.000	0.327	
Program Management Support	Various	NAVSEA:Not Specified	0.093	0.065	Oct 2011	0.038	Oct 2012	-		0.038	0.000	0.196	
		Subtotal	2.532	0.746		0.724		-		0.724			

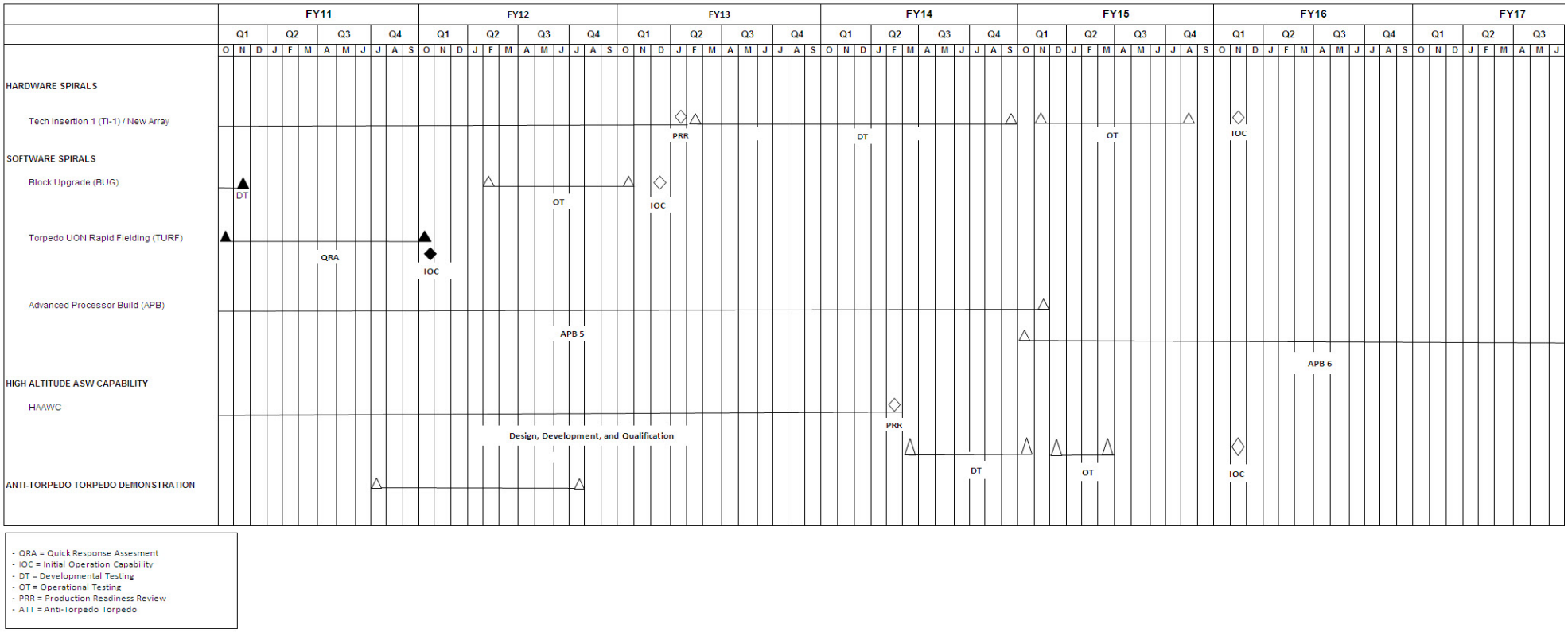
Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	179.068	32.592		49.818		-		49.818			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604610N: *Lightweight Torpedo Development*	**PROJECT** 2234: *Lightweight Hybrid Torpedo*

Exhibit R-3, RDT&E Project Cost Analysis: BES 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY *1319: Research, Development, Test & Evaluation, Navy* *BA 05: Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** *PE 0604610N: Lightweight Torpedo Development*	**PROJECT** *2234: Lightweight Hybrid Torpedo*



- QRA = Quick Response Assesment
- IOC = Initial Operation Capability
- DT = Developmental Testing
- OT = Operational Testing
- PRR = Production Readiness Review
- ATT = Anti-Torpedo Torpedo

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604610N: *Lightweight Torpedo Development*	PROJECT 2234: *Lightweight Hybrid Torpedo*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 2234				
Tech Insertion 1 (TI-1) /New Array Production Readiness Review (PRR):	2	2013	2	2013
Tech Insertion 1 (TI-1)/New Array Developmental Testing (DT):	2	2013	4	2014
Tech Insertion 1 (TI-1) /New Array OT:	1	2015	4	2015
Tech Insertion 1 (TI-1) /New Array IOC:	1	2016	1	2016
Software Spirals BUG/CAT DT:	1	2011	1	2011
Software Spirals BUG/CAT OT:	2	2012	1	2013
Software Spirals BUG/CAT OT: Software Spirals BUG/CAT IOC: Schedule Detail	1	2013	1	2013
Software Spirals BUG/CAT OT: Torpedo UON Rapid Fielding (TURF): Schedule Detail	1	2011	1	2012
Software Spirals BUG/CAT OT: Torpedo UON Rapid Fielding IOC:	1	2012	1	2012
Software Spirals BUG/CAT OT: Anti-Torpedo Torpedo (ATT) Demonstration: Schedule Detail	4	2011	4	2012
Software Spirals BUG/CAT OT: APB 5:	1	2011	1	2015
Software Spirals BUG/CAT OT: APB 6:	1	2015	4	2017
Software Spirals BUG/CAT OT: HAAWC Design/Development/Qualification:	1	2011	2	2014
Software Spirals BUG/CAT OT: HAAWC Production Readiness Review (PRR):	2	2014	2	2014
Software Spirals BUG/CAT OT: HAAWC DT:	2	2014	1	2015
Software Spirals BUG/CAT OT: HAAWC OT:	1	2015	2	2015
Software Spirals BUG/CAT OT: HAAWC IOC:	1	2016	1	2016

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	10.418	13.460	10.099	-	10.099	10.128	10.292	10.426	10.632	Continuing	Continuing
1829: *Expl Ord Disp Proc*	10.418	13.460	10.099	-	10.099	10.128	10.292	10.426	10.632	Continuing	Continuing

A. Mission Description and Budget Item Justification

DOD Directive 5160.62 assigned to the Secretary of the Navy (SECNAV) the responsibility of Single Manager for Explosive Ordnance Disposal (EOD) Technology and Training (T&T). It also assigns to the Executive Manager for EODT&T the responsibility to provide for technical development, validation, preparation, Joint Service approval, and distribution of all EOD procedures texts, graphic aids, manuals, and bulletins. This program provides for the development of validated EOD render-safe procedures (RSPs), key identification features, and safety information used by EOD personnel in all four military services when performing their mission of rendering safe and disposing of both domestic and foreign explosive ordnance and Improvised Explosive Devices (IEDs) that pose a threat to military operations, installations, personnel, and materials. In addition, EOD render-safe procedures for foreign ordnance must be developed as soon as possible after gaining knowledge of its existence. This effort requires exploitation and analysis of the foreign ordnance prior to development of the procedures. The program also provides for the development and evaluation of prototypical EOD Tier Two solutions sets for threats Identified in the National Response Framework. This effort also provides resources necessary for the Foreign Threat Mine Acquisition/Exploitation (FTMA/E) program. This effort includes acquisition, inert certification, intelligence and operational exploitation, analysis, procedure development, and disposition of the highest priority foreign threat naval mines.

This program is a non-acquisition program (without traditional acquisition milestones) with on-going, continuous delivery of urgent and periodic documented procedures and identification guides.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	10.489	9.960	10.216	-	10.216
Current President's Budget	10.418	13.460	10.099	-	10.099
Total Adjustments	-0.071	3.500	-0.117	-	-0.117
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.018	-			
• Program Adjustments	-	3.500	-	-	-
• Rate/Misc Adjustments	-	-	-0.117	-	-0.117
• Congressional General Reductions Adjustments	-0.053	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*	PROJECT 1829: *Expl Ord Disp Proc*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1829: *Expl Ord Disp Proc*	10.418	13.460	10.099	-	10.099	10.128	10.292	10.426	10.632	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

DOD Directive 5160.62 assigned to the Secretary of the Navy (SECNAV) the responsibility of Single Manager for Explosive Ordnance Disposal (EOD) Technology and Training (T&T). It also assigns to the Executive Manager for EODT&T the responsibility to provide for technical development, validation, preparation, Joint Service approval, and distribution of all EOD procedures texts, graphic aids, manuals, and bulletins. This program provides for the development of validated EOD render-safe procedures (RSPs), key identification features, and safety information used by EOD personnel in all four military services when performing their mission of rendering safe and disposing of both domestic and foreign explosive ordnance and Improvised Explosive Devices (IEDs) that pose a threat to military operations, installations, personnel, and materials. In addition, EOD render-safe procedures for foreign ordnance must be developed as soon as possible after gaining knowledge of its existence. This effort requires exploitation and analysis of the foreign ordnance prior to development of the procedures. The program also provides for the development and evaluation of prototypical EOD Tier Two solutions sets for threats Identified in the National Response Framework. This effort also provides resources necessary for the Foreign Threat Mine Acquisition/Exploitation (FTMA/E) program. This effort includes acquisition, inert certification, intelligence and operational exploitation, analysis, procedure development, and disposition of the highest priority foreign threat naval mines.

This program is a non-acquisition program (without traditional acquisition milestones) with on-going, continuous delivery of urgent and periodic documented procedures and identification guides.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Render-Safe Procedures (RSP) Development	3.955	4.189	4.239
Articles:	0	0	0
FY 2011 Accomplishments: Exploited and analyzed high priority foreign threat ordnance items, and developed render-safe procedures for new domestic and foreign ordnance for the EOD community.			
FY 2012 Plans: Analyze and exploit foreign ordnance items resulting in the development of render-safe procedures for use by the EOD Community.			
FY 2013 Plans: Analyze and exploit foreign ordnance items and develop render-safe procedures for new ordnance domestic and foreign.			
Title: Improvised Nuclear Device (IND) Countermeasures	3.380	3.069	3.093
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*	PROJECT 1829: *Expl Ord Disp Proc*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Developed information, procedures, and prototypical tools for specialized EOD response elements in advance of the evolving IND and WMD threat. ***FY 2012 Plans:*** Develop specialized procedures for EOD response elements to stay ahead of the response to IND and WMD threats. ***FY 2013 Plans:*** Develop procedures and information for EOD responders to IND and WMD incidents and maintain technologies to stay ahead of the evolving IND and WMD threats.			
Title: Foreign Mine Acquisition ***Articles:*** ***FY 2011 Accomplishments:*** Acquired additional high priority foreign threat naval mines for the purpose of the exploitation and the development of procedures to counter these foreign mines. ***FY 2012 Plans:*** Acquire high priority foreign mines for exploitation and analyses leading to development of procedures to counter these threats. ***FY 2013 Plans:*** Acquire and analyze foreign mines of the highest priority for exploitation and development of countermeasures procedures.	3.083 0	2.702 0	2.767 0
Title: Joint Service EOD Speical Missions OCO ***Articles:*** ***FY 2012 Plans:*** OCO: Joint Service EOD Special Mission Support - Platoons supporting SOF/NAVSOF have unique mission requirements per CONPLAN 0300. There are unique tools for these forces that need to be developed and/or modified from COTS to provide agile counter WMD and counter proliferation capability when supporting COCOM contingency. These forces are deployed in direct support of SOF/NAVSOF in AF/IZ and must have this expanded capability if directed by COCOM. All technology will be developed and operationally tested within 12 months.	- 	3.500 0	-
Accomplishments/Planned Programs Subtotals	10.418	13.460	10.099

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*	PROJECT 1829: *Expl Ord Disp Proc*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

This is a non-acquisition program.

E. Performance Metrics

Analyzed and exploited foreign and domestic ordnance resulting in the development of 140 validated render-safe procedures and the development of 1,554 procedures providing ordnance key identification features, safety information and other technical details for the Joint Service EOD community. Also developed and validated 299 IED / WMD countermeasures procedures.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604654N: *JT Service EOD*	PROJECT 1829: *Expl Ord Disp Proc*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Foreign Mine Acquisition	WR	NSWCPC:PANAMA CITY, FL	-	2.485	Oct 2011	2.752	Oct 2012	-		2.752	Continuing	Continuing	Continuing
Special Mission OCO	WR	EODTD:Indian Head, MD	-	3.500	Oct 2011	-		-		-	0.000	3.500	
RSP Development	WR	EODTD:Indian Head, MD	171.978	3.830	Oct 2011	3.714	Oct 2012	-		3.714	Continuing	Continuing	Continuing
IND Countermeasures	WR	EODTD:Indian Head, MD	40.092	2.730	Oct 2011	2.806	Oct 2012	-		2.806	Continuing	Continuing	Continuing
Foreign Mine Acquisition	WR	ONI:Suitland, MD	23.355	0.015	Oct 2011	0.015	Oct 2012	-		0.015	Continuing	Continuing	Continuing
Program Management Personnel	WR	EODTD:Indian Head, MD	3.455	0.250	Oct 2011	0.250	Oct 2012	-		0.250	Continuing	Continuing	Continuing
Miscellaneous	WR	EODTD:Indian Head, MD	15.602	0.650	Oct 2011	0.562	Oct 2012	-		0.562	Continuing	Continuing	Continuing
		Subtotal	254.482	13.460		10.099		-		10.099			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	254.482	13.460		10.099		-		10.099			

Remarks

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	10.098	12.992	7.348	-	7.348	7.514	7.669	7.793	7.926	Continuing	Continuing
1822: *Manpower Pers & Human Fact System*	10.098	12.992	7.348	-	7.348	7.514	7.669	7.793	7.926	Continuing	Continuing

A. Mission Description and Budget Item Justification

This non-acquisition category program provides funds for continued (but less risky) R&D for broader application of advanced technologies to transition successful research proof-of-concept demonstrations into operational use. Development of prototype systems to support and/or improve operational requirements of manpower and personnel sponsors is the primary goal of this Engineering Development Program. The R&D Program features the use of a broad range of technologies from cognitive science, human systems integration, learning management, content management & delivery, learning and ability testing techniques, mathematical modeling and optimization, statistical and econometric forecasting, intelligent systems, data visualization, data mining, simulation, decision support systems, and new services oriented architectures to include applications, databases and communications configuration. This non-acquisition category program provides funds for continued R&D for broader application of advanced training technologies and the science of learning to transition successful research proof of concept demonstrations and rapid prototyping of Commercial off the Shelf/Government off the Shelf (COTS/GOTS) technologies into operational use.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	10.759	12.992	8.758	-	8.758
Current President's Budget	10.098	12.992	7.348	-	7.348
Total Adjustments	-0.661	-	-1.410	-	-1.410
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.233	-			
• SBIR/STTR Transfer	-0.360	-			
• Program Adjustments	-	-	-1.410	-	-1.410
• Rate/Misc Adjustments	-	-	-	-	-
• Congressional General Reductions Adjustments	-0.068	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604703N: *Personnel, Trng, Sim, & Human Factors*

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1822: *Manpower Pers & Human Fact System*	10.098	12.992	7.348	-	7.348	7.514	7.669	7.793	7.926	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

L1822/Manpower, Personnel, Training, Sim, and Human Factors. This non-acquisition category program provides funds for continued R&D for broader application of advanced technologies to transition successful 6.3 research proof-of-concept demonstrations into operational use. Development of prototype systems to support and/or improve operational requirements of manpower and personnel sponsors is the primary goal of this Engineering Development Program. The 6.5 R&D Program features the use of a broad range of technologies from cognitive science and ability testing techniques, mathematical modeling and optimization, statistical and econometric forecasting, intelligent systems, data visualization, data mining, simulation, decision support systems, and new database and communications configuration.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Manpower Pers & Human Fact System	10.098	12.992	7.348
Articles:	11	9	6

Description: This program is funded under RDT&E operational systems development because it encompasses engineering and development of new end-items prior to production approval decision and the upgrading and enhancement of existing MPTE decision support systems, tools and models.

FY 2011 Accomplishments:
- Continued transitioning of Future Naval Warfighter Capabilities (FNWC) Capable Manpower products.
- Continued transitioning of Integrated System for Language Education and Training (ISLET).
- Completed transitioning of Virtual Environment for Ship and Shore Experiential Learning (VESSEL).
- Continued Training and Supply Chain Management Decision Support Systems integration and transition.
- Continued Improved Manpower and Personnel Integration Tool.
- Continued transition of Future Naval Warfighter Capabilities (FNWC) Capable Manpower (CM) Refresh of early prototypes.
- Continued development of Training Capacity Tradeoff Model.
- Continued enhancement of products delivered via World Class Modeling.
- Continued transitioning of DARPA Digital Tutor to Center for Information Dominance for IT Training.
- Transitioned RIDE/JOIN into PRIDE MOD.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Small Business Innovative Research (SBIR). ***FY 2012 Plans:*** - Complete transitioning of Future Naval Warfighter Capabilities (FNWC) Capable Manpower products. - Complete transition of Integrated System for Language Education and Training (ISLET). - Continue Training and Supply Chain Management Decision Support Systems integration and transition. - Continue Improved Manpower and Personnel Integration Tool. - Continue transition of Future Naval Warfighter Capabilities (FNWC) Capable Manpower (CM) Refresh of early prototypes. - Continue development of Training Capacity Tradeoff Model. - Continue enhancement of products delivered via World Class Modeling. - Complete transition of DARPA Digital Tutor to Center for Information Dominance for IT Training. - Start GFMDI implementation. - Small Business Innovative Research (SBIR). ***FY 2013 Plans:*** - Continue Training and Supply Chain Management Decision Support Systems integration and transition. - Continue Improved Manpower and Personnel Integration Tool. - Continue transition of Future Naval Warfighter Capabilities (FNWC) Capable Manpower (CM) Refresh of early prototypes. - Continue development of Training Capacity Tradeoff Model. - Continue enhancement of products delivered via World Class Modeling. - Small Business Innovative Research (SBIR).			
Accomplishments/Planned Programs Subtotals	10.098	12.992	7.348

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

This PE provides funding to support the transition of models and decision support tools from RDT&E funded research, Science and Technology (6.2-6.3), to production and into the hands of analysts and program managers throughout the Manpower, Personnel, Training and Education enterprise. The PE also supports the application of proven industry models, tools and methodologies to Navy MPTE problems where GOTS solutions are non-existent. One goal of this PE is to transition 90% of successful S&T products to production and eventual use within the Navy. An acceptable metric will be to successfully transition 80% of the products. The second goal of the PE is to successfully implement 90% of the industry-standard tools that are attempted to be used in Navy applications.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/IDIQ	Acuitus:Palo Alto, CA	4.800	-	Mar 2012	-		-		-	0.000	4.800	
		Subtotal	4.800	-		-		-		-	0.000	4.800	

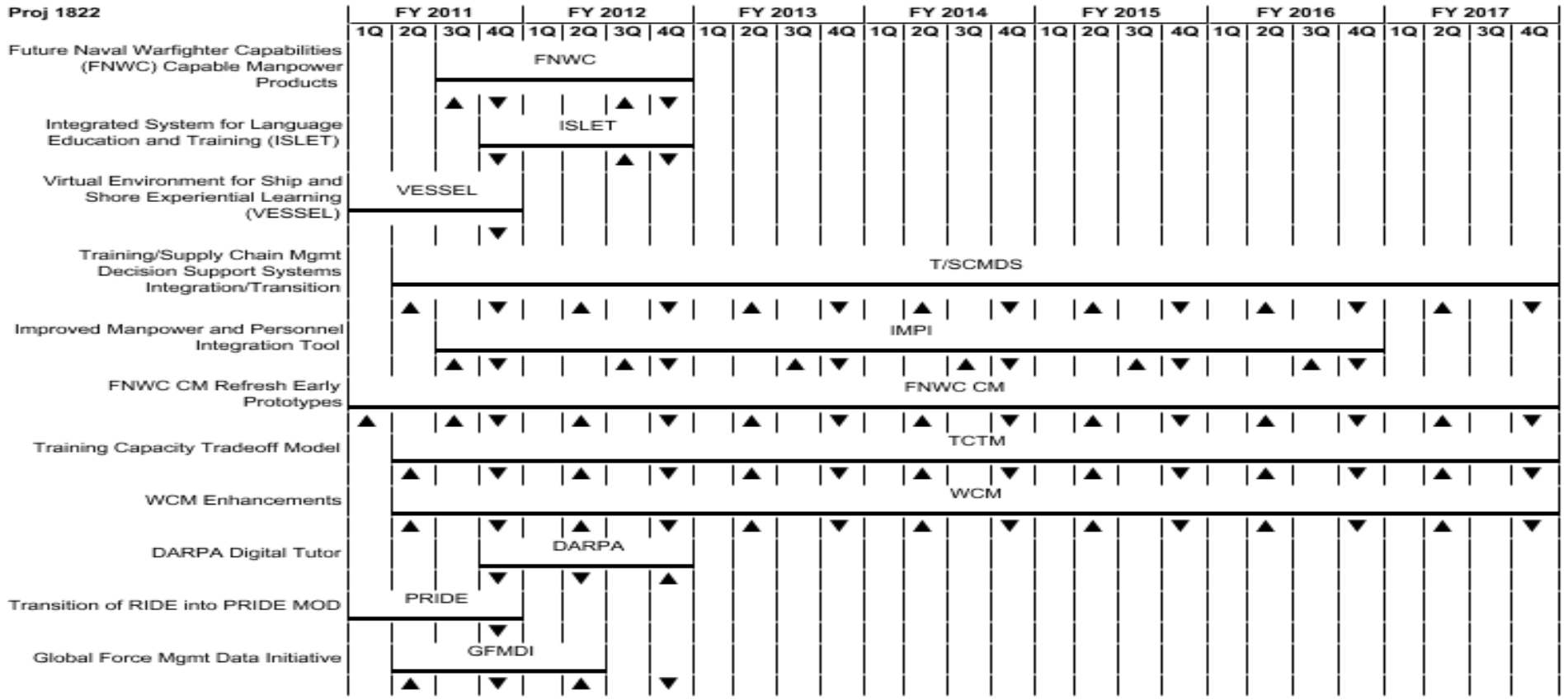
Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Allot	NPRST:Millington, TN	2.200	1.650	Mar 2012	1.650	Mar 2013	-		1.650	Continuing	Continuing	Continuing
Development Support	Allot	CNP:Washington, DC	3.098	9.932	Mar 2012	5.698	Mar 2013	-		5.698	Continuing	Continuing	Continuing
Development Support	Allot	PMW-240:Various	-	1.410	Mar 2012	-		-		-	0.000	1.410	
		Subtotal	5.298	12.992		7.348		-		7.348			

	Total Prior Years Cost	FY 2012 Cost	FY 2012	FY 2013 Base Cost	FY 2013 Base	FY 2013 OCO Cost	FY 2013 OCO	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	10.098	12.992		7.348		-		7.348			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*



2013PB - 0604703N - 1822 Up=Demonstration; Down=Prototype & Documenation

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	**PROJECT** 1822: *Manpower Pers & Human Fact System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 1822				
Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products: Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products	3	2011	4	2012
Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products: FNWC 1	3	2011	3	2011
Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products: FNWC 2	4	2011	4	2011
Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products: FNWC 3	3	2012	3	2012
Future Naval Warfighter Capabilities (FNWC) Capable Manpower Products: FNWC4	4	2012	4	2012
Integrated System for Language Education and Training (ISLET): Integrated System for Language Education and Training (ISLET)	4	2011	4	2012
Integrated System for Language Education and Training (ISLET): ISLET 1	4	2011	4	2011
Integrated System for Language Education and Training (ISLET): ISLET 2	3	2012	3	2012
Integrated System for Language Education and Training (ISLET): ISLET 3	4	2012	4	2012
Virtual Environment for Ship and Shore Experiential Learning (VESSEL): Virtual Environment for Ship and Shore Experiential Learning (VESSEL)	1	2011	4	2011
Virtual Environment for Ship and Shore Experiential Learning (VESSEL): VESSEL	4	2011	4	2011
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: Training/Supply Chain Mgmt Decision Support Systems Integration/Transition	2	2011	4	2017
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/SCMDS I	2	2011	2	2011
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/SCMDS 2	4	2011	4	2011
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/SCMDS 3	2	2012	2	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	**PROJECT** 1822: *Manpower Pers & Human Fact System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 4	4	2012	4	2012
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 5	2	2013	2	2013
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 6	4	2013	4	2013
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 7	2	2014	2	2014
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 8	4	2014	4	2014
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 9	2	2015	2	2015
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS 10	4	2015	4	2015
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS I1	2	2016	2	2016
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS I2	4	2016	4	2016
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS I3	2	2017	2	2017
Training/Supply Chain Mgmt Decision Support Systems Integration/Transition: T/ SCMDS I4	4	2017	4	2017
Improved Manpower and Personnel Integration Tool: Improved Manpower and Personnel Integration Tool	3	2011	4	2016
Improved Manpower and Personnel Integration Tool: IMPI 1	3	2011	3	2011
Improved Manpower and Personnel Integration Tool: IMPI 2	4	2011	4	2011
Improved Manpower and Personnel Integration Tool: IMPI 3	3	2012	3	2012
Improved Manpower and Personnel Integration Tool: IMPI 4	4	2012	4	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Improved Manpower and Personnel Integration Tool: IMPI 5	3	2013	3	2013
Improved Manpower and Personnel Integration Tool: IMPI 6	4	2013	4	2013
Improved Manpower and Personnel Integration Tool: IMPI 7	3	2014	3	2014
Improved Manpower and Personnel Integration Tool: IMPI 8	4	2014	4	2014
Improved Manpower and Personnel Integration Tool: IMPI 9	3	2015	3	2015
Improved Manpower and Personnel Integration Tool: IMPI 10	4	2015	4	2015
Improved Manpower and Personnel Integration Tool: IMPI 11	3	2016	3	2016
Improved Manpower and Personnel Integration Tool: IMPI 12	4	2016	4	2016
FNWC CM Refresh Early Prototypes: FNWC CM Refresh Early Prototypes	1	2011	4	2017
FNWC CM Refresh Early Prototypes: FNWC CM 1	1	2011	1	2011
FNWC CM Refresh Early Prototypes: FNWC CM 2	3	2011	3	2011
FNWC CM Refresh Early Prototypes: FNWC CM 3	4	2011	4	2011
FNWC CM Refresh Early Prototypes: FNWC CM 4	2	2012	2	2012
FNWC CM Refresh Early Prototypes: FNWC CM 5	4	2012	4	2012
FNWC CM Refresh Early Prototypes: FNWC CM 6	2	2013	2	2013
FNWC CM Refresh Early Prototypes: FNWC CM 7	4	2013	4	2013
FNWC CM Refresh Early Prototypes: FNWC CM 8	2	2014	2	2014
FNWC CM Refresh Early Prototypes: FNWC CM 9	4	2014	4	2014
FNWC CM Refresh Early Prototypes: FNWC CM 10	2	2015	2	2015
FNWC CM Refresh Early Prototypes: FNWC CM 11	4	2015	4	2015
FNWC CM Refresh Early Prototypes: FNWC CM 12	2	2016	2	2016
FNWC CM Refresh Early Prototypes: FNWC CM 13	4	2016	4	2016
FNWC CM Refresh Early Prototypes: FNWC CM 14	2	2017	2	2017
FNWC CM Refresh Early Prototypes: FNWC CM 15	4	2017	4	2017
Training Capacity Tradeoff Model: Training Capacity Tradeoff Model	2	2011	4	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	PROJECT 1822: *Manpower Pers & Human Fact System*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Training Capacity Tradeoff Model: TCTM 1	2	2011	2	2011
Training Capacity Tradeoff Model: TCTM 2	4	2011	4	2011
Training Capacity Tradeoff Model: TCTM 3	2	2012	2	2012
Training Capacity Tradeoff Model: TCTM 4	4	2012	4	2012
Training Capacity Tradeoff Model: TCTM 6	2	2013	2	2013
Training Capacity Tradeoff Model: TCTM 7	4	2013	4	2013
Training Capacity Tradeoff Model: TCTM 8	2	2014	2	2014
Training Capacity Tradeoff Model: TCTM 9	4	2014	4	2014
Training Capacity Tradeoff Model: TCTM 10	2	2015	2	2015
Training Capacity Tradeoff Model: TCTM 11	4	2015	4	2015
Training Capacity Tradeoff Model: TCTM 12	2	2016	2	2016
Training Capacity Tradeoff Model: TCTM 13	4	2016	4	2016
Training Capacity Tradeoff Model: TCTM 14	2	2017	2	2017
Training Capacity Tradeoff Model: TCTM 15	4	2017	4	2017
WCM Enhancements: WCM Enhancements	2	2011	4	2017
WCM Enhancements: WCM 1	2	2011	2	2011
WCM Enhancements: WCM 2	4	2011	4	2011
WCM Enhancements: WCM 3	2	2012	2	2012
WCM Enhancements: WCM 4	4	2012	4	2012
WCM Enhancements: WCM 5	2	2013	2	2013
WCM Enhancements: WCM 6	4	2013	4	2013
WCM Enhancements: WCM 7	2	2014	2	2014
WCM Enhancements: WCM 8	4	2014	4	2014
WCM Enhancements: WCM9	2	2015	2	2015
WCM Enhancements: WCM 10	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604703N: *Personnel, Trng, Sim, & Human Factors*	**PROJECT** 1822: *Manpower Pers & Human Fact System*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
WCM Enhancements: WCM 11	2	2016	2	2016
WCM Enhancements: WCM 12	4	2016	4	2016
WCM Enhancements: WCM 13	2	2017	2	2017
WCM Enhancements: WCM 14	4	2017	4	2017
DARPA Digital Tutor: DARPA Digital Tutor	4	2011	4	2012
DARPA Digital Tutor: DARPA 1	4	2011	4	2011
DARPA Digital Tutor: DARPA 2	2	2012	2	2012
DARPA Digital Tutor: DARPA 3	4	2012	4	2012
Transition of RIDE into PRIDE MOD: Transition of RIDE into PRIDE MOD	1	2011	4	2011
Transition of RIDE into PRIDE MOD: PRIDE	4	2011	4	2011
Global Force Mgmt Data Initiative: Global Force Mgmt Data Initiative	2	2011	2	2012
Global Force Mgmt Data Initiative: GFMDI 1	2	2011	2	2011
Global Force Mgmt Data Initiative: GFMDI 2	4	2011	4	2011
Global Force Mgmt Data Initiative: GFMDI 3	2	2012	2	2012
Global Force Mgmt Data Initiative: GFMDI 4	4	2012	4	2012

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	12.503	7.506	5.518	-	5.518	0.444	0.426	0.428	0.451	3.000	30.276
2068: *Joint Standoff Weapon (JSOW)*	12.503	7.506	5.518	-	5.518	0.444	0.426	0.428	0.451	3.000	30.276

A. Mission Description and Budget Item Justification

The Joint Standoff Weapon (JSOW) is an air-to-ground weapon designed to attack a variety of targets during day, night and adverse weather conditions. JSOW will enhance aircraft survivability as compared to current interdiction weapon systems by providing the capability for launch aircraft to standoff outside the range of most target area surface-to-air threat systems. The JSOW launch-and-leave capability will allow several target kills per aircraft sortie. The JSOW program first developed a baseline weapon for use against fixed area targets. JSOW is a Navy-led joint Navy/Air Force program.

The JSOW Baseline (AGM-154A) variant includes a kinematically efficient airframe, an integrated Inertial/Global Positioning System navigation capability, and a BLU-97/B or BLU-111 payload. This weapon was designed up front for pre-planned product improvements. Procurement of JSOW-A in the FYDP is deferred pending a fix to the Unexploded Ordnance issue or a change in the inventory levels. The JSOW BLU-108 (AGM-154B) variant incorporates the Sensor Fuze Weapon submunition (BLU-108) into the baseline vehicle. Planned production of the JSOW/BLU-108 is deferred pending a change in the threat. The JSOW Unitary (AGM-154C) variant has a terminal seeker, Autonomous Target Acquisition capability, and a Broach lethal package to enable the attack of blast/fragmentation and penetration type targets. The JSOW Unitary provides increased accuracy and lethality and the capability for aimpoint selection. Operational Testing of the JSOW-C was successfully completed in December 2004. Approval for Milestone-III/Full Rate Production was granted on 20 December 2004. JSOW-C Initial Operational Capability was achieved in February 2005.

FY 2011-2013 includes funding for development, integration, qualification and follow-on developmental and operational test and evaluation of a Network Enabled Weapon moving maritime target capability into the JSOW Unitary weapon (AGM-154C-1). The moving maritime target capability is currently being integrated as an Engineering Change Proposal beginning with FY 2009 procured JSOW-C weapons. The new AGM-154C-1 capability will enable the weapon to be integrated with the network and attack sea moving maritime targets via real-time pre-and post-launch targeting updates. JSOW will continue to conduct analysis and development of solutions to system integration challenges, and continual enhancement of warfighter effectiveness in the employment of the JSOW weapon system. In addition, FY 2011-2013 includes funding to integrate new functionality of the Common Unique Planning Component into the Joint Mission Planning Systems and Precision Guided Munitions Planning System.

JSOW utilizes a "common truck" for both AGM-154A and AGM-154C variants. Through adherence to international standards for weapons interfaces, weight, and dimension considerations, JSOW is compatible with Air Force and NATO aircraft.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	12.567	7.506	0.498	-	0.498
Current President's Budget	12.503	7.506	5.518	-	5.518
Total Adjustments	-0.064	-	5.020	-	5.020
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	4.996	-	4.996
• Rate/Misc Adjustments	-	-	0.024	-	0.024
• Congressional General Reductions Adjustments	-0.064	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule:

(1) JSOW FRP-6 deliveries changed from starting 4Q FY 2011 to 1Q FY 2011 due to change in delivery schedule of GFE materials to prime contractor.

(2) JSOW FRP-7 deliveries changed from starting 3Q FY 2012 to 4Q FY 2012 due to change in delivery schedule of GFE materials to prime contractor.

(3) JSOW FRP-8 deliveries changed from starting 3Q FY 2013 to 4Q FY 2013 due to change in delivery schedule of GFE materials to prime contractor.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*	PROJECT 2068: *Joint Standoff Weapon (JSOW)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2068: *Joint Standoff Weapon (JSOW)*	12.503	7.506	5.518	-	5.518	0.444	0.426	0.428	0.451	3.000	30.276
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Includes RDT&E funds for the development of a weapon to be employed by aircraft to attack targets during day, night, and adverse weather conditions. The Joint Standoff Weapon System (JSOW) design will capitalize on aircraft sensor capabilities and minimize individual weapon sophistication, reducing unit cost and provides a significant increase in strike warfare capability. Excludes civilian and military manpower and their related costs and military construction costs which are included in appropriate management and support elements in this program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Network Enabled Weapon (NEW)	12.328	7.337	5.420
Articles:	0	0	0
Description: Develop and integrate the NEW moving maritime target capability into JSOW-C, termed AGM-154C-1.			
FY 2011 Accomplishments: Continued weapon qualification and follow-on Developmental/Operational Test (DT/OT) efforts.			
FY 2012 Plans: Includes funding to continue weapon qualification and follow-on DT/OT efforts.			
FY 2013 Plans: Includes funding to complete weapon qualification and follow-on Operational Test efforts.			
Title: JSOW Common Unique Planning Component (CUPC)	0.175	0.169	0.098
Articles:	0	0	0
Description: Plan new functions into the JSOW maritime CUPC and develop new software releases. Address new mission planning functionality related to the incorporation of the NEW moving target capability into the JSOW-C-1 weapons.			
FY 2011 Accomplishments: Began interoperability efforts for JSOW C-1.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*	PROJECT 2068: *Joint Standoff Weapon (JSOW)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue interoperability efforts for JSOW C-1. ***FY 2013 Plans:*** Continue interoperability efforts for JSOW C-1.			
Accomplishments/Planned Programs Subtotals	12.503	7.506	5.518

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• USN WP,N BLI 223000: *JSOW*	128.946	131.722	127.609	0.000	127.609	150.439	169.781	172.185	175.188	1,229.756	3,938.276

D. Acquisition Strategy

The contracting strategy for JSOW is planned to be sole source for the life of the program. Cost type contracts are utilized for the Engineering and Manufacturing Development and follow-on modification program (i.e., Block II (AGM-154C), AGM-154C-1) efforts. Component breakout is used, when possible, to promote full and open competition.

Fixed price type contracts are utilized for production.

E. Performance Metrics

The JSOW C-1 program is meeting the cost schedule, performance, funding and life cycle sustainment in accordance with the Acquisition Program Baseline.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*	PROJECT 2068: *Joint Standoff Weapon (JSOW)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development-NEW	SS/CPFF	Raytheon Systems:Tucson, AZ	76.904	3.338	Nov 2011	-		-		-	0.000	80.242	83.730
System Engineering	MIPR	National Security Agency:Maryland	0.699	0.359	Jun 2012	0.111	Jun 2013	-		0.111	0.000	1.169	1.169
System Engineering	WR	Naval Research Lab:Maryland	0.945	0.140	May 2012	0.143	May 2013	-		0.143	0.000	1.228	
System Engineering	WR	NAWCWD:China Lake, CA	109.068	1.000	Nov 2011	0.322	Nov 2012	-		0.322	0.000	110.390	
Prior year cost no longer funded in the FYDP	Various	Various:Various	601.305	-		-		-		-	0.000	601.305	
		Subtotal	788.921	4.837		0.576		-		0.576	0.000	794.334	

Remarks

(1) The target value of the contract exceeds the JSOW funding because the Harpoon Block III (PE0604227N PU1843) program shares a portion of the Strike Common Weapons Data Link (SCWDL) development costs.
(2) National Security Agency (NSA) funding was added for systems engineering support in FY13 as a result of the continued support that is needed for the integration of cryptographic keys through JSOW C-1 IOC.
(3) National Research Laboratory (NRL) funding was added for systems engineering in FY13 as a result of the need for continued JSOW C-1 Network Enabled Weapon support through the OT phase of the program.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development -JMPS	SS/CPFF	Raytheon Systems:Tucson, AZ	5.620	0.169	Dec 2011	0.098	Dec 2012	-		0.098	5.176	11.063	11.063
Prior year cost no longer funded in the FYDP	Various	Various:Various	8.007	-		-		-		-	0.000	8.007	
		Subtotal	13.627	0.169		0.098		-		0.098	5.176	19.070	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604727N: *Joint Standoff Weapon Systems*	PROJECT 2068: *Joint Standoff Weapon (JSOW)*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Int Test and Evaluation	WR	NAWCWD:China Lake, CA	30.646	2.500	Nov 2011	-		-		-	0.000	33.146	
Oper Test and Evaluation	WR	COMOPTEVFOR:Norfolk, VA	10.815	-		4.844	Nov 2012	-		4.844	0.000	15.659	
		Subtotal	41.461	2.500		4.844		-		4.844	0.000	48.805	

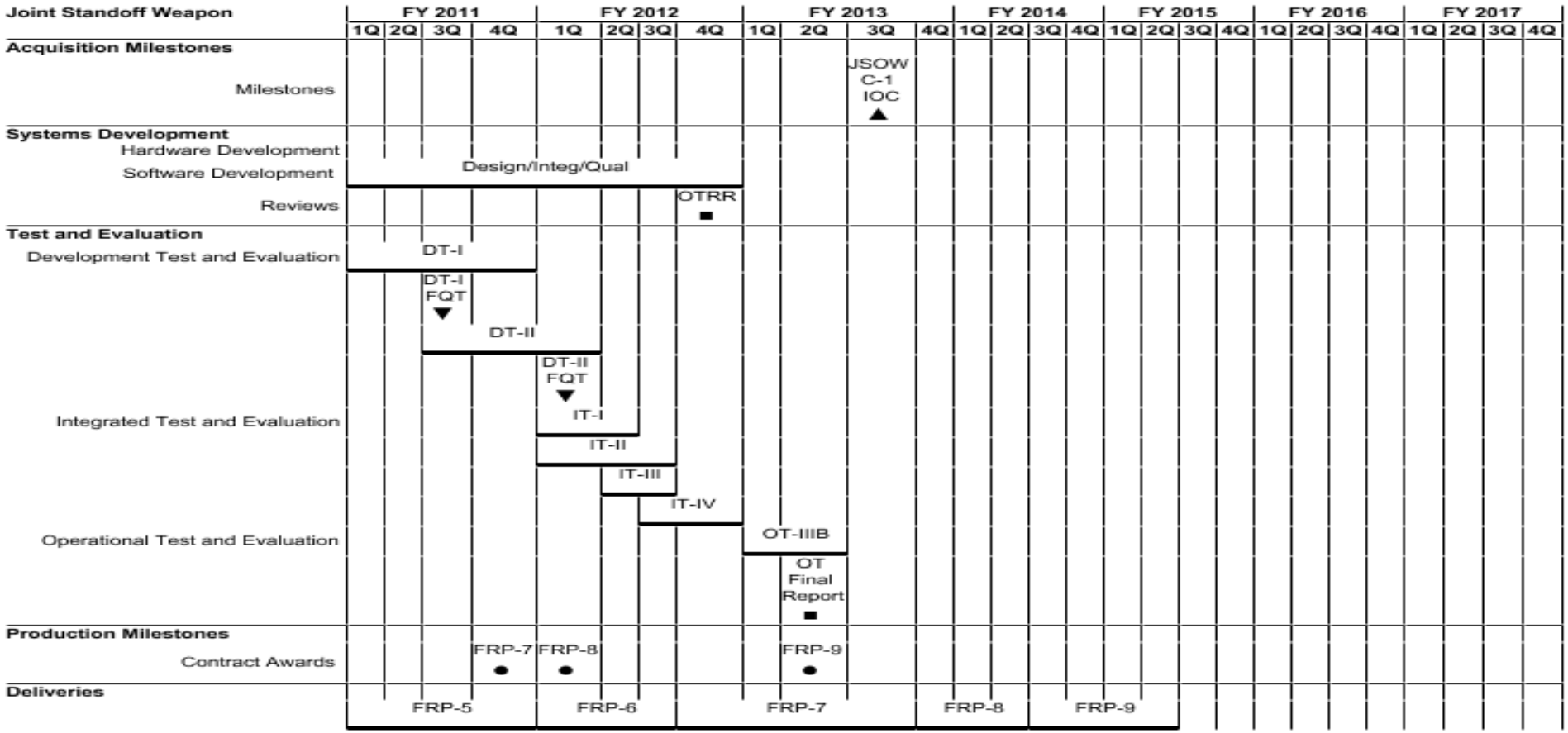
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Prior year cost no longer funded in the FYDP	Various	Various:Various	25.504	-		-		-		-	0.000	25.504	
		Subtotal	25.504	-		-		-		-	0.000	25.504	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	869.513	7.506		5.518		-		5.518	5.176	887.713	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604727N: *Joint Standoff Weapon Systems*	**PROJECT** 2068: *Joint Standoff Weapon (JSOW)*



2013PB - 0604727N - 2068 OT Final Report refers to AGM-154C-1 Operational Test Agency Follow On Evaluation OT-IIIB Final Report
FRP-7 contract award occurred in July 2011
FRP-8 contract award occurred in December 2010
FRP-8 delivery schedule adjusted to a nine-month schedule to realign the JSOW production cycle FRP-9 and beyond. Prior variations in delivery schedules and contract award dates caused the production cycle misalignment.

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604727N: *Joint Standoff Weapon Systems*	**PROJECT** 2068: *Joint Standoff Weapon (JSOW)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Joint Standoff Weapon				
Acquisition Milestones: Milestones: Inital Operational Capability C-1	3	2013	3	2013
Systems Development: Software Development: Network Enabled Weapon/Moving Target/AGM-154C-1 Design/Integration/Qual	1	2011	4	2012
Systems Development: Reviews: Operational Test Readiness Review	4	2012	4	2012
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Development Test (DT-I)	1	2011	4	2011
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Development Test Final Qualification Test (DT-1)	3	2011	3	2011
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Development Test (DT-II)	3	2011	1	2012
Test and Evaluation: Development Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Development Test Final Qualification Test (DT-II)	1	2012	1	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Integrated Test (IT-I)	1	2012	2	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Integrated Test (IT-II)	1	2012	3	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Integrated Test (IT-III)	2	2012	3	2012
Test and Evaluation: Integrated Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Integrated Test (IT-IIII)	3	2012	4	2012
Test and Evaluation: Operational Test and Evaluation: Network Enabled Weapon/ Moving Target/AGM-154C-1 Development Test (OT-IIIB)	1	2013	2	2013
Test and Evaluation: Operational Test and Evaluation: AGM-154C-1 JSOW Operational Test Agency Follow-On Evaluation Report OT-IIIB Final Report	2	2013	2	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604727N: *Joint Standoff Weapon Systems*	**PROJECT** 2068: *Joint Standoff Weapon (JSOW)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-7	4	2011	4	2011
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-8	1	2012	1	2012
Production Milestones: Contract Awards: FRP Award AGM-154C FRP-9	2	2013	2	2013
Deliveries: FRP-5 Deliveries- AGM-154C-1	1	2011	4	2011
Deliveries: FRP-6 Deliveries- AGM-154C-1	1	2012	3	2012
Deliveries: FRP-7 Deliveries- AGM-154C-1	4	2012	3	2013
Deliveries: FRP-8 Deliveries- AGM-154C-1	4	2013	2	2014
Deliveries: FRP-9 Deliveries- AGM-154C-1	3	2014	2	2015

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	48.526	71.222	87.662	-	87.662	73.032	56.850	52.014	52.993	Continuing	Continuing
0166: *SPS Improvement Program*	4.708	3.871	-	-	-	-	-	-	-	0.000	8.579
2178: *QRCC*	35.754	64.360	81.106	-	81.106	60.922	50.497	48.118	49.054	Continuing	Continuing
3172: *Joint Non-Lethal Weapons*	8.064	1.334	5.379	-	5.379	10.906	5.134	2.657	2.676	Continuing	Continuing
3306: *Integrated Swimmer Defense (ISD)*	-	1.657	1.177	-	1.177	1.204	1.219	1.239	1.263	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element consolidates currently ongoing and planned programmatic efforts related to Detect & Control aspects of Ship Self Defense (SSD) to facilitate effective planning and management of these efforts and to exploit the synergistic relationship inherent in each. Analysis and demonstration have established that surface SSD based on single-sensor detection point-to-point control architecture performs marginally against current and projected Anti-Ship Cruise Missile (ASCM) threats. The supersonic seaskimming ASCM reduces the effective battle space to the horizon and the available reaction time-line to less than 30 seconds from first opportunity to detect until the ASCM impacts its target ship. Against such a threat, multi-sensor integration is required for effective detection, and parallel processing is essential to reduce reaction time to acceptable levels and to provide vital coordination/integration of hardkill and softkill assets. These SSD projects address and coordinate the detect and control functions necessary to meet the rigorous SSD requirements within a development structure dedicated to systems engineering.

DETECTION: Improvements in coordinated sensor performance to increase the probability of detecting low altitude, low observable targets are to be achieved through the synergism gained from the integration of dissimilar sensor sources. Multi-sensor integration is being addressed through the efforts of Quick Reaction Combat Capability (QRCC) (2178), while sensor improvements were addressed through the SPS Improvements (0166). These provide improvements to both active and passive detection.

CONTROL: Multi-sensor integration, parallel processing and the coordination of hardkill/softkill capabilities in an automated, doctrine-based response to the ASCM threats are the cornerstones of Ship Self Defense System (SSDS) being developed through QRCC (2178) efforts. In addition, that project provides for the central system engineering management of SSD developments, including efforts required to integrate SSDS with the Advanced Combat Direction System (ACDS) functionality for those ships having a CDS with the Open Architecture Computing Environment and with advanced sensor, weapon and C4I upgrades.

Shipboard Protection System (SPS) develops an integrated shipboard, suite of systems designed to detect, identify, and engage asymmetric surface threats.

Integrated Swimmer Defense (ISD) scope is to provide the Navy Expeditionary security forces with capabilities of a portable marine integrated swimmer defense system (ISDS) to engage combat swimmers/divers or unknown individuals underwater once they have been detected.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*

Non-Lethal Weapons provides a long range laser warning and dazzle systems for use in the maritime environment. Optical warning and distraction has been identified by the services as a possible technology solution to mitigate and/or address several known joint non-lethal capability gaps.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	45.930	71.222	73.076	-	73.076
Current President's Budget	48.526	71.222	87.662	-	87.662
Total Adjustments	2.596	-	14.586	-	14.586
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	3.500	-			
• SBIR/STTR Transfer	-0.671	-			
• Program Adjustments	-	-	14.934	-	14.934
• Rate/Misc Adjustments	-	-	-0.348	-	-0.348
• Congressional General Reductions Adjustments	-0.233	-	-	-	-

Change Summary Explanation

$3.5M was added in FY11 for the development of Non Lethal vessel-entanglement technologies.
$3.3M was added in FY13 for the integration and test of SSDS MK2 Link 16 interoperability improvements in support of critical Strike Group interoperability improvements under the AEGIS Wholeness Initiative.
$4.5M was added in FY13 for the development of Non Lethal Weapons.
$3.48M was removed in FY13 due to cancellation of the SPS program.
$10.8M was added in FY13 for SSDS MK2 MOD6C ACB12 Product Development for the development and integration of product line software components for the new CVN78 combat system interfaces. This also includes funds for development test and evaluation for ESSM Missile integration testing with SSDS MK2 MOD6C and Dual Band Radar.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 0166: *SPS Improvement Program*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0166: *SPS Improvement Program*	4.708	3.871	-	-	-	-	-	-	-	0.000	8.579
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Shipboard Protection System (SPS) develops an integrated shipboard, suite of systems designed to detect, identify, and engage asymmetric surface threats. Capabilities include: Surface Surveillance System, MK 49 stabilized gun mounts and Non-Lethal weapons/devices. The surface surveillance system integrates EO/IR sensors, and radar into a common tactical surveillance system. Stabilized guns: provide integrated lethal engagement capability against asymmetric threats. Non-lethal weapons (NLW) assist in determining intent and target discrimination. SPS is to be fielded in blocks through evolutionary acquisition. The block approach facilitates the early delivery of enhanced situational awareness capability. Future blocks will introduce lethal and non-lethal effectors with total detect to engage capability integration. The SPS 'End State System' will provide Navy vessels with the ability, in foreign and domestic ports, to protect themselves from attacks by asymmetric surface threats. This ability requires that information necessary to seamlessly execute the detect-to-engage sequence be collected, processed, communicated, and acted upon before threats reach their objectives. Due to the requirement for 360 degree coverage for situational awareness and engagement, design variants are required to ensure coverage requirements are met for larger (CVN, LHA, LHD) as well as smaller (DDG, CG, LSD, LPD) platforms.

Note: Starting in FY13, the SPS program will be cancelled to support higher Departmental priorities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SPS Improvement Program	4.708	3.871	-
Articles:	0	0	
FY 2011 Accomplishments: Shipboard Protection System - System design for other ship classes, integration with MK38 Mod 2 system.			
FY 2012 Plans: Shipboard Protection System - System design for other ship classes; developmental test events for previously designed systems.			
Accomplishments/Planned Programs Subtotals	4.708	3.871	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/8128: *SPS Program*	16.450	31.291	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	66.939

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 0166: *SPS Improvement Program*

D. Acquisition Strategy

Revised acquisition strategy is to orderly ramp down Shipboard Protection System (SPS) and initiate Task Force Defense efforts by FY13.

E. Performance Metrics

Successfully achieved Milestone C. Successfully conduct SPS Block 3 Release 2 Critical Design Review (CDR).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 0166: *SPS Improvement Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development (Crane)	WR	NSWC Crane:Crane IN	3.377	1.000	Nov 2011	-		-		-	0.000	4.377	
Hardware/Software Development (Dahlgren)	WR	NSWC Dahlgren:Dahlgren VA	5.443	1.000	Nov 2011	-		-		-	0.000	6.443	
Hardware/Software Development (NG)	Various	NORTHROP GRUMMAN:Not Specified	0.236	-		-		-		-	0.000	0.236	
Hardware/Software Development (NAVAIR)	WR	NAVAIR/KDH:Pax River MD	0.200	-		-		-		-	0.000	0.200	
		Subtotal	9.256	2.000		-		-		-	0.000	11.256	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services (CRANE)	WR	NSWC CRANE:Crane IN	2.326	0.400	Nov 2011	-		-		-	0.000	2.726	
Engineering Services (DAHLGREN)	WR	NSWC DAHLGREN:Dahlgren VA	2.121	0.411	Nov 2011	-		-		-	0.000	2.532	
Engineering Services (IWS)	C/FPIF	IWS PERISCOPE DETECT:Not Specified	4.193	-		-		-		-	0.000	4.193	
ILS FUNCTIONS	WR	NSWC DAHLGREN:Dahlgren VA	2.680	0.500	Nov 2011	-		-		-	0.000	3.180	
		Subtotal	11.320	1.311		-		-		-	0.000	12.631	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 0166: *SPS Improvement Program*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
T&E FUNCTIONS (COTF)	WR	COMOPTEVFOR:Norfolk VA	0.618	-		-		-		-	0.000	0.618	
T&E FUNCTIONS (Dahlgren)	WR	NSWC DAHLGREN:Dahlgren VA	1.498	0.250	Nov 2011	-		-		-	0.000	1.748	
T&E FUNCTIONS (Crane)	WR	NSWC CRANE:Crane IN	0.914	0.250	Nov 2011	-		-		-	0.000	1.164	
		Subtotal	3.030	0.500		-		-		-	0.000	3.530	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MANAGEMENT SUPPORT	Various	VARIOUS:VARIOUS	0.275	-		-		-		-	0.000	0.275	
TRAVEL	Various	Not Specified:Not Specified	0.168	0.060	Nov 2011	-		-		-	0.000	0.228	
DAWDF	Various	Not Specified:Not Specified	0.008	-		-		-		-	0.000	0.008	
		Subtotal	0.451	0.060		-		-		-	0.000	0.511	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.057	3.871		-		-		-	0.000	27.928	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 0166: *SPS Improvement Program*

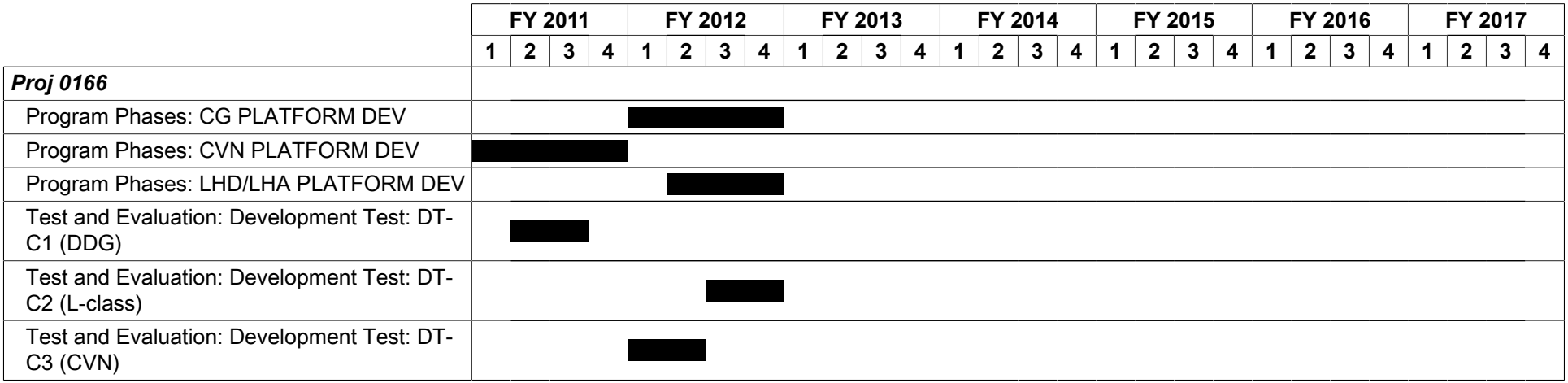


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 0166: *SPS Improvement Program*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0166				
Program Phases: CG PLATFORM DEV	1	2012	4	2012
Program Phases: CVN PLATFORM DEV	1	2011	4	2011
Program Phases: LHD/LHA PLATFORM DEV	2	2012	4	2012
Test and Evaluation: Development Test: DT-C1 (DDG)	2	2011	3	2011
Test and Evaluation: Development Test: DT-C2 (L-class)	3	2012	4	2012
Test and Evaluation: Development Test: DT-C3 (CVN)	1	2012	2	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2178: *QRCC*	35.754	64.360	81.106	-	81.106	60.922	50.497	48.118	49.054	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Quick Reaction Combat Capability (QRCC) project implements an evolutionary acquisition of improved ship self defense capabilities against Anti-Ship Cruise Missiles (ASCMs) for selected ships. The Ship Self Defense System (SSDS) is the integrating element of QRCC. The design integrates several existing stand-alone Anti-Air Warfare (AAW) systems that do not individually provide the complete detection, control, and engagement capabilities needed against low flying, high speed ASCMs with low radar cross sections. The SSDS integration concept fulfills the need for an automated detection, quick reaction and multi-target engagement capability emphasizing performance in the littoral environment. SSDS replaces manual control of several self-defense systems with a single integrated capability under the computer-aided control of ship operators. System design emphasizes use of non-developmental items, commercial standards, commercial processors, computer program reuse and open system architecture. SSDS is a physically distributed, open system architecture computer network consisting of commercially available or previously developed hardware. It includes the Navy's standard displays (AN/UYQ-70 and Common Display System) and command table for human-system interface, commercially based local area network access units and interface units, and commercially available fiber optic cabling.

SSDS MK1 integrates the SPS-49A(V)1 radar, SPS-67(V)1 radar, AN/SLQ-32A/B electronic warfare system, Combat Identification Friend or Foe-Self Defense (CIFF-SD), Rolling Airframe Missile (RAM) and Phalanx Close-In Weapon System and is installed on LSD41/49 class ships. SSDS MK1 successfully completed Operational Evaluation in June 1997. SSDS received Milestone III Approval for Full Rate Production (Mar 98) and authority to integrate with ACDS and Cooperative Engagement Capability (CEC) on CVN, LPD-17, LHD and LHA ship classes.

SSDS MK2 facilitates the incremental evolution and implementation of follow-on modifications. Development of SSDS MK2 leveraged critical experiments and re-use of technology and software from SSDS MK1. SSDS MK2 integrates other ship self defense elements, such as AN/SPQ-9B radar, NATO Sea-sparrow system, CEC and Tactical Data Links for joint interoperability. SSDS MK2 provides enhanced capabilities for Self Defense against air, and surface threats using both ownship and remote data to address AAW Capstone requirements. SSDS MK2 becomes the integrated, coherent real time Command and Control System for Aircraft Carriers and Amphibious ships. It will increase operational capabilities; improve combat readiness and Strike Group/Expeditionary Strike Group Interoperability; and promote standardization. It introduces new shipboard tactical displays and support equipment via Tech Insertion and warfighting capability improvements via Advanced Capability Builds (ACB). ACBs integrate advanced systems such as Dual Band Radar, Evolved Sea-Sparrow Missile (ESSM), RAM Block 2 missile, SLQ-32 SEWIP Block 2 and MH-60R Helicopter to implement the warfighting capability improvements.

In order to meet the Navy's warfighting capabilities and modernization concepts described in SEA POWER 21, Navy Open Architecture (OA) is being introduced in conjunction with SSDS P3I Commercial off the Shelf (COTS) Tech Refresh. This is the first step in unifying a set of war fighting functions into a single architecture shared among many ship classes. This principle of commonality is a major mechanism for cost control and avoidances in the Navy's future war fighting systems. Starting in 2008, SSDS MK 2 was rehosted existing tactical computer program applications to the Open Architecture Computing Environment (OACE) specifications/ equipment suite concurrent with P3I COTS Tech Insertion (TI) cycles, prior to migration and integration with other OA applications for implementation on future

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

new construction ships or during future ship modernization. Tech Insertion cycles and equipment tech refresh are driven by COTS obsolescence. In FY09, system development was initiated for SSDS MK1 Technology Refresh for the LSD 41/49 class ships. The effort will transition these ships to an SSDS MK OACE and SSDS MK 2 single source library. New system designation is SSDS MK2 Mod 5C. The system development effort encompasses tech insertion of new OA computing and display equipment (Common Processor System (CPS) and Common Display System (CDS)), modifications and additions to the SSDS MK 2 software for an upgraded interface with the Phalanx Closed-In-Weapon System (CIWS) Block 1B Baseline 2 and Battle Force Tactical Trainer (BFTT), and other unique LSD SSDS interfaces and functionality. The first LSD SSDS MK 2 Mod 5C is programmed for FY14 installation after land-based Combat System Integration and Certification Testing with IOC in FY15. In FY10, SSDS MK 2 system development commenced for the first phase of migration to the Navy OA objective functional architecture designated as SSDS MK 2 ACB-12/TI-12. ACB-12/TI-12 encompasses: implementation of common product line software components for System Track Management and Vehicle Control; integration of the product line System Track Management components and associated data model with other SSDS software components and Combat System interfaces (e.g. CEC, Dual Band Radar, ESSM and JUWL up-link, RAM Block 2 and CV-TSC); integration of new interfaces with SEWIP Block 2 ES, MH-60R and Global Command & Control System-Maritime (GCCS-M) via Consolidated-Afloat Network and Enterprise Services (CANES); integration of Common Processors System and Common Display System; and expansion of SSDS MK 2 Local Area Network (LAN) to OA Combat System LAN. ACB-12/TI-12 is planned for IOC in the CVN 78, CVN 72 in FY16, and Amphibious Assault Ships in FY17. In FY11-FY13, advanced planning, analysis, and requirements definition will be undertaken for SSDS MK 2 ACB-16/TI-16. ACB-16 warfighting improvement integration candidates include SEWIP Block 2 with automated radar designation decoy launch, CIWS and SPS-48G Sensor Integration, interoperability of IFF Mode 5/S and Joint Strike Fighter, advanced MH-60R integration, total ship training capability updates and GCCS-M Data Exchange via CANES. TI-16 will include COTS Hardware and Software Tech Insertion candidates for computing, display, network switching, interfaces and information assurance devices to support system and equipment modernization driven by COTS obsolescence. Funds were added in FY13 for the integration and test of SSDS MK2 Link16 interoperability improvements in support of critical Strike Group interoperability improvements under the AEGIS Wholeness Initiative.

Prepare and conduct comprehensive Combat System test for Combat System and SSDS MK 2 hardware/software upgrades for the CVN, LPD 17, LHD, LHA 6 and LSD ship classes. This includes Land Based testing at Wallops Island and At-Sea testing in the lead ships for specific ship class Combat System configuration and testing in the Self Defense Test Ship. The testing encompasses test preparation, integration, engineering and development tests, data collection and analysis, and resolution and verification of deficiency corrections. The SSDS MK 2 T&E support Combat System certification, the SSDS Test and Evaluation Master Plan (TEMP) and the Air Warfare Ship Self Defense CAPSTONE Enterprise TEMP.

The initial Development Test and Evaluation (DT&E) and Follow On Operational Test and Evaluation (FOT&E) for SSDS MK 2 was conducted with the CVN 76 SSDS MK 2 Mod 1 configuration in FY05. In FY07, the SSDS MK 2 FOT&E requirements were linked with the Air Warfare Ship Self Defense Enterprise T&E initiative to combine At-Sea Combat System element DT&E and OT&E requirements to synergize the resources required for testing in the SSDS MK 2 ships and the Self Defense Test Ship. The LPD-17 class SSDS MK 2 Mod 2 FOT&E was conducted in FY07/FY08 as part of the Enterprise T&E initiative. Live fire, Combat System end-to-end testing was conducted against Anti Ship Cruise Missile targets in the Self Defense Test Ship in FY07/08/09 in the CVN/LHD/LPD configurations. FOT&E of ESSM integration with SSDS MK 2 was initiated in the CVN class in FY08 and will extend through FY11. FOT&E for the CVN class SSDS MK 2 Mod 1B P3I OACE COTS Tech Insertion was conducted in FY09. Future FOT&E includes the LHA 6 SSDS MK 2 Mod 4B configuration with the RAM Block 2 missile, the LSD SSDS MK 2 Mod 5C configuration with the Phalanx CIWS 1B Baseline 2 system, and CVN 78 SSDS MK 2 Mod 6C configuration with the Dual Band Radar, SEWIP Block 2 ES, ESSM with JUWL up-link, and RAM Block 2.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SSDS MK2 Development Test & Evaluation	13.161	17.341	21.463
Articles:	0	0	0

FY 2011 Accomplishments:
For CVN 71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2, ESSM integration and Linux OACE:
- Initiated Land Based system integration and engineering test for CVN71/LPD24/LHA 6;
- Completed Land Based system integration and engineering test for CVN71

For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and CPS/CDS equipment:
- Initiated Land Based system integration and engineering test for LSD 46.

FY 2012 Plans:
For CVN71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2 ESSM integration and Linux OACE:
- Complete Land Based system integration and engineering test for LPD24;
- Initiate Land Based DT for LHA 6;

For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and CPS/CDS equipment:
- Complete Land Based system integration and engineering test for LSD 46.

For CVN78 SSDS MK2 Mod 6C configuration with Dual Band Radar, CEC, TPX-42, STM, RAM Block 2 and CPS/CDS and Combat System LAN
- Complete Land Based system integration and engineering test for CVN78 SSDS MK2 Engineering Software Releases for DBR Common Array Power and Cooling System integration.

FY 2013 Plans:
For CVN71/LPD24/LHA 6 SSDS MK2 Mod 1B/2B/4B Configurations with RAM Block 2 integration and Linux OACE:
- Complete Land Based system integration and engineering test for LHA 6;
- Conduct Land Based DT for LHA 6;
- Conduct Live Fire At Sea Testing for LHA 6 in the Self Defense Test Ship (SDTS).

For LSD SSDS MK2 Mod 5C configuration with the Phalanx CIWS Block 1B Baseline 2, RAM Block 2 and CPS/CDS equipment:
- Conduct Land Based DT for LSD 50.

For CVN78 SSDS MK2 Mod 6C configuration with Dual Band Radar, CEC, TPX-42, STM, ESSM, RAM Block 2 and CPS/CDS and Combat System LAN

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Initiate Land Based system integration and engineering test for CVN78 SSDS MK2 Engineering Software Releases for DBR Track capability and Missile Integration Capabilities with ESSM and RAM Block 2. This includes missile integration testing of ESSM X-Band JUWL uplink/downlink with the SSDS MK2 MOD6C, Dual Band Radar, and MK-29 launcher.			
Title: SSDS MK2 Product Development-Advanced Capability Builds (ACB)/Technology Insertion	22.593	47.019	59.643
Articles:	0	0	0
FY 2011 Accomplishments: Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirement engineering, critical experiments, hardware and software design, software code development, advanced production units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, and Development Test and Evaluation (land-based and at-sea). For LSD SSDS MK 2 Mod 5C Tech Insertion, complete software code development, advanced production units and, hardware/ software integration. For CVN 78 SSDS MK 2 Mod 6C ACB-12/TI-12, complete hardware Preliminary Design Review (PDR), complete software System Specification Review (SSR) for phase 1 of software development for product line system track manager integration, DBR track integration and CPS, CDS and Combat System LAN. Initiated planning/analysis for ACB-16/TI-16 candidates for Warfighting Capability Improvements and Technology Insertion Refresh.			
FY 2012 Plans: Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirement engineering, critical experiments, hardware and software design, software code development, advanced production units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, and Development Test and Evaluation, land-based and at-sea.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
For LSD SSDS MK 2 Mod 5C Tech Insertion, complete Factory System Integration Test and Factory Qualification Testing and provide pre and post certification support during Combat System certification testing. For CVN 78 SSDS MK 2 Mod 6C, complete hardware CDR and software PDR and CDR for phase 1 of software development and SSR for second phase of software development for ESSM with JUWL up-link, SEWIP Block 2 ES and CV-TSC/MH-60R. Initiate development of operator and maintenance training courses for SSDS MK 2 Mod 6C/1C ACB-12/TI-12. For ACB-16/TI-16, define and generate documentation for Combat System requirements. ***FY 2013 Plans:*** Perform SSDS MK 2 System Development including integration of government furnished hardware and software to provide Warfighting Capability Improvements via Advanced Capability Builds (ACB), and Open Architecture Computing Environment (OACE) improvements and COTS obsolescence refresh via Technology Insertional Refresh. Product development encompasses studies and analysis, modeling and simulation, system requirement engineering, critical experiments, hardware and software design, software code development, advanced production units, hardware/software integration, factory system integration testing, factory qualification testing, and system pre and post certification support during Combat System Integration Testing, Combat System Certification testing, and Development Test and Evaluation, land-based and at-sea. For CVN 78 SSDS MK 2 Mod 6C, complete software code and unit test for phase 1 of software development for product line system track manager integration, DBR track integration and CPS, CDS and Combat System LAN; and complete software PDR and CDR for phase 2 for ESSM with JUWL up-link, SEWIP Block 2 ES and CV-TSC/MH-60R. Continue development of operator and maintenance training courses for SSDS MK 2 Mod 6C/1C ACB-12/TI-12. This includes the development and integration of product line software components (Product Line System Track Manager/Track Server) within SSDS MK2; the required modifications to existing SSDS MK2 software for implementation of the common software components, and supporting modifications for the new Combat System architecture and interfaces. Conduct software integration and test of SSDS MK2 Link 16 interoperability improvement in support of Strike Group interoperability improvements as part of the AEGIS Wholeness Initiative. For ACB-16/TI-16, define and generate documentation for SSDS MK2 system requirements for software and hardware.			
Accomplishments/Planned Programs Subtotals	35.754	64.360	81.106

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/5239: *SSDS*	43.239	54.324	55.371	0.000	55.371	53.207	69.080	77.522	64.234	Continuing	Continuing
• RDTEN/0603382N: *Advanced Combat System Technology*	1.613	1.418	1.506	0.000	1.506	1.571	1.733	1.762	1.793	Continuing	Continuing
• RDTEN/0603658N: *Cooperative Engagement*	57.198	54.783	56.512	0.000	56.512	71.776	64.469	86.867	77.385	Continuing	Continuing
• RDTEN/0603582N: *Combat System Integration*	33.323	34.123	56.551	0.000	56.551	36.592	32.827	33.569	34.157	Continuing	Continuing
• RDTEN/0604307N: *Surface Combatant Cmbt Sys Eng*	195.569	223.217	260.616	0.000	260.616	253.166	226.221	263.670	142.545	Continuing	Continuing

D. Acquisition Strategy

The first SSDS MK 2 system procurements took place under a Cost Plus Award Fee (CPAF) contract in FY99 for the CVN 76, LPD 17, LPD 18 and CVN 69. Follow-on equipment procurements for additional ships of the CVN, LPD and LHD classes were awarded on Firm Fixed Price (FFP) contracts. For those ships that will be receive P3I OACE COTS tech Refresh hardware suites, the initial system Tech Refresh Development occurred under a CPAF type contract, with ship COTS conversion equipment/kits procured on FFP contracts.

A new system engineering/design agent and Life Cycle Maintenance Cost Plus Fixed Fee (CPFF) contract was awarded in FY05 and a follow-on cost type contract (with incentives), N00024-08-C-5122, was awarded on 30 Sept 2008, to support SSDS MK 2 system/software maintenance and system upgrades through FY12 including the P3I COTS Tech Insertion cycles. The contract (N00024-08-C-5122) will be extended through FY17/FY18 timeframe for the completion of the development, test, certification of SSDS MK2 (ACB12/TI12) for CVN78, CVN72, and Amphibious Assault Ships. A follow on combat system engineering/SSDS design agent contract is planned for competitive award in FY 14 for the development of SSDS MK2 ACB16.

E. Performance Metrics

Requirement Documents
- Ship Self Defense System (SSDS) Operational Requirement Document (ORD) approved April 1995 and validated in 1997.
- SSDS MK2 KPPs were promulgated in OPNAV N76 letter SER N766/1S649367 of 18 Dec 01.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPP) and Measures of Suitability.
* Included the Interoperability KPP for CVN/LPD/LHD
- SSDS MK2 KPPs were clarified in OPNAV N86 letter SER N86F/7U178266 of 13 Nov 07.
* Subject: Ship Self Defense System (SSDS) Requirement Clarification of Key Performance Parameters (KPPs) and Measures of Suitability and Effectiveness

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

* Included Force Protection and Survivability KPPs
- Test and Evaluation Master Plan (TEMP No. 1400) For Ship Self Defense System (SSDS) Revision B, 5 Mar 2008.

Background
- SSDS MK1 OPEVAL was successfully completed June 1997 with a Milestone III approval in March 1998
- SSDS MK2 MOD 1 FOT&E was conducted on CVN 76 in 2005. All KPP thresholds were met. However, the system was assessed as not suitable and not effective by COMOPTEVFOR based on the identification of SSDS MK2 and Combat Systems deficiencies (24major, 37 minor deficiencies).
- SSDS MK 2 Mod 2 FOT&E was conducted in LPD 17-19 in 2007/2008. All KPPs thresholds were met and the system was assessed OPERATIONALLY EFFECTIVE and OPERATIONALLY SUITABLE by COMOPTEVFOR in the 12 Feb 2010 report. 10 major and minor deficiencies were identified against SSDS MK 2. (Also, major Warfare effects deficiencies were identified against the LPD 17 class Combat System).
- SSDS MK 2 Mod 3A FOT&E was conducted in LHD 8 in Feb 2010. All KPPs thresholds were met and the system was assessed OPERATIONALLY EFFECTIVE and OPERATIONALLY SUITABLE by COMOPTEVFOR in the 13 Dec 2010 report. 10 major deficiencies were identified against SSDS MK 2. (Also, major Warfare effects deficiencies were identified against the LHD 8 Combat System).

Status
CVN SSDS MK 2 Mod 1
- 18 of 24 major deficiencies have been fixed/improved and verified as corrected or awaiting verification by COMOPTEVFOR. The status of the remaining 6 major deficiencies is as follows:
* 4 have been identified as future efforts
* 2 are radar design limitations that would require major system redesign.
LPD SSDS MK 2 Mod 2
- 3 of 10 major deficiencies have been fixed/improved and verified as corrected or awaiting verification by COMOPTEVFOR. The status of the remaining 7 major deficiencies is as follows:
* 3 have been identified as future efforts
* 3 are in analysis
* 1 would require major system redesign
LHD SSDS MK 2 Mod 3A
- 1 of 10 major deficiencies has been fixed/improved and verified as corrected or awaiting verification by COMOPTEVFOR. The status of the remaining 9 major deficiencies is as follows:
* 3 have been identified as future efforts
* 6 are in analysis

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Sys Eng/Safety (Dahlgren)	WR	NSWC DD:Dalhgren, VA	47.795	4.073	Nov 2011	4.480	Oct 2012	-		4.480	Continuing	Continuing	Continuing
Systems Engineering (JHU)	SS/FP	JHU/APL:Laurel, MD	46.630	6.666	Apr 2012	7.333	Nov 2012	-		7.333	Continuing	Continuing	Continuing
Sys Eng/Training Dev (PHD)	WR	NSWC PHD:Pt Hueneme, CA	19.916	2.407	Nov 2011	0.450	Oct 2012	-		0.450	Continuing	Continuing	Continuing
Sys Eng/ILS (CDSA)	WR	CDSA DN:Dam Neck, VA	15.225	2.407	Nov 2011	1.554	Oct 2012	-		1.554	Continuing	Continuing	Continuing
Systems Engineering (IH)	WR	NSWC IH:Indian Head, MD	3.056	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5100)	SS/CPAF	Gen. Dyn. (5100):Fairfax, VA	2.000	-		0.834	Nov 2012	-		0.834	Continuing	Continuing	Continuing
Display Development Kits	SS/FP	Lockheed Martin:St Paul, MN	3.958	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5110)	SS/CPAF	RSC (5110):San Diego, CA	50.100	30.351	Nov 2011	42.050	Nov 2012	-		42.050	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5132)	SS/CPAF	RSC (5132):San Diego, CA	20.576	-		-		-		-	Continuing	Continuing	Continuing
Award Fees (5132)	SS/CPAF	RSC (5132):San Diego, CA	3.603	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5108)	SS/CPAF	RSC (5108):San Diego, CA	98.646	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5466)	SS/CPAF	RSC (5466):San Diego, CA	20.353	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate (5104)	SS/CPFF	RSC (5104):San Diego, CA	23.685	-		-		-		-	Continuing	Continuing	Continuing
Award Fees (5108)	SS/CPAF	RSC (5108):San Diego, CA	11.208	-		-		-		-	Continuing	Continuing	Continuing
Award Fees (5466)	SS/CPAF	RSC (5466):San Diego, CA	2.163	-		-		-		-	Continuing	Continuing	Continuing
Systems Eng/Dev/Integrate	SS/CPAF	RSC (5202):Portsmouth, RI	-	-		1.794	Nov 2012	-		1.794	Continuing	Continuing	Continuing
RisK Reduction/EMD	Various	Various:Various	76.366	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Misc.	Various	Various:Various	4.513	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering (Corona)	WR	NSWC Corona:Corona, CA	0.644	0.200	Jan 2012	0.247	Oct 2012	-		0.247	Continuing	Continuing	Continuing
		Subtotal	450.437	46.104		58.742		-		58.742			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
QA/RMA	WR	NSWC Corona:Corona, CA	9.954	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	9.954	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NWAS:China Lake, CA	-	-		1.150	Oct 2012	-		1.150	Continuing	Continuing	Continuing
Development Test & Evaluation (PHD)	WR	NSWC PHD:Port Hueneme, CA	74.294	6.517	Nov 2011	6.645	Oct 2012	-		6.645	Continuing	Continuing	Continuing
Development Test & Evaluation (DD)	WR	NSWC DD:Dahlgren, VA	5.760	0.205	Nov 2011	0.462	Oct 2012	-		0.462	Continuing	Continuing	Continuing
Development Test & Evaluation (SCSC-WI)	WR	SCSC-WI:Wallops Is, VA	39.772	5.944	Jan 2012	4.922	Oct 2012	-		4.922	Continuing	Continuing	Continuing
Development Test & Evaluation (JHU)	SS/FP	JHU/APL:Laurel, MD	15.122	1.100	Apr 2012	1.637	Nov 2012	-		1.637	Continuing	Continuing	Continuing
Development Test & Evaluation (Corona)	WR	NSWC Corona:Corona, CA	3.798	1.070	Jan 2012	1.061	Oct 2012	-		1.061	Continuing	Continuing	Continuing
Development Test & Evaluation (COTF)	WR	OPTEVFOR:Norfolk, VA	3.250	0.412	Feb 2012	0.310	Oct 2012	-		0.310	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation (5110)	SS/CPFF	RSC(5110):San Diego, CA	10.754	1.000	Nov 2011	0.562	Nov 2012	-		0.562	Continuing	Continuing	Continuing
Development Test & Evaluation (5466)	SS/CPFF	RSC(5432):Tucson, AZ	2.180	-		0.800	Nov 2012	-		0.800	Continuing	Continuing	Continuing
Development Test & Evaluation	SS/CPAF	RSC (5412):Portsmouth, RI	-	-		1.326	Nov 2012	-		1.326	Continuing	Continuing	Continuing
Development Test & Evaluation	SS/CPAF	RSC (5202):St. Pete, FL	-	-		0.900	Nov 2012	-		0.900	Continuing	Continuing	Continuing
Development Test & Evaluation (CDSA)	WR	CDSA DN:Dam Neck, VA	1.461	0.205	Nov 2011	0.786	Nov 2012	-		0.786	Continuing	Continuing	Continuing
Miscellaneous	Various	Various:Not Specified	5.546	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	161.937	16.453		20.561		-		20.561			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	Not Specified:Not Specified	19.856	1.803	Apr 2012	1.803	Nov 2012	-		1.803	Continuing	Continuing	Continuing
		Subtotal	19.856	1.803		1.803		-		1.803			

Remarks

Program Management Support accounts for three SEAPORT contracts, Alion (01D7013), NGIT (01D7026), and SAIC (04D4119), each funded less than 1.0M respectively, and therefore, account for the aggregate total specified for each fiscal year. These contracts provide services in the areas of financial management, configuration management, testing evaluation, and engineering support.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	642.184	64.360		81.106		-		81.106			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 2178: *QRCC*

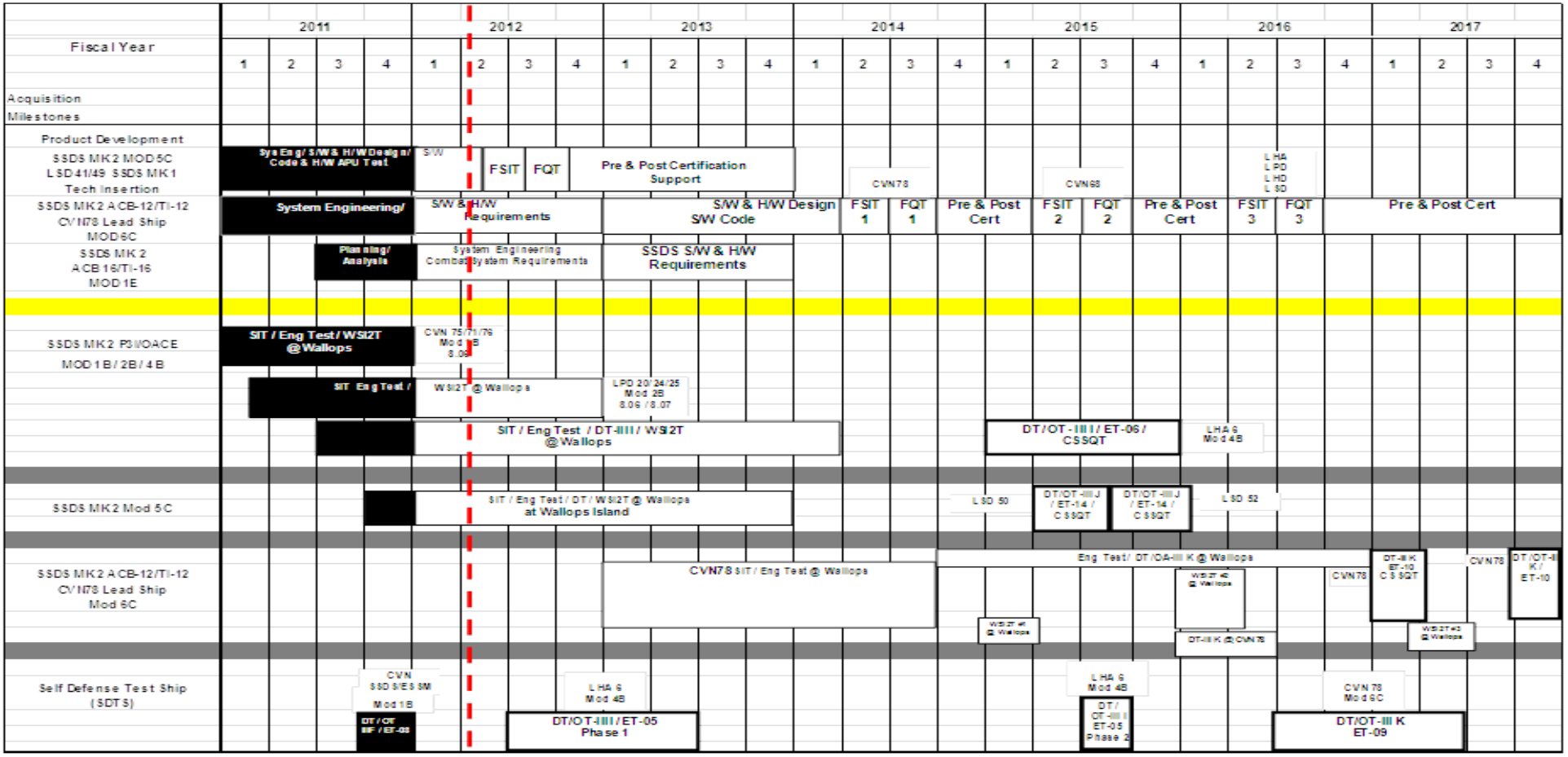


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 2178: *QRCC*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2178				
SSDS MK 2 MOD 5C (LSD) - SYS ENG/DESIGN/CODE/APU/TEST	1	2011	2	2012
SSDS MK 2 MOD 5C (LSD) - FACTORY SYS INTEGRATION TEST (FSIT)	2	2012	3	2012
SSDS MK 2 MOD 5C (LSD) - FACTORY QUALIFICATION TEST (FQT)	3	2012	4	2012
SSDS MK 2 MOD 5C (LSD) - PRE&POST CERT SUPPORT	4	2012	4	2013
SSDS MK 2 MOD 5C (LSD) - T&E - SIT/ENG TEST/WSI2T AT WALLOPS	4	2011	4	2013
SSDS MK 2 MOD 5C (LSD) - T&E - LSD 50 DT/CSSQT	2	2015	3	2015
SSDS MK 2 MOD 5C (LSD) - T&E - LSD 52 DT/OT/CSSQT	3	2015	4	2015
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST	1	2011	1	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-HW PDR	2	2011	2	2011
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SSR 1	2	2011	2	2011
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-HW CDR	2	2012	2	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SW PDR 1	1	2012	1	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SFR 2	2	2012	2	2012
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SSR 2	1	2013	1	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SW CDR 1	3	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SW PDR 2	1	2013	1	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - SYS ENG/SW/HW REQTS/DESIGN/ CODE/APU/TEST-SW CDR 2	2	2013	2	2013
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - FACTORY SYS INTEGRATION TEST (FSIT 1)	2	2014	2	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - FACTORY QUALIFICATION TEST (FQT 1)	3	2014	3	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - PRE & POST CERT SUPPORT	3	2014	4	2017
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E -SIT/ENG TEST AT WALLOPS	4	2012	3	2014
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E - ET/DT/OA-III K AT WALLOPS	4	2014	4	2016
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT/ENG TEST/WSI2T #1 AT WALLOPS	1	2015	2	2015
SSDS MK2 MOD 1C - CVN 68 ACB12/TI12 - FACTORY SYS INTEGRATION TEST (FSIT 2)	2	2015	2	2015
SSDS MK2 MOD 1C - CVN 68 ACB12/TI12 - FACTORY QUALIFICATION TEST (FQT 2)	3	2015	3	2015
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT/ENG TEST/WSI2T #2 AT WALLOPS	1	2016	2	2016
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT III K (ON CVN78)	1	2016	2	2016
Amphibious Ships SSDS MK2 ACB12/TI12 - FACTORY SYS INTEGRATION TEST (FSIT 3)	2	2016	2	2016
Amphibious Ships SSDS MK2 ACB12/TI12 - FACTORY QUALIFICATION TEST (FQT 3)	3	2016	3	2016
SDTS-SSDS MK 2 MOD 6C T&E-DT/OT ET 09	3	2016	2	2017
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT III K ET 10/CSSQT (ON CVN78)	1	2017	1	2017
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT/ENG TEST/WSI2T #3 AT WALLOPS	1	2017	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 2178: *QRCC*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
SSDS MK2 MOD 6C - CVN 78 ACB12/TI12 - T&E-DT/OT-III K / ET 10 (ON CVN78)	4	2017	4	2017
SSDS MK 2 MOD 1E-CVN/Amphib ACB16/TI16 -PLANNING /ANALYSIS	3	2011	4	2011
SSDS MK 2 MOD 1E-CVN/Amphib ACB16TI16 - SYS ENG/CS REQTS	1	2012	4	2012
SSDS MK 2 MOD 1E-CVN/Amphib ACB16TI16 - SSDS SW/HW REQTS	1	2013	4	2013
SSDS MK 2 P3I OACE MOD 1B 8.06 (CVN 75/71/76) T&E-SIT/ENG TEST/WSI2T AT WI	1	2011	4	2011
SSDS MK 2 P3I OACE MOD 2B 8.06 (LPD 20/24/25) T&E-SIT/ENG TEST/WSI2T AT WI	2	2011	4	2012
SSDS MK 2 P3I OACE MOD 4B 8.06 (LHA 6) T&E-SIT /ENT TEST/DT/WSI2T AT WI	4	2011	4	2013
SSDS MK 2 P3I OACE MOD 4B 8.06 (LHA 6) T&E-DT/OT-III I /ET06/ CSSQT	2	2015	3	2015
SDTS-SSDS MK 2 MOD 1B T&E-DT/OT ET 03	4	2011	4	2011
SDTS-SSDS MK 2 MOD 4B T&E-DT/OT ET 05 Phase 1	1	2013	2	2013
SDTS-SSDS MK 2 MOD 4B T&E-DT/OT ET 05 Phase 2	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3172: *Joint Non-Lethal Weapons*	8.064	1.334	5.379	-	5.379	10.906	5.134	2.657	2.676	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Funding for Integrated Swimmer Defense (ISD) moved to project 3306 starting in FY12.

A. Mission Description and Budget Item Justification

The scope of this project is to provide the fleet Expeditionary (specifically the Maritime Expeditionary Security Force) units with the capability of a portable maritime system to engage contacts of interest once they have been detected. Long Range Ocular Interruption (LROI) consists of efforts to develop and demonstrate a long range laser warning and dazzle system for use in maritime environment. The device is designed to issue clear and unambiguous optically dazzling warnings at long ranges (in excess of 1000m) to personnel, vehicles, vessels, (and potentially aircraft) approaching Navy, Coast Guard, or Army ships, ground assets, and critical maritime infrastructure.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Non-Lethal Weapons Development	2.064	0.409	3.979
Articles:	0	0	0
FY 2011 Accomplishments: Supported completion of Increment I CPD, Increment I MS C and Full-Rate Production (FRP development). Supported Analysis of Alternatives (AoA).			
FY 2012 Plans: Support program planning for technology investment resulting from the Analysis of Alternatives (AoA). Develop non-lethal, vessel-entanglement technologies to stop small and medium sized vessels in response to CENTCOM JUONS CC-0371. Effort will involve design and fabrication of launchers and payloads (i.e. nets used for entanglement of vessels' propellers).			
FY 2013 Plans: Support design refinement for the Long Range Ocular Interrupter (LROI) and other systems resulting from the Analysis of Alternatives (AoA).			
Title: Non-Lethal Weapons Testing	6.000	0.925	1.400
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Completed update of User Operational Evaluation Systems (UOES)2 system to the first Increment I. Accomplished developmental testing. ***FY 2012 Plans:*** Complete development of Request For Proposal (RFP) package to support system production Post Milestone C. Also plan to test non-lehtal, vessel-entanglement technologies on various representative vessels. ***FY 2013 Plans:*** Test Long Range Ocular Interrupter (LROI) components and other Non-lethal capabilities resulting from Analysis of Alternatives (AoA).			
Accomplishments/Planned Programs Subtotals	8.064	1.334	5.379

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/8128: *NCW Forces Active*	0.000	0.000	1.844	0.000	1.844	4.338	1.922	5.504	6.921	Continuing	Continuing

D. Acquisition Strategy

The acquisition strategy includes the assessment of mature technologies, strategies and potential system capabilities matched against identified capability gaps that can be used in a flexible response posture. Selected capabilities will be based on AoA and best material approach to meet expeditionary and afloat force protection requirements. Technology development will occur in FY12-13 culminating in an Engineering and Manufacturing Development (EMD) phase commencing in FY14. Successful capabilities will require cross-integration onto existing Navy platforms and ensure compatibility/interoperability within the expeditionary context. Multiple solutions could be output based on overall satisfaction of technical and operational requirements, acquisition life cycle costs, and forecasted procurement quantity needs.

Received $3.5M via Omnibus ATR in late FY11. Funds are required to develop Naval Forces CENTCOM non-lethal technologies designed to stop small and medium sized vessels via entanglement of the propeller in response to JUONS CC-0371.

E. Performance Metrics

Complete material solution analysis and technical development strategy. Conduct Capability Development Document (CDD) process.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering	WR	NSWC Dahlgren:Dahlgren VA	5.956	0.500	Feb 2012	2.479	Feb 2013	-		2.479	Continuing	Continuing	Continuing
System Engineering	WR	NSWC Port Hueneme:Port Hueneme CA	0.400	0.254	Feb 2012	0.400	Feb 2013	-		0.400	Continuing	Continuing	Continuing
System Engineering	WR	NSWC Crane:Crane IN	0.400	0.180	Feb 2012	0.900	Feb 2013	-		0.900	Continuing	Continuing	Continuing
		Subtotal	6.756	0.934		3.779		-		3.779			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NUWC Newport:Newport, RI	2.857	-		-		-		-	Continuing	Continuing	Continuing
Engineering Services (NSWC)	WR	NSWC Panama City:Panama City, FL	1.200	-		-		-		-	0.000	1.200	
		Subtotal	4.057	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NSWC Carderock:Bethesda MD	0.300	-		-		-		-	0.000	0.300	
Test and Evaluation	MIPR	Military Sealift Command:Washington DC	2.200	-		-		-		-	0.000	2.200	
Test and Evaluation	WR	COMOPTEVFOR:Norfolk VA	3.325	0.100	Feb 2012	1.000	Feb 2013	-		1.000	Continuing	Continuing	Continuing
		Subtotal	5.825	0.100		1.000		-		1.000			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*

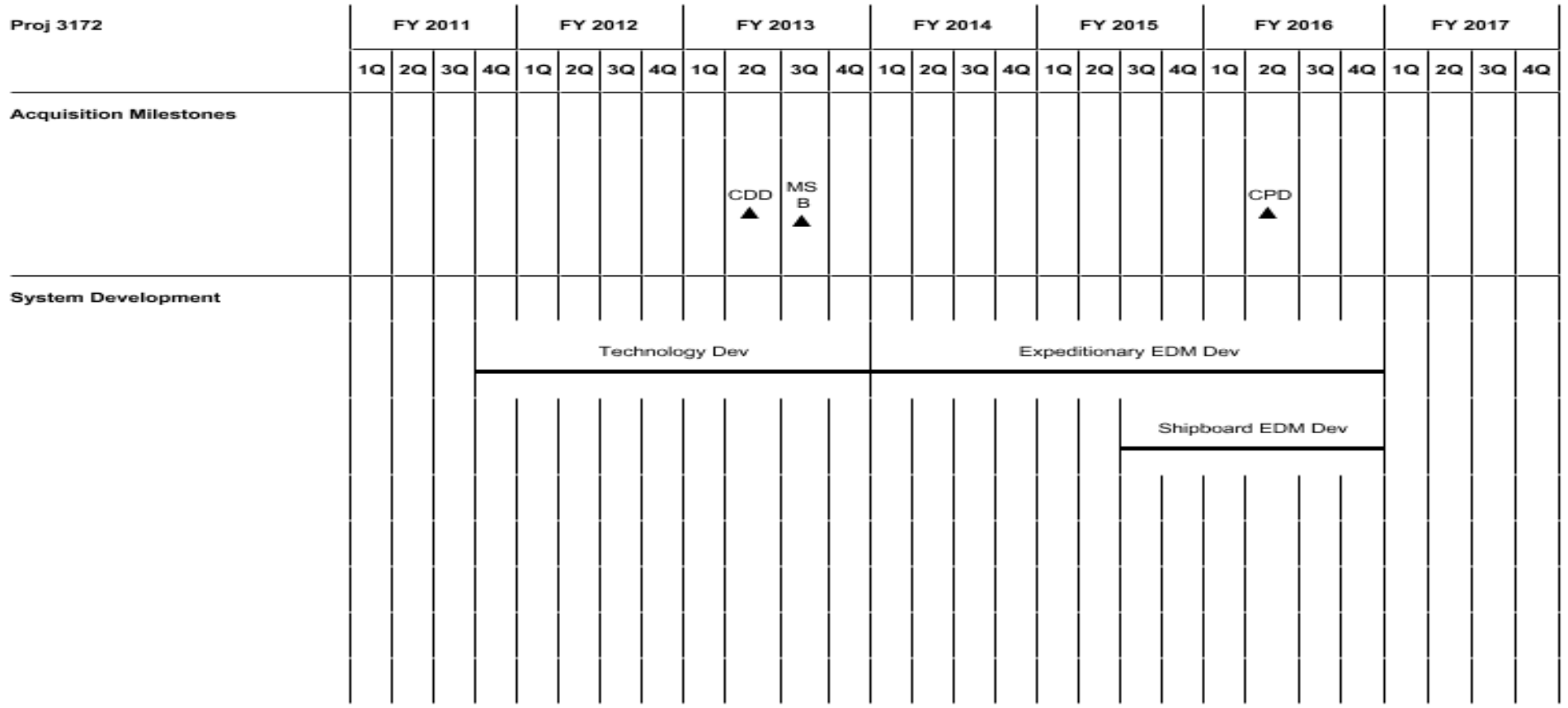
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NSWC Dahlgren:Dahlgren VA	3.292	0.300	Feb 2012	0.600	Feb 2013	-		0.600	Continuing	Continuing	Continuing
DAWDF	Various	Not Specified:Not Specified	0.018	-		-		-		-	0.000	0.018	
		Subtotal	3.310	0.300		0.600		-		0.600			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	19.948	1.334		5.379		-		5.379			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3172: *Joint Non-Lethal Weapons*



2013DON - 0604755N - 3172

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 3172: *Joint Non-Lethal Weapons*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3172				
Acquisition Milestones: CDD	2	2013	2	2013
Acquisition Milestones: Milestone B	3	2013	3	2013
Acquisition Milestones: CPD	2	2016	2	2016
System Development: Technology Development	4	2011	4	2013
System Development: Expeditionary EDM Development	1	2014	4	2016
System Development: Ship EDM Development	3	2015	4	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3306: *Integrated Swimmer Defense (ISD)*	-	1.657	1.177	-	1.177	1.204	1.219	1.239	1.263	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Funding moved from project 3172 starting in FY12.

A. Mission Description and Budget Item Justification

The scope of this project is to provide the fleet Expeditionary (specifically the Maritime Expeditionary Security Force) units with the capability of a portable maritime Integrated Swimmer Defense (ISD) system to engage combat swimmers/divers or unknown individuals underwater once they have been detected. The ISD program combines the detection and engagement operations in order to complete the swimmer defense picture for the fleet. The objective of the integrated swimmer defense system (ISD) is the development and deployment of an integrated system capable of being deployed by the expeditionary harbor security units (primarily the Maritime Expeditionary Security Force). ISD will be designed to detect, track, classify, warn, deter and neutralize divers' and swimmers' threats. ISD is important to protecting high value assets within harbors from the increasing threat of waterborne terrorist or combatant attacks.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Integrated Swimmer Defense	-	1.657	1.177
Articles:		0	0
FY 2012 Plans: Development of project documentation (CONOPS and CPD). Supports preparation for Milestone C decision.			
FY 2013 Plans: Continue development of project documentation (CONOPS and CPD). Implement additional development efforts for LRIP.			
Accomplishments/Planned Programs Subtotals	-	1.657	1.177

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/8128: *NCW Forces Active*	0.000	0.000	0.000	0.000	0.000	3.920	5.700	5.920	5.920	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*

D. Acquisition Strategy

The acquisition strategy includes the integration of swimmer/diver detection sensors and using software to fuse the sensor track data thereby creating an end to end combat system capability for swimmer/diver defense. The ISD program of record system configuration will be produced through an Acquisition Category (ACAT) program to procure component systems needed to bring the performance of the UOES prototypes up to the full production requirements.

E. Performance Metrics

User Operational Evaluation Systems (UOES) will culminate defined set of system capabilities and limitations. Define level specifications and technical data packages.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Development	WR	NSWC:TBD	-	0.200	Feb 2012	0.300	Feb 2013	-		0.300	Continuing	Continuing	Continuing
Hardware/Software Development - FNC	WR	NUWC Newport:Newport RI	-	0.100	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Hardware/Software Development - FNC Detection and Targeting	WR	NUWC Newport:Newport RI	-	0.125	Feb 2012	-		-		-	Continuing	Continuing	Continuing
		Subtotal	-	0.425		0.300		-		0.300			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Services	WR	NSWC:TBD	-	0.679	Feb 2012	0.295	Feb 2013	-		0.295	Continuing	Continuing	Continuing
		Subtotal	-	0.679		0.295		-		0.295			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	WR	NSWC:TBD	-	0.290	Feb 2012	0.300	Feb 2013	-		0.300	Continuing	Continuing	Continuing
		Subtotal	-	0.290		0.300		-		0.300			

Management Services ($ in Millions)

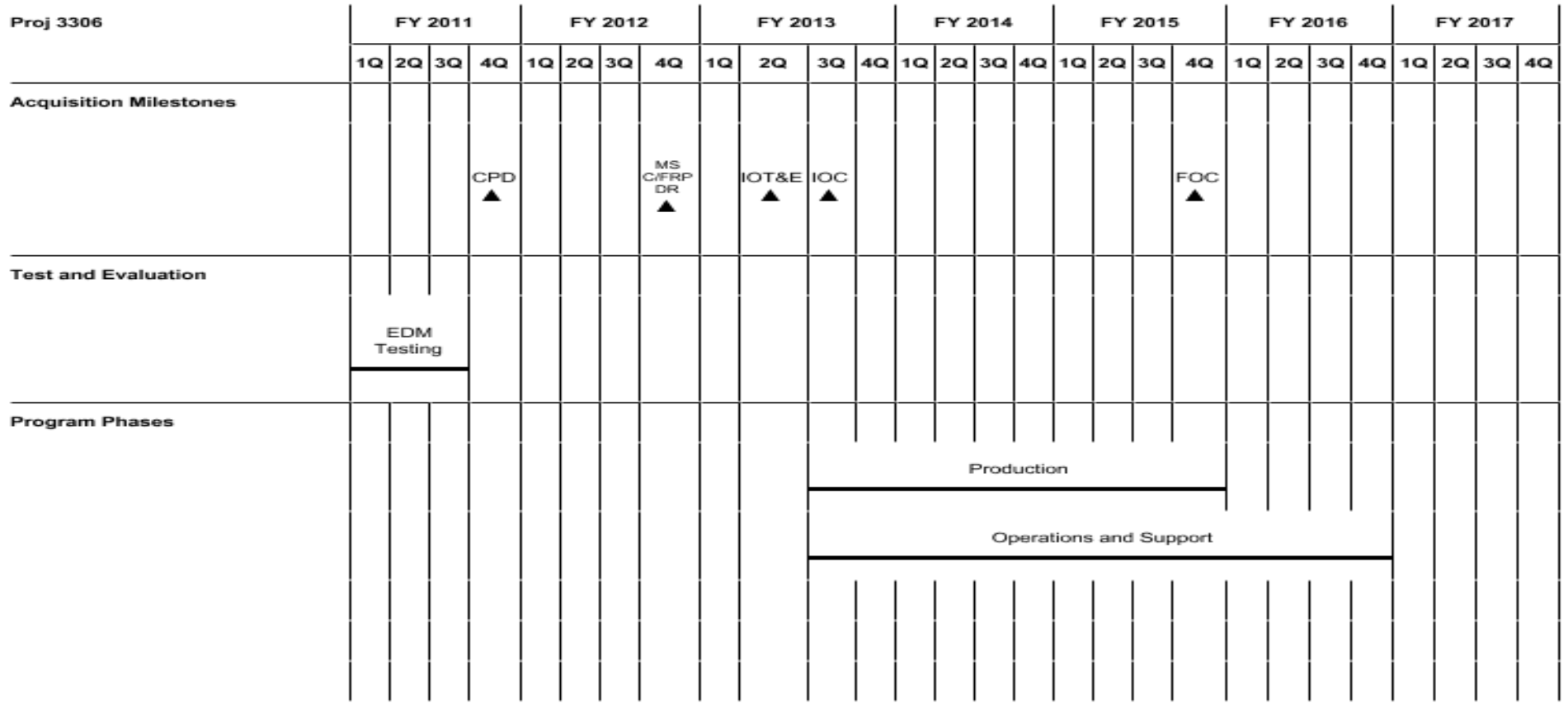
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	WR	NSWC:TBD	-	0.263	Feb 2012	0.282	Feb 2013	-		0.282	Continuing	Continuing	Continuing
		Subtotal	-	0.263		0.282		-		0.282			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	1.657		1.177		-		1.177			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604755N: *Ship Self Def (Detect & Cntrl)*	PROJECT 3306: *Integrated Swimmer Defense (ISD)*



2013DON - 0604755N - 3306

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604755N: *Ship Self Def (Detect & Cntrl)*	**PROJECT** 3306: *Integrated Swimmer Defense (ISD)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3306				
Acquisition Milestones: Increment I CPD	4	2011	4	2011
Acquisition Milestones: Increment I IOC	3	2013	3	2013
Acquisition Milestones: Increment I MS C/FRPDR	4	2012	4	2012
Acquisition Milestones: Increment I FOC	4	2015	4	2015
Acquisition Milestones: Increment I IOT&E	2	2013	2	2013
Test and Evaluation: Increment I EDM Testing	1	2011	3	2011
Program Phases: Increment 1 Production	3	2013	4	2015
Program Phases: Increment 1 Operations and Support	3	2013	4	2016

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	35.284	6.631	64.079	-	64.079	30.412	17.061	6.510	6.697	Continuing	Continuing
0167: *5in Rolling Airframe Missile*	1.537	1.280	1.297	-	1.297	1.322	1.345	1.343	1.369	Continuing	Continuing
0173: *NATO Sea Sparrow*	11.747	5.351	32.005	-	32.005	29.090	15.716	5.167	5.328	Continuing	Continuing
3342: *Griffin Missile*	22.000	-	30.777	-	30.777	-	-	-	-	0.000	52.777

A. Mission Description and Budget Item Justification

This program element provides funding for the development of systems that fulfill a portion of the third phase of the Ship Self Defense: Engage Hard Kill. Development in this line will focus on hard kill capabilities in which missiles are used to intercept incoming Anti-Ship Cruise Missiles (ASCM). ENGAGEMENT: Missile and system improvements necessary to meet their requirements are being addressed via NATO SEASPARROW Missile System (NSSMS) (0173), 5" Rolling Airframe Missile (RAM) (0167), Phalanx CIWS SeaRAM (9853A), Griffin and Spike missile (3342). Missile improvements include improved kinematic performance plus advanced seeker and low elevation fusing/warhead capability improvements. System improvements include incorporation of Phalanx detection capability into RAM system (SeaRAM), future concepts studies and self-destructing ammunition, and Future Phalanx Next Generation Improvements. New system developments include integration of Griffin missile into Patrol Craft (PC) and development of Spike missile system. Missile systems demonstration to include Javelin, Spike and Griffin to assess weapons effectiveness in a maritime environment.

B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	5.860	6.631	4.059	-	4.059
Current President's Budget	35.284	6.631	64.079	-	64.079
Total Adjustments	29.424	-	60.020	-	60.020
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	29.500	-			
• SBIR/STTR Transfer	-0.046	-			
• Program Adjustments	-	-	60.052	-	60.052
• Rate/Misc Adjustments	-	-	-0.032	-	-0.032
• Congressional General Reductions Adjustments	-0.030	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*

Change Summary Explanation

FY 2011 Reprogramming increase provides funding for Cyclone Patrol Craft (PC) integration with Griffin Missile System (GMS) and DEMO of Javelin, Spike and Griffin.

FY 2013 increase provides funds for Evolved Sea Sparrow Missile BLK1 (ESSM) Test, ESSM BLK 1 integration into SSDS MK2 upgrade on LHDs, risk reduction efforts for ESSM BLK 2,and Stalker Long Range Electro Optic(EO)/Infra Red (IR)/Laser Range Finder (LRF)System. Funding also increased for Cyclone Patrol Craft (PC) integration with Griffin Missile System (GMS) and development of Spike Missile System to support a CENTCOM requirement.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0167: *5in Rolling Airframe Missile*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0167: *5in Rolling Airframe Missile*	1.537	1.280	1.297	-	1.297	1.322	1.345	1.343	1.369	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The purpose of this program is to develop a surface-to-air self-defense system utilizing a dual mode, passive Radio Frequency/Infrared 5" RAM. The baseline system (Block 0) provides a self-defense capability against active radar-guided anti-ship missiles and was developed on an equal cost share basis with the Government of the Federal Republic of Germany. The RAM Block 1 provides a capability against passive anti-ship missiles, very low altitude missiles, and maneuvering missiles through the incorporation of an infrared all-the-way mode seeker and improved fuze. The RAM Block 1 MOD 3 upgrade program, which provides an additional capability against helicopters, aircraft and surface craft, is a Cooperative requirement of the U.S. and Federal Republic of Germany agreed to in a Memorandum of Agreement (MOA) signed by both parties. FY 2011-2017 funding continues development and testing of a Block 2 upgrade to the RAM. This upgrade will allow RAM to regain battle space lost to emerging, more maneuverable ASCM threats. This system is designed to counter anti-ship cruise missile raids and other threats to provide for ship survivability with accurate terminal guidance, proven lethality, and no shipboard post launch dependence.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: 5in Rolling Airframe Missile Block 2 Development and Test	1.452	1.165	1.184
Articles:	0	0	0
FY 2011 Accomplishments: FY 2011 funds continued development and support of RAM Block 2 upgrade.			
FY 2012 Plans: FY 2012 funds test efforts			
FY 2013 Plans: FY 2013 funds test efforts			
Title: 5in Rolling Airframe Missile Block 2 Travel	0.085	0.115	0.113
Articles:	0	0	0
FY 2011 Accomplishments: FY 2011 funds travel.			
FY 2012 Plans: FY 2012 funds travel			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0167: *5in Rolling Airframe Missile*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2013 funds travel			
Accomplishments/Planned Programs Subtotals	1.537	1.280	1.297

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN 5238: *RAM*	6.763	3.128	1.185	0.000	1.185	0.502	0.761	1.768	1.542	Continuing	Continuing
• WPN 2242: *RAM*	99.649	66.197	66.769	0.000	66.769	67.652	82.923	84.345	85.799	Continuing	Continuing

D. Acquisition Strategy

The RAM Program uses directed sole source contracts with Raytheon Missile Systems Company, Tucson, AZ.

E. Performance Metrics

Successfully achieve Milestone C. Successfully achieve Development/Operational Milestones.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0167: *5in Rolling Airframe Missile*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPFF	Raytheon:Tucson/ Louisville	7.434	-		-		-		-	0.000	7.434	
Primary Hardware Dev Support	WR	China Lake:CA	1.266	-		-		-		-	0.000	1.266	
Block 1 Eng/Interface Support	SS/CPFF	Raytheon:Tucson/ Louisville	0.400	-		-		-		-	0.000	0.400	
Block 1 MOD 3 Interface Support	C/CPFF	JHU/APL:MD	0.981	-		-		-		-	0.000	0.981	
Block 2 Upgrade	SS/CPAF	Raytheon:Tucson/ Louisville	134.529	-		-		-		-	0.000	134.529	
Block 2 Upgrade	WR	China Lake/ NRL/ Dahlgren:CA/VA	15.244	-		-		-		-	0.000	15.244	
Block 2 Upgrade	C/CPFF	JHU/APL:md	1.300	-		-		-		-	0.000	1.300	
Block 2 Product Support	WR	China Lake/NRL/ Dahlgren:CA/VA	3.577	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	164.731	-		-		-		-			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies and Analyses	Various	various:various	1.210	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.210	-		-		-		-			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DT&E/OT&E/FOT&E/	SS/CPAF	Raytheon:Tucson/ Louisville	13.787	1.113	Jan 2012	0.591	Nov 2012	-		0.591	0.000	15.491	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0167: *5in Rolling Airframe Missile*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
FOT&E	WR	China Lake/PHD:CA/ CA	4.674	-		-		-		-	0.000	4.674	
Test Support	WR	China Lake/PHD:CA/ CA	11.059	0.052	Jan 2012	0.593	Oct 2012	-		0.593	Continuing	Continuing	Continuing
Miscellaneous	Various	various:various	5.733	-		-		-		-	0.000	5.733	
		Subtotal	35.253	1.165		1.184		-		1.184			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	Allot	Program Office:VA	0.998	0.115	Jan 2012	0.113	Oct 2012	-		0.113	Continuing	Continuing	Continuing
Defense Acquisition Workforce Development Fund	Various	various:various	0.147	-		-		-		-	0.000	0.147	
		Subtotal	1.145	0.115		0.113		-		0.113			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	202.339	1.280		1.297		-		1.297			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0167: *5in Rolling Airframe Missile*

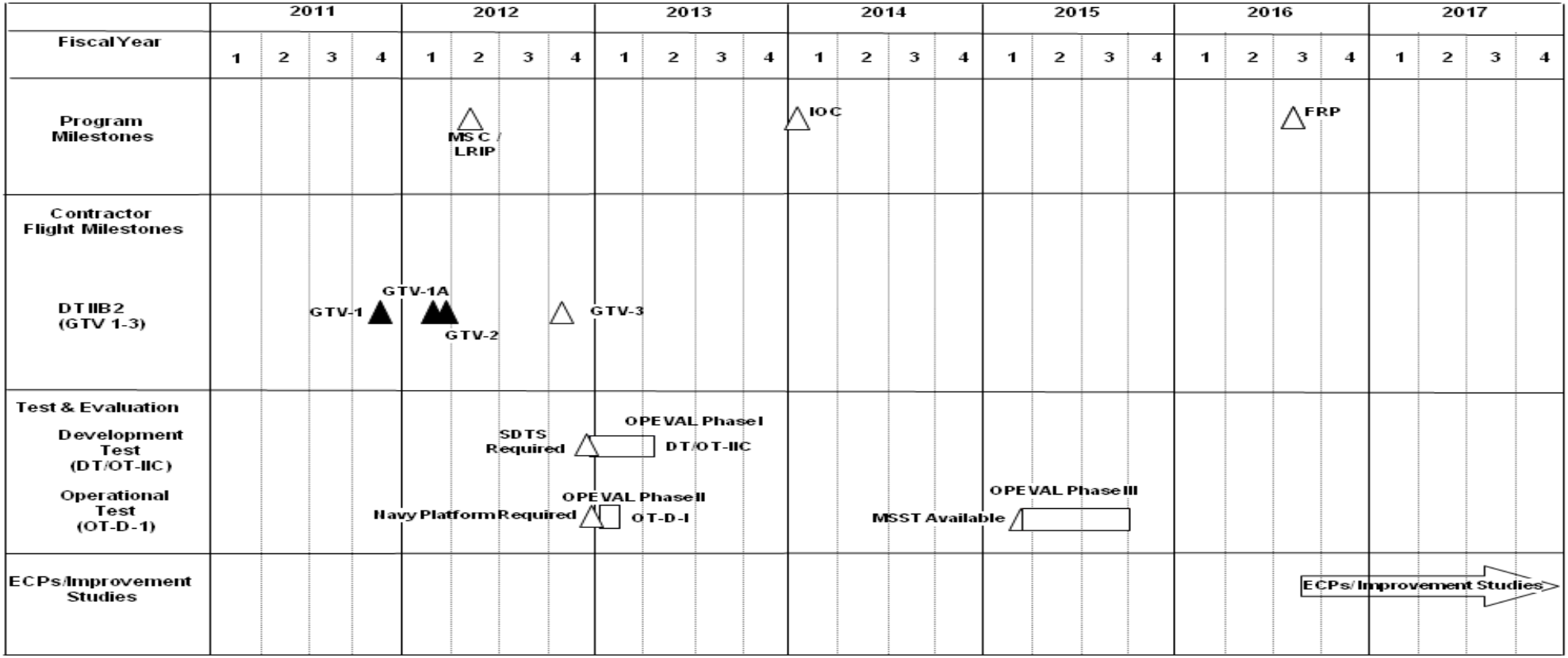


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	**PROJECT** 0167: *5in Rolling Airframe Missile*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0167				
MS C/LRIP	2	2012	2	2012
IOC	1	2014	1	2014
FRP	3	2016	3	2016
GTV-1 Firing	4	2011	4	2011
GTV-1A Firing	1	2012	1	2012
GTV-2 Firing	1	2012	1	2012
GTV-3 Firing	4	2012	4	2012
DT/OT-IIC	4	2012	2	2013
OT-D-1 Firing	4	2012	1	2013
MSST Testing	1	2015	4	2015
ECPs/Improvement Studies	3	2016	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0173: *NATO Sea Sparrow*	11.747	5.351	32.005	-	32.005	29.090	15.716	5.167	5.328	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses three (5) primary efforts to enhance ship self defense:

1. Evolved SEASPARROW Missile (ESSM): A cooperative effort among 10 NATO SEASPARROW Nations and the U.S., to improve the capability of the SEASPARROW Missile to counter the low altitude, highly maneuverable Anti-Ship Cruise Missile (ASCM) threat. The program consists of evolving the SEASPARROW Missile through the development of a new rocket motor with tail control; thrust vector control and ordnance (warhead) upgrade; modifications to the MK 41 Vertical Launch System (VLS) to fire from a single cell with 4 ESSM (QuadPack); and modifications to the NSSMS to provide ESSM capability.

2. NATO SEASPARROW - MK 91 Rearchitecture: The MK 91 Rearchitecture Program integrates NSSMS into the Ship Self Defense System (SSDS) Architecture to provide ship missile defense utilizing an open architected system Technical Design Agent.

3. NATO SEASPARROW Objective Configuration (OC). The OC Program consists of segmenting and automating the existing MK 57 NSSMS radars (MK 9 Track illuminator System) and launchers (MK 29 Guided Missile Launching System). The program eliminates all MK 57 watch stations, reduces the required system hardware.

4. STALKER LONG RANGE Electro Optic(EO)/Infra Red (IR)/Laser Range Finder (LRF) SYSTEM: Detects, acquires, classifies, identifies and determines intent of conventional,asymmetrical and advanced threats supporting Anti-Air Warefare (AAW), Anti-Surface Warefare (ASUW), Anti-terrorism/Force Protection (AT/FP) and Global War on Terrorism. Long Range Visible/Infra Red Sensors and Laser Range Finder provide multi-spectral target imagery and accurate range data in non-benign environments. Classification to the horizon, visual resolution of 1ft @ 10 nm and range resolution/rate within 1 ft/1kt/nm.

5. ESSM Block 2 Risk Reduction: ESSM Block 2 upgrade is a cooperative effort between U.S Navy and NATO SEASPARROW Consortium Nations. ESSM Block 2 upgrade replaces the largely obsolete guidance section with a dual mode Active/Semi-Active X-Band seeker capable of defeating future threat capabilities within the existing envelope, including; smaller signatures, increased raid sizes, and adverse environments including countermeasures. Threat types include; advanced Anti-Ship Cruise Missile (ASCM)s, Anti-Ship Ballistic Missiles (ASBMs), surface and asymmetrical.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: NATO Sea Sparrow integration testing	4.000	5.096	9.356
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue ESSM SSDS integration testing on CVN platforms. Conduct US-unique DT/OT firings from SDTS and carriers (DT/OT-D2, DT/OT-D3). Conduct ESSM Aegis integration testing and DT/OT firings on Cruisers and Destroyers and SDTS (DT/OT-D4, DT/OT-D5, DT/OT-D6) in support of Aegis Modernization Program. Conduct ESSM DT/OT firings on SDTS (DT/OT-D7) in support of SSDS Open Architecture integration and uplink development. This provides for the U.S. share of cooperative efforts associated with ESSM engineering studies and other development initiatives. ***FY 2012 Plans:*** Continue ESSM SSDS integration testing on CVN platforms. Conduct US-unique DT/OT firings from SDTS and carriers (DT/OT-D2, DT/OT-D3). Conduct ESSM Aegis integration testing and DT/OT firings on Cruisers and Destroyers and SDTS (DT/OT-D4, DT/OT-D5, DT/OT-D6) in support of Aegis Modernization Program. Conduct ESSM DT/OT firings on SDTS (DT/OT-D7) in support of SSDS Open Architecture integration and uplink development. This provides for the U.S. share of cooperative efforts associated with ESSM engineering studies and other development initiatives. ***FY 2013 Plans:*** Continue ESSM SSDS integration testing on CVN platforms. Conduct US-unique DT/OT firings from SDTS and carriers (DT/OT-D2, DT/OT-D3). Conduct ESSM Aegis integration testing and DT/OT firings on Cruisers and Destroyers and SDTS (DT/OT-D4, DT/OT-D5, DT/OT-D6) in support of Aegis Modernization Program. Conduct ESSM DT/OT firings on SDTS (DT/OT-D7) in support of SSDS Open Architecture integration and uplink development. This provides for the U.S. share of cooperative efforts associated with ESSM engineering studies and other development initiatives.			
Title: NATO SEASPARROW Objective Configuration ***Articles:*** ***Description:*** NATO SEASPARROW Objective Configuration (OC). The OC Program consists of segmenting and automating the existing MK 57 NSSMS radars (Mk 9 Track illuminator System) and launchers (Mk 29 Guided Missile Launching System). The program eliminates all MK 57 watch stations, reduces the required system hardware. ***FY 2013 Plans:*** Begin engineering development of the OC. Specific efforts in 2013 will include requirements definition, completion of the requirements review followed by design definition with the preliminary design review completing in the 4th Quarter of FY 13.	-	-	8.903 0
Title: NATO Sea Sparrow Combat System Integraton Technical Direction Agent (TDA) ***Articles:*** ***FY 2011 Accomplishments:*** Provides funding for the Combat System Integration TDA who will provide engineering support for combat system performance and risk mitigation. The TDA will leverage it's technical expertise & leadership to cover a broad range of activities such as	0.247 0	0.255 0	0.263 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
defining near-term and future requirements for current systems and future upgrades, maintain system performance models to evaluate system improvements, threat changes and operational environment conditions, verify models and simulations to promote program success through application of rigorous and disciplined systems engineering principles and practices in a consistent manner across system elements over the program life cycle, make prudent use of authoritative technical expertise for advice and independent review, identify a range of technically acceptable alternatives to resolve engineering issues, assist in development of T&E planning, and continue to maintain NSPO essential research and engineering capabilities and corporate memory. ***FY 2012 Plans:*** Provides funding for the TDA who will provide engineering support for combat system performance and risk mitigation. ***FY 2013 Plans:*** Provides funding for the TDA who will provide engineering support for combat system performance and risk mitigation.			
Title: STALKER LONG RANGE EO/IR/LRF SYSTEM ***Articles:*** ***Description:*** Description: STALKER LONG RANGE EO/IR/LRF SYSTEM: Detects, acquires, classifies, identifies and determines intent of conventional,asymmetrical and advanced threats supporting AAW, ASUW, AT/FP and GWOT. Long Range Visible/Infra Red Sensors and Laser Range Finder provide multi-spectral target imagery and accurate range data in non-benign environments. Classification to the horizon, visual resolution of 1ft @ 10 nm and range resolution/rate within 1 ft/1kt/nm. ***FY 2011 Accomplishments:*** N/A ***FY 2013 Plans:*** FY 2013 Plans: Productize and test Stalker Long Range EO/IR/LRF system for LLTV replacement in the fleet.	7.500 0	-	5.483 0
Title: Evolved SEASPARROW Blk 2 Risk Reduction ***Articles:*** ***FY 2013 Plans:*** Perform Risk Reduction with consortium partners to reduce technology risk, determine and mature the appropriate set of technologies to be integrated into a full system.	-	-	8.000 0
Accomplishments/Planned Programs Subtotals	11.747	5.351	32.005

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN 2307: *ESSM*	45.260	48.486	58.194	0.000	58.194	70.822	121.908	197.768	119.778	0.000	1,417.745
• OPN 5237: *NATO SEA SPARROW*	10.106	8.926	8.960	0.000	8.960	36.229	28.520	40.606	31.586	0.000	304.047

D. Acquisition Strategy

ESSM is a directed sole source contract to Raytheon Missile Systems Company. The MK 29 ESSM Launcher Upgrade and REARC/SSDS Integration effort was a directed sole source contract to Raytheon Company Integrated Defense System.

E. Performance Metrics

Successfully complete Developmental Test/Operational testing.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ESSM-Primary Hardware Development	C/CPAF	Raytheon:Tucson	143.356	-		-		-		-	0.000	143.356	
ESSM-Primary Hardware Development	C/CPAF	Raytheon:Tuscon	3.746	-		-		-		-	0.000	3.746	3.746
Amphib Self-Defense PRA Imp	Various	various:various	1.996	-		-		-		-	0.000	1.996	11.200
Ancillary Hardware Development	SS/CPAF	Lockhead/ UDLP:various	46.706	-		-		-		-	0.000	46.706	46.706
Systems Engineering	Various	various:various	22.622	-		-		-		-	0.000	22.622	22.622
MK 29/ESSM Launcher upgrade	C/CPAF	Raytheon Sys:Tucson	8.521	-		-		-		-	0.000	8.521	8.521
NATO-Primary Hdw Dev	SS/CPAF	Raytheon Sys:Tucson	30.627	-		-		-		-	0.000	30.627	30.627
Software Development/Test	SS/CPAF	Raytheon Sys:Tucson	7.691	-		-		-		-	0.000	7.691	
Systems Engineering/Firing Spt	WR	Corona:CA	6.640	0.600	Nov 2011	0.685	Dec 2012	-		0.685	0.000	7.925	
NATO OC - Hardware	SS/CPAF	Raytheon:RI	-	-		1.000	Nov 2012	-		1.000	0.000	1.000	
NATO OC System Engineering	SS/CPAF	Raytheon:RI	-	-		1.653	Nov 2012	-		1.653	0.000	1.653	
NATO OC - Software	SS/CPAF	Raytheon:RI	-	-		4.938	Nov 2012	-		4.938	0.000	4.938	
Stalker System Engineering	TBD	TBD:TBD	-	-		3.233	Nov 2012	-		3.233	0.000	3.233	
Stalker Hardware Engineering	TBD	TBD:TBD	7.500	-		1.250	Nov 2012	-		1.250	0.000	8.750	
Stalker Software Engineering	TBD	TBD:TBD	2.000	-		0.500	Nov 2012	-		0.500	0.000	2.500	
ESSM Blk 2 Risk reduction	WR	various:various	-	-		8.000	Nov 2012	-		8.000	0.000	8.000	
		Subtotal	281.405	0.600		21.259		-		21.259	0.000	303.264	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Support	WR	NSWC PHD:CA	3.568	-		-		-		-	0.000	3.568	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Engr Support1	WR	various:various	4.207	-		-		-		-	0.000	4.207	
MK 29/ESSM Launcher Support	WR	Dahlgren/PHD:VA/CA	0.375	-		-		-		-	0.000	0.375	
Engr Support2	WR	various:various	0.195	-		-		-		-	0.000	0.195	0.195
NATO-MK 91/SSDS Integ	WR	Dahlgren/PHD:VA/CA	0.834	-		-		-		-	0.000	0.834	
Engr Support3	WR	various:various	6.364	-		-		-		-	0.000	6.364	
NATO System TDA	SS/FP	APL:MD	1.220	0.255	Dec 2011	0.263	Nov 2012	-		0.263	Continuing	Continuing	Continuing
NATO OC	SS/FFP	APL:MD	-	-		0.300	Nov 2012	-		0.300	0.000	0.300	
Stalker -ISEA/TDA/RM&A	SS/FFP	various:various	-	-		0.300	Nov 2012	-		0.300	0.000	0.300	
NATO Engr Support OC	WR	various:various	-	-		0.400	Nov 2012	-		0.400	0.000	0.400	
		Subtotal	16.763	0.255		1.263		-		1.263			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC CL:CA	15.698	1.217	Oct 2011	1.568	Dec 2012	-		1.568	Continuing	Continuing	Continuing
OPEVAL/TECHEVAL/Test Firings	WR	Corona, IHD, Dahlgren, SNSWC, PHD):various	11.878	-		2.310	Nov 2012	-		2.310	0.000	14.188	
Developmental Test & Evaluation	SS/FFP	APL:MD	2.979	0.510	Oct 2011	0.659	Oct 2012	-		0.659	Continuing	Continuing	Continuing
ESSM Test & Evaluation	C/CPAF	Raytheon:Tuscon	7.998	2.026	Nov 2011	3.056	Nov 2012	-		3.056	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	Dahlgren:VA	0.418	-		-		-		-	0.000	0.418	0.836
ESSM Test & Evaluation	WR	Dahlgren/PHD:VA/CA	-	0.543	Nov 2011	0.560	Nov 2012	-		0.560	0.000	1.103	
NATO OC - Test & Evaluation	WR	Dahlgren/PHD:VA/CA	-	-		0.469	Nov 2012	-		0.469	0.000	0.469	
Stalker - Test & eval	WR	TBD:TBD	-	-		0.200	Nov 2012	-		0.200	0.000	0.200	
		Subtotal	38.971	4.296		8.822		-		8.822			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ESSM-ENGR SPT	WR	various:various	4.913	-		-		-		-	0.000	4.913	
ESSM-PM SPT	WR	various:various	0.498	-		-		-		-	0.000	0.498	0.498
ESSM-Support and Performing Activity	Allot	PHD/NAWC CL/ APL:CA/MD	13.951	-		0.256	Dec 2012	-		0.256	Continuing	Continuing	Continuing
ESSM-Travel	Allot	Program Office:VA	2.782	0.200	Nov 2011	0.205	Oct 2012	-		0.205	Continuing	Continuing	Continuing
ESSM-Misc	Various	various:various	2.065	-		-		-		-	0.000	2.065	2.065
NATO Travel/Misc	Various	various:various	1.831	-		0.200	Oct 2012	-		0.200	0.000	2.031	
Defense Acquisition Workforce Development Fund	Various	various:various	0.047	-		-		-		-	0.000	0.047	
		Subtotal	26.087	0.200		0.661		-		0.661			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	363.226	5.351		32.005		-		32.005			

Remarks

Various used for multiple vendors and location under threshold.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

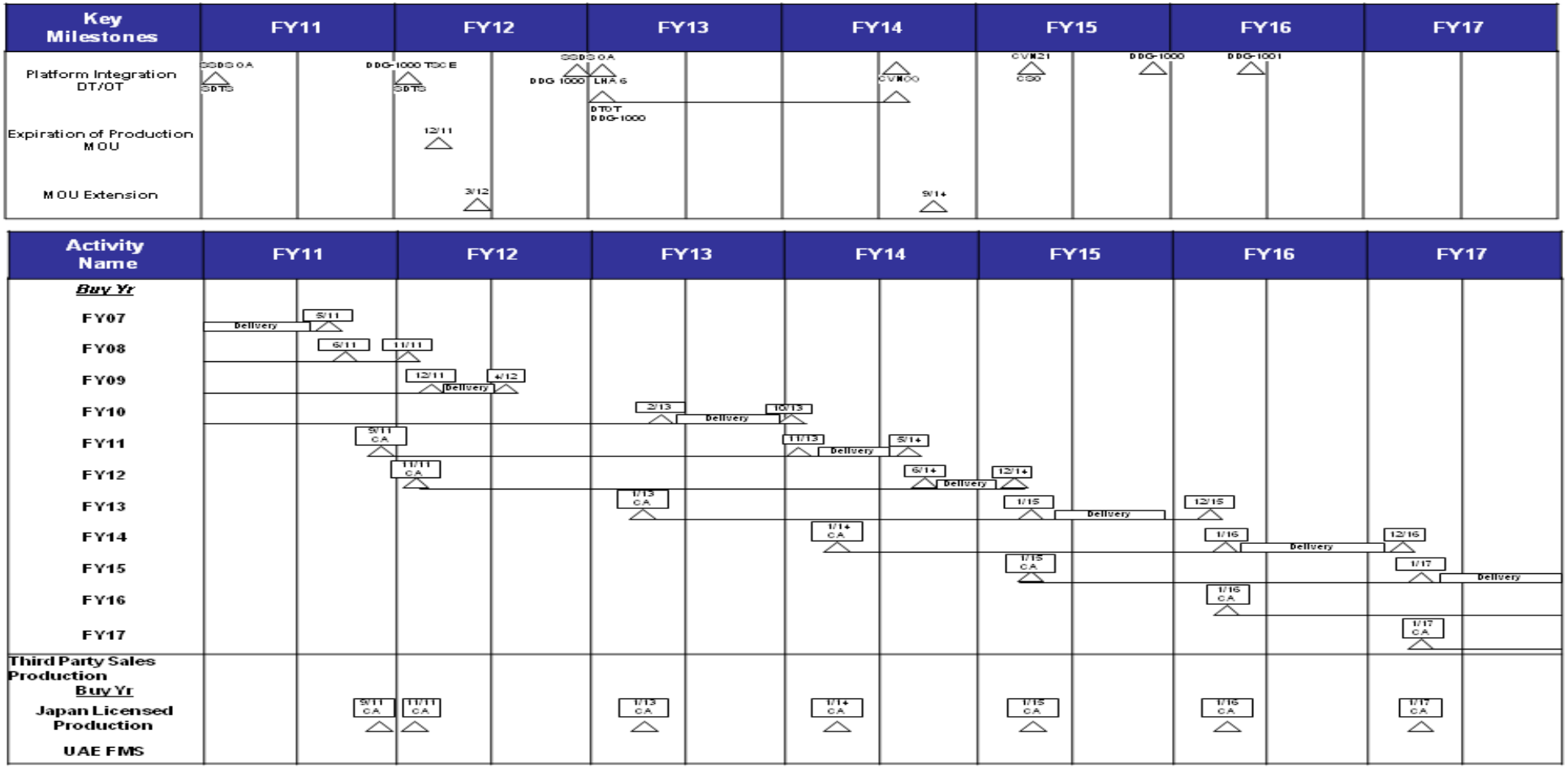


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 0173: *NATO Sea Sparrow*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 0173				
Platform Intergration DT/OT	1	2011	2	2016
Expiration of Production MOU	1	2012	1	2012
MOU Extension	2	2012	3	2014
Page/Group/Row: FY 07FRP DELIVERIES	3	2011	3	2011
Page/Group/Row: FY 08 FRP DELIVERIES	3	2011	1	2012
Page/Group/Row: FY 09 FRP DELIVERIES	1	2012	3	2012
Page/Group/Row: FY 10 FRP DELIVERIES	3	2012	3	2013
Page/Group/Row: FY 11 FRP CONTRACT AWARD	4	2011	4	2011
Page/Group/Row: FY 11 FRP DELIVERIES	4	2013	1	2014
Page/Group/Row: FY 12 FRP CONTRACT AWARD	1	2012	1	2012
Page/Group/Row: FY 12 FRP DELIVERIES	1	2014	3	2014
Page/Group/Row: FY 13 FRP CONTRACT AWARD	1	2013	1	2013
Page/Group/Row: FY 13 FRP DELIVERIES	1	2015	1	2016
Page/Group/Row: FY 14 FRP CONTRACT AWARD	1	2014	1	2014
Page/Group/Row: FY14 FRP DELIVERIES	1	2016	3	2016
Page/Group/Row: FY 15 FRP CONTRACT AWARD	1	2015	1	2015
Page/Group/Row: FY15 FRP DELIVERIES	1	2017	3	2017
Page/Group/Row: FY 16 FRP CONTRACT AWARD	1	2016	1	2016
Page/Group/Row: FY 17 FRP CONTRACT AWARD	1	2017	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 3342: *Griffin Missile*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3342: *Griffin Missile*	22.000	-	30.777	-	30.777	-	-	-	-	0.000	52.777
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

PEO IWS 3.0 established a new program office IWS 3S for Surface Missions which is primarily focused on developing and delivering Counter-Swarm Small Boat defense cpabilities for the Surface Fleet. IWS 3S has three (3) efforts supporting this mission area listed below:

1. Rapid Deployment Capabilities (RDCs):
- Cyclone Patrol Craft (PC) with Griffin Missile System (GMS)

2. DEMO (Javelin-Spike-Griffin)

3. NAWC China Lake Spike Shoulder Launched Missile System

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Cyclone Patrol Craft (PC) with Griffin Missile System (GMS)	17.000	-	8.100
Articles:	0		0
FY 2011 Accomplishments: Preliminary system requirements determination, market research and team development.			
FY 2013 Plans: Complete lead PC design, develop training and logistics support, obtain safety approvals for system deployment and formulate the OCONUS AIT plan. Procurement planning for forward deployed PC hardware.			
Title: DEMO (Javelin-Spike-Griffin)	5.000	-	-
Articles:	0		
FY 2011 Accomplishments: Test planning, test article procuremeent, target allocation, range coordination and developed data collection plan.			
Title: Spike Shoulder Launched Missile System	-	-	22.677
Articles:			0
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 3342: *Griffin Missile*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Missile modifications, launcher development, architecture and warhead upgrade analysis. Plan environmental and safety qualification testing.			
Accomplishments/Planned Programs Subtotals	22.000	-	30.777

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• WPN/2264: *Griffin*	0.000	0.000	0.000	0.000	0.000	8.000	0.500	0.500	0.500	0.000	9.500
• OPN/5421: *Griffin*	0.000	0.000	0.000	0.000	0.000	13.200	17.000	0.000	0.000	0.000	30.200

D. Acquisition Strategy

The RDC'S will use a sole contract via the U.S. Army Joint Program Office to procure in production Griffin B Block II Missles. In addition, the NSWC DD Battle Management System (BMS) will be integrated as the Weapon Control and Launcher Control System. IWS 3L will support 3S in developing and delivering launchers with gas management systems.

China Lake will develop a shoulder launcher for Spike missile.

E. Performance Metrics

Successful completion of DT/OA for Griffin missile. Continued development of shoulder launcher and integration of Spike missile.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 3342: *Griffin Missile*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PC Integration	WR	PHD:CA	-	-		3.113	Nov 2012	-		3.113	0.000	3.113	
Spike Development	WR	China Lake:CA	-	-		21.777	Nov 2012	-		21.777	0.000	21.777	
PC Integration	WR	Dahlgren:VA	-	-		4.687	Nov 2012	-		4.687	0.000	4.687	
		Subtotal	-	-		29.577		-		29.577	0.000	29.577	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	Various	various:various	-	-		1.200	Oct 2012	-		1.200	0.000	1.200	
		Subtotal	-	-		1.200		-		1.200	0.000	1.200	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		30.777		-		30.777	0.000	30.777	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 3342: *Griffin Missile*

Spike Development Schedule

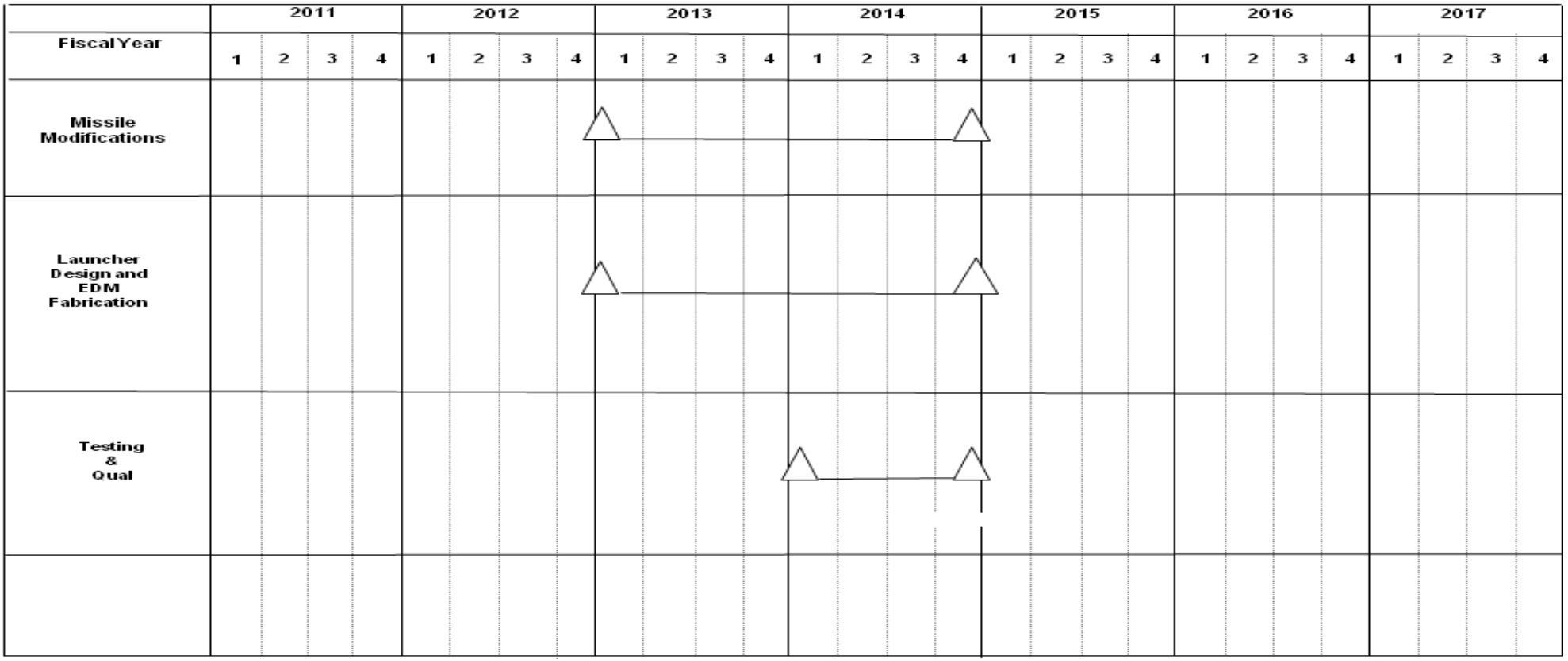


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	PROJECT 3342: *Griffin Missile*

PC Griffin Schedule

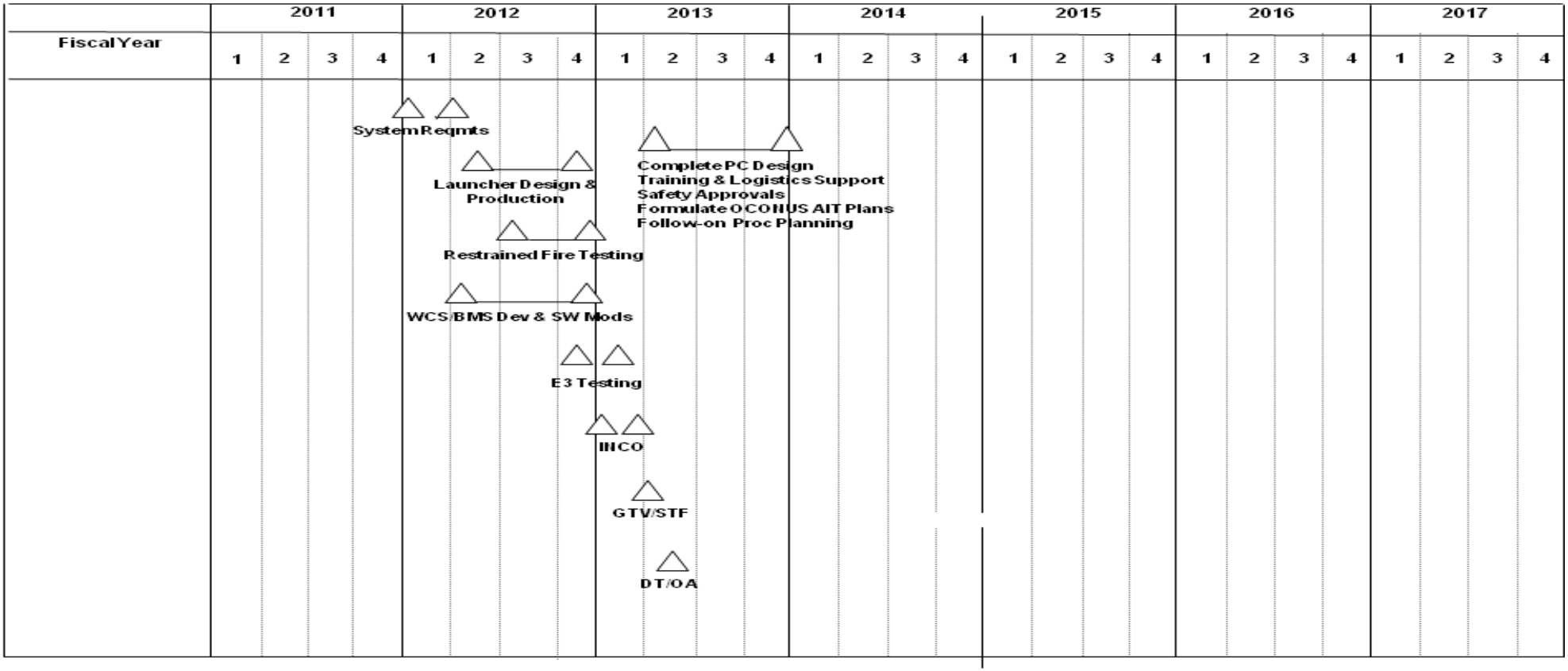


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604756N: *Ship Self Def (Engage: Hard Kill)*	**PROJECT** 3342: *Griffin Missile*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3342				
Missile Modifications Spike	1	2013	4	2014
Launcher Design and EDM Fabrication	1	2013	4	2014
Test Planning	1	2013	4	2014
System Requirements PC	1	2012	2	2012
Launcher Design	2	2012	4	2012
Restrained Fire Testing	3	2012	4	2012
WCS/BMS Dev and SW Mods	2	2012	4	2012
E3 Testing	4	2012	1	2013
INCO	1	2013	1	2013
GTV/STF	2	2013	2	2013
DT/OA	2	2013	2	2013
Complete PC Design, Trng, Safety, AIT Plans, Proc Planning	2	2013	4	2013

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/EW)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	90.484	184.087	151.489	-	151.489	169.224	177.289	128.965	141.605	Continuing	Continuing
0954: *Shipboard EW Improvement Program*	13.200	18.438	18.494	-	18.494	15.935	15.675	15.813	16.115	Continuing	Continuing
2190: *NULKA Decoy*	5.204	3.520	2.352	-	2.352	2.344	5.276	2.221	7.207	Continuing	Continuing
3227: *SEWIP Block 2*	57.389	43.894	29.937	-	29.937	3.089	0.744	0.676	0.691	Continuing	Continuing
3316: *Advanced Offboard EW*	-	22.967	23.211	-	23.211	23.793	72.341	66.058	72.546	Continuing	Continuing
3321.: *SEWIP Block 3*	14.691	95.268	77.495	-	77.495	124.063	83.253	44.197	45.046	Continuing	Continuing

A. Mission Description and Budget Item Justification

0954 - The Surface Electronic Warfare Improvement Program (SEWIP) provides enhanced Electronic Warfare (EW) capabilities to existing and new ship combat systems to improve Anti Ship Missile Defense (ASMD), counter-targeting and counter-surveillance capabilities, as well as improved battlefield situational awareness. The SEWIP employs an evolutionary acquisition and incremental development strategy to upgrade surface EW capabilities via a series of block upgrades to the AN/SLQ-32(V) system, and field EW improvements to keep pace with the ASMD threat.

2190 - The Offboard Active Decoy (NULKA) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. NULKA is designed to counter a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket.

3227 - SEWIP Block 2 is a separate program to develop an upgraded antenna, receiver, and combat system interface for SLQ-32. The upgrades are necessary in order to pace the threat, improving detection, accuracy, and mitigation of Electromagnetic Interference (EMI).

3316 - The Advanced Offboard EW program is for the development of a long duration, offboard decoy utilizing one of a family of payload types in support of countering identified EW gaps (additional details classified). Development will include the vehicle shipboard control and integration with ship systems and sensors.

3321 - SEWIP Block 3 is a separate program that will provide an updated Electronic Attack (EA) capability to the SLQ-32(V) Electronic Warfare (EW) suite. The program will provide a new integrated EA transmitter, array, and associated techniques to enhance surface EW capability for legacy and new ship combat systems.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/EW)*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	84.525	184.095	178.986	-	178.986
Current President's Budget	90.484	184.087	151.489	-	151.489
Total Adjustments	5.959	-0.008	-27.497	-	-27.497
• Congressional General Reductions	-	-0.008			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	10.000	-			
• SBIR/STTR Transfer	-1.621	-			
• Program Adjustments	-	-	-26.456	-	-26.456
• Rate/Misc Adjustments	-	-	-1.041	-	-1.041
• Congressional General Reductions Adjustments	-0.420	-	-	-	-
• Congressional Directed Reductions Adjustments	-2.000	-	-	-	-

Change Summary Explanation

Program changes in FY11 include adding funds to SEWIP BLK III TEWM effort. Program changes FY13 include adding additional funding for CNO endorsed TEWM speed to fleet initiative.

Technical: Realigned FY 13 funding to a classified effort for proper execution.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0954: *Shipboard EW Improvement Program*	13.200	18.438	18.494	-	18.494	15.935	15.675	15.813	16.115	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

SEWIP provides enhanced EW capabilities to existing and new ship combat systems to improve ASMD, counter-targeting and counter surveillance capabilities, as well as improved situational awareness. The SEWIP employs an evolutionary acquisition and incremental development strategy to upgrade surface EW capabilities via a series of block upgrades to the AN/SLQ-32(V) system, and field EW improvements to keep pace with the ASMD threat. SEWIP will provide required EW capabilities and will incorporate technology advances as they become available to provide incremental upgrades and improvements in performance.

SEWIP Block 1 is segmented into Block 1A, and Block 1B, ALQ-210 integration, and EW Rapid Capability Insertion Process (RCIP). Block 1A upgrades the AN/SLQ-32 pulse-processing computers and the display console allowing the system to more quickly identify threats and better display the information to the operator. Block 1A Electronic Surveillance Enhancements (ESE) pulse-processing computers and the Improved Control and Display (ICAD) Human System Interface (HSI) console partially open the electronic warfare system architecture to support subsequent EW capability upgrades. Block 1B adds adjunct sensors for special signal intercept, including Specific Emitter Identification (SEI), and High Gain High Sensitivity (HGHS) (Block 1B3), a critical improvement for threat correlation, situational awareness, and extending the battle space. ALQ-210 integration will develop capability to use and integrate Electronic Warfare Support (ES) controls and data between AN/SLQ-32 and the ALQ-210 on the MH60R. EW RCIP identifies joint force capability gaps, prioritizes those gaps based on fleet input and critical technology maturity, and develops upgrades to the AN/SLQ-32(V) product line for fielding to address those gaps.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Block 1B3	4.718	10.037	6.406
Articles:	0	0	0
FY 2011 Accomplishments: Completed Engineering and Manufacturing Development (E&MD) by taking delivery of Engineering Development Models (EDMs). Conducted and completed operational assessment of EDMs.			
FY 2012 Plans: Commence integration and testing of EDMs.			
FY 2013 Plans: Continue integration and testing.			
Title: EW RCIP	-	3.647	8.898
Articles:		0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2012 Plans: Award E&MD contract for RCIP #1. Identify and prioritize capability gaps in support of release of Request for Information/Request for Proposal (RFI/RFP) for future (RCIP #2) RCIP candidates. ***FY 2013 Plans:*** Continue E&MD of EW RCIP #1. Award E&MD contract for RCIP #2. Identify and prioritize capability gaps in support of release of RFI/RFP for future (RCIP #3) RCIP candidates.			
Title: V(4) Electronic Surveillance Enhancements (ESE) ***Articles:*** ***FY 2011 Accomplishments:*** Completed development of V(4) ESE upgrade and took delivery of EDMs. ***FY 2012 Plans:*** Conduct At-Sea testing. Analyze and correct deficiencies.	6.432 0	1.624 0	-
Title: Shipboard Integration ***Articles:*** ***FY 2011 Accomplishments:*** Continued development to use and integrate ES controls and data between ALQ210 (on the MH60R) and AN/SLQ-32. ***FY 2012 Plans:*** Continue development of capability to use and integrate ES controls and data between ALQ210 (on the MH60R) and AN/SLQ-32. ***FY 2013 Plans:*** Continue development of capability to use and integrate ES controls and data between ALQ210 (on the MH60R) and AN/SLQ-32.	2.050 0	3.130 0	3.190 0
Accomplishments/Planned Programs Subtotals	13.200	18.438	18.494

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0204228N/2312: *OPN BA-2 AN/ SLQ-32(V)*	23.131	39.902	92.270	0.000	92.270	200.617	277.028	352.376	357.611	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 24575N & 72827N/1C2C: *OMN BA-1 AN/SLQ-32(V)*	7.887	10.444	7.698	0.000	7.698	8.706	8.645	8.975	9.800	Continuing	Continuing

D. Acquisition Strategy

SEWIP will develop Block upgrades to SLQ-32 based on integrating technology advances and adding functional capabilities in an incremental fashion. Each Block and Sub-Block will be developed and contracted in an individual yet coordinated and overlapping fashion.

E. Performance Metrics

Successfully complete 1B3 Operational Assessment prior to Milestone (MS) C.
Successfully achieve Block 1B3 Milestone C / Low Rate Initial Production (LRIP) Decision Review (DR).
Successfully complete Block 1B3 Operational Evaluation (OPEVAL).
Successfully achieve Block 1B3 Full Rate Production (FRP) DR.

Successfully identify RCIP capabilities.
Successfully identify and assess RCIP Science & Technology candidates.
Award E&MD contract for RCIP #1.
Successfully demonstrate and validate RCIP capabilities.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ancillary Hardware Development	Various	Various:Various	151.420	-		-		-		-	0.000	151.420	
ESE Development	SS/CPFF	Northrop Grumman:Goleta, CA	12.415	0.205	Jan 2012	-		-		-	0.000	12.620	
ICAD Development	SS/CPFF	GD-AIS:Fairfax, VA	11.747	-		-		-		-	0.000	11.747	
ESE Development (Block 1A)	SS/CPFF	Northrop Grumman:Goleta, CA	0.471	-		-		-		-	0.000	0.471	
System Integrator	C/CPAF	GD-AIS:Fairfax, VA	13.798	-		-		-		-	0.000	13.798	
1B Development	SS/CPIF	GD-AIS:Fairfax, VA	82.231	1.801	Dec 2011	1.832	Nov 2012	-		1.832	Continuing	Continuing	Continuing
Q-70 Mods	C/CPFF	LM-EAGAN:Eagan, MN	3.491	-		-		-		-	0.000	3.491	
Block 2 Study/Development	C/CPIF	BAE:Nashua, NH	0.336	-		-		-		-	0.000	0.336	
Rapid Capability Insertion Process	TBD	TBD:TBD	-	3.637	Jun 2012	5.206	Nov 2012	-		5.206	Continuing	Continuing	Continuing
ALQ210 Integration	WR	NSWC Dahlgren:Dahlgren, VA	4.050	3.130	Nov 2011	3.190	Nov 2012	-		3.190	Continuing	Continuing	Continuing
		Subtotal	279.959	8.773		10.228		-		10.228			

Remarks

Ancillary Hardware Development included several contractors from the original development of the SLQ-32 system. This line has been left on the exhibit to track Prior year costs of this PU.

Product Development for RCIP is in a competitive status.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Integrated Logistics Support	WR	NSWC Crane, DD, NRL, APL:Crane, IN; Dahlgren, VA; Washington, DC; Laurel,MD	9.912	-		-		-		-	0.000	9.912	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Integrated Logistics Support	WR	NSWC Crane:Crane, IN	1.099	0.910	Nov 2011	0.234	Nov 2012	-		0.234	Continuing	Continuing	Continuing
Block 1 Integrated Logistics Support	WR	NSWC DD:Dahlgren, VA	0.293	-	Nov 2011	-		-		-	0.000	0.293	
Block 1 Government Engineering Support	WR	NSWC Crane, DD, NRL, APL:Crane, IN; Dahlgren, VA; Washington, DC; Laurel,MD	34.783	-		-		-		-	0.000	34.783	
Block 1 Government Engineering Support	WR	NSWC Dahlgren:Dahlgren, VA	0.579	0.947	Dec 2011	0.901	Nov 2012	-		0.901	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	WR	NSWC Crane:Crane, IN	0.606	1.269	Nov 2011	0.672	Nov 2012	-		0.672	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	WR	NRL:Washington, DC	0.602	0.615	Dec 2011	0.569	Nov 2012	-		0.569	Continuing	Continuing	Continuing
Block 1 Government Engineering Support	SS/CPFF	APL:Laurel, MD	-	0.447	Dec 2011	0.659	Nov 2012	-		0.659	Continuing	Continuing	Continuing
Block 1 SIPRNET Access	WR	ARL:Adelphi, MD	0.046	0.092	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Block 2 Integrated Logistics Support	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	0.540	-		-		-		-	0.000	0.540	
Block 2 Government Engineering Support	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	2.496	-		-		-		-	0.000	2.496	
		Subtotal	50.956	4.280		3.035		-		3.035			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Integration and Test	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	0.853	-		-		-		-	0.000	0.853	
Developmental Test & Evaluation	Various	Various:Various	8.958	-		-		-		-	0.000	8.958	
Block 1A Test Planning/T&E Events	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	11.036	-		-		-		-	0.000	11.036	
Block 1B Test Planning/T&E Events	WR	NSWC Crane, DD, NRL, NAVAIR, OPTEVFOR, NSWC PHD:Crane, IN; Dahlgren, VA; Washington, DC; MD; CA	9.567	-		-		-		-	0.000	9.567	
Block 1B Test Planning/T&E Events	WR	NSWC Dahlgren:Dahlgren, VA	0.291	0.497	Dec 2011	0.220	Nov 2012	-		0.220	Continuing	Continuing	Continuing
Block 1B Test Planning/T&E Events	WR	NSWC Crane:Crane, IN	0.285	1.086	Nov 2011	0.535	Nov 2012	-		0.535	Continuing	Continuing	Continuing
Block 1B Test Planning/T&E Events	WR	NRL:Washington, DC	0.520	1.105	Dec 2011	1.767	Nov 2012	-		1.767	Continuing	Continuing	Continuing
Block 1B Test Planning/T&E Events	WR	OPTEVFOR:Norfolk, VA	0.039	0.110	Dec 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
Block 1B Test Planning/T&E Events	WR	JITC:Indian Head, MD	-	0.081	Nov 2011	0.083	Nov 2012	-		0.083	Continuing	Continuing	Continuing
(V)4 ESE Test Planning/T&E Events	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	0.686	-		-		-		-	0.000	0.686	
(V)4 ESE Test Planning/T&E Events	WR	NSWC Dahlgren:Dahlgren, VA	0.519	0.090	Dec 2011	-		-		-	0.000	0.609	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
(V)4 ESE Test Planning/T&E Events	WR	NSWC Crane:Crane, IN	0.815	0.221	Nov 2011	-		-		-	0.000	1.036	
(V)4 ESE Test Planning/T&E Events	WR	NRL:Washington, DC	1.348	0.240	Dec 2011	-		-		-	0.000	1.588	
(V)4 ESE Test Planning/T&E Events	WR	OPTEVFOR:Norfolk, VA	0.092	0.050	Dec 2011	-		-		-	0.000	0.142	
RCIP Test Planning/T&E Events	WR	NSWC Dahlgren:Dahlgren, VA	-	-		0.368	Nov 2012	-		0.368	Continuing	Continuing	Continuing
RCIP Test Planning/T&E Events	WR	NSWC Crane:Crane, IN	-	0.030	Nov 2011	0.357	Nov 2012	-		0.357	Continuing	Continuing	Continuing
RCIP Test Planning/T&E Events	WR	NRL:Washington, DC	-	-		0.391	Nov 2012	-		0.391	Continuing	Continuing	Continuing
Block 2 Test Planning/T&E Events	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	0.941	-		-		-		-	0.000	0.941	
		Subtotal	35.950	3.510		3.821		-		3.821			

Remarks

Development Test & Evaluation included several activities from the original development of the SLQ-32 system. This line has been left on the exhibit to track Prior year costs of this PU.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Program Management	C/CPIF	SPA (SEAPORT):Washington, D.C.	29.166	1.258	Nov 2011	0.473	Nov 2012	-		0.473	Continuing	Continuing	Continuing
Block 1 Program Management Support	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington, DC	17.310	-		-		-		-	0.000	17.310	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 1 Program Management Support	WR	NSWC Crane:Crane, IN	0.351	0.130	Nov 2011	0.244	Nov 2012	-		0.244	Continuing	Continuing	Continuing
Block 1 Program Management Support	WR	NSWC Dahlgren:Dahlgren, VA	0.442	0.278	Dec 2011	0.237	Nov 2012	-		0.237	Continuing	Continuing	Continuing
Block 1 Program Management Support	WR	NRL:Washington, DC	0.492	0.088	Dec 2011	0.175	Nov 2012	-		0.175	Continuing	Continuing	Continuing
Block 1 Program Management Support	SS/CPFF	APL:Laurel, MD	-	0.021	Dec 2011	0.181	Nov 2012	-		0.181	Continuing	Continuing	Continuing
Block 1 Travel	WR	NAVSEA Program Office Travel:Washington, DC	0.955	0.100	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
Block 1 DoD Acquisition Workforce Fund	Various	Various:Various	0.126	-		-		-		-	0.000	0.126	
Block 2 Program Managment Support	C/FFP	AT&T Gov't Solutions (SEAPORT):Washington, DC	0.023	-		-		-		-	0.000	0.023	
Block 2 Program Managment Support	WR	NSWC Crane, DD, NRL:Various	0.823	-		-		-		-	0.000	0.823	
Block 2 Travel	WR	NAVSEA Program Office Travel:Washington, DC	0.050	-		-		-		-	0.000	0.050	
		Subtotal	49.738	1.875		1.410		-		1.410			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	416.603	18.438		18.494		-		18.494			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 0954: *Shipboard EW Improvement Program*

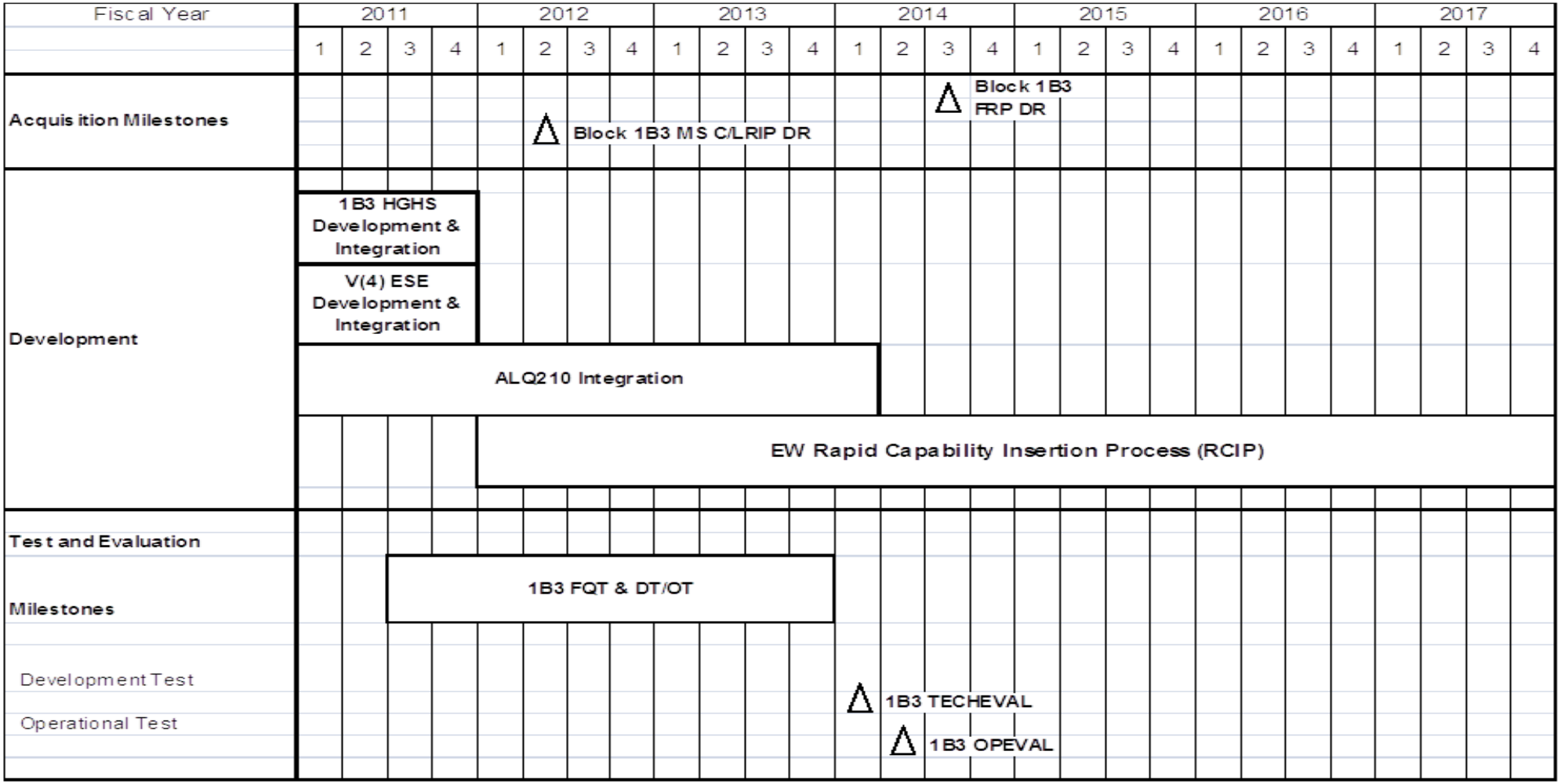


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	**PROJECT** 0954: *Shipboard EW Improvement Program*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0954				
1B3 HGHS Development & Integration	1	2011	4	2011
V(4) ESE Development & Integration	1	2011	4	2011
ALQ210 Integration	1	2011	1	2014
EW Rapid Capability Insertion Process (RCIP)	1	2012	4	2017
Block 1B3 MS C/LRIP DR	2	2012	2	2012
1B3 FQT & DT/OT	3	2011	4	2013
Block 1B3 TECHEVAL	1	2014	1	2014
Block 1B3 OPEVAL	2	2014	2	2014
Block 1B3 FRP DR	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 2190: *NULKA Decoy*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2190: *NULKA Decoy*	5.204	3.520	2.352	-	2.352	2.344	5.276	2.221	7.207	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Offboard Active Decoy (NULKA) is a joint cooperative program between the United States and Australia that developed an active offboard decoy that utilizes a broadband radio frequency repeater mounted atop a hovering rocket. NULKA is designed to counter a wide variety of present and future radar guided Anti-Ship Missiles (ASMs) by radiating a large radar cross section while flying a ship-like trajectory. The United States developed the electronic payload and fire control system, while Australia developed the hovering rocket. Future efforts involve development of the capability for high value unit protection.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: NULKA Decoy Subsystem	2.634	2.020	2.352
Articles:	0	0	0
FY 2011 Accomplishments: NULKA decoy subsystem integration and improvements to include Effectiveness Studies, Engineering Studies, Fly Out Tactics and open architecture transition.			
FY 2012 Plans: NULKA decoy subsystem integration and improvements to include Effectiveness Studies, Engineering Studies, Fly Out Tactics and open architecture transition.			
FY 2013 Plans: NULKA decoy subsystem integration and improvements to include Effectiveness Studies, Engineering Studies, Fly Out Tactics and open architecture transition.			
Title: NULKA Decoy Enhancements	0.300	-	-
Articles:	0		
FY 2011 Accomplishments: Conducted design and development efforts aimed at increasing the interoperability between NULKA and emerging surface ship radars.			
Title: NULKA Software	2.270	1.500	-
Articles:	0	0	
Description:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 2190: *NULKA Decoy*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued upgrade of Launching System software to provide CVN protection capability. ***FY 2012 Plans:*** Complete upgrade of Launching System software to provide CVN protection capability.			
Accomplishments/Planned Programs Subtotals	5.204	3.520	2.352

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/5530: *Anti-Ship Missile Decoy System*	36.389	32.716	31.743	0.000	31.743	30.869	65.037	66.741	65.878	Continuing	Continuing
• OMN/12CR0 (1C2C): *Nulka*	6.482	6.126	5.205	0.000	5.205	6.260	6.456	6.715	7.407	Continuing	Continuing

D. Acquisition Strategy

NULKA is a joint cooperative program between United States and Australia in full rate production.

E. Performance Metrics

Successfully complete Critical Design Review (CDR) for MK 53 Decoy Launch System (DLS) upgrade for CVN class.
Successfully complete first-of-class testing of MK 53 DLS upgrade for CVN.
Successfully complete Decoy Launch Processor (DLP) software version 6_5 Beta 1 for CVN 68 ship class.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 2190: *NULKA Decoy*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	Lockheed Martin:Sippican, MA	6.692	-		-		-		-	0.000	6.692	
Primary Hardware Development	MIPR	BAE Systems:Australia	7.092	-		-		-		-	0.000	7.092	
Systems Engineering	WR	NRL:Washington, DC	15.277	1.500	Nov 2011	0.986	Nov 2012	-		0.986	Continuing	Continuing	Continuing
Systems Engineering	WR	NWAD:China Lake, CA	0.120	-		-		-		-	0.000	0.120	
MK 53 System Eng Changes	C/FFP	Sechan:PA	0.150	-		-		-		-	0.000	0.150	
Systems Engineering	WR	NSWC Dahlgren:Dahlgren, VA	4.953	1.495	Nov 2011	0.929	Nov 2012	-		0.929	Continuing	Continuing	Continuing
Systems Engineering	WR	NSMA:VA	0.360	-		-		-		-	0.000	0.360	
Systems Engineering	WR	NSWC Crane:IN	5.211	0.245	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
		Subtotal	39.855	3.240		2.115		-		2.115			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NRL:Washington, DC	1.314	-		-		-		-	0.000	1.314	
Software Development	WR	NSWC Dahlgren:Dahlgren, VA	2.497	-		-		-		-	0.000	2.497	
		Subtotal	3.811	-		-		-		-	0.000	3.811	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NSWC Dahlgren:Dahlgren, VA	0.700	-		-		-		-	0.000	0.700	
Developmental Test & Evaluation	WR	NRL:Washington, DC	1.181	-		-		-		-	0.000	1.181	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 2190: *NULKA Decoy*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Assets	WR	NRL:Washington, DC	0.701	-		-		-		-	0.000	0.701	
Test Support	WR	OPTEVFOR:Norfolk, VA	0.050	-		-		-		-	Continuing	Continuing	Continuing
Test Support	WR	BAE Systems:Australia	0.050	-		-		-		-	0.000	0.050	
		Subtotal	2.682	-		-		-		-			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPIF	SPA (SEAPORT)::Washington, DC	0.825	0.250	Nov 2011	0.213	Nov 2012	-		0.213	Continuing	Continuing	Continuing
Program Management Support	C/FFP	AT&T Gov't Solutions (SEAPORT)::Washington, DC	1.147	-		-		-		-	0.000	1.147	
Travel	WR	NAVSEA Program Office Travel:Washington, DC	0.541	0.030	Jan 2012	0.024	Nov 2012	-		0.024	Continuing	Continuing	Continuing
DoD Acquisition Workforce Fund (DAWDF)	Various	Various:Various	0.015	-		-		-		-	0.000	0.015	
		Subtotal	2.528	0.280		0.237		-		0.237			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	48.876	3.520		2.352		-		2.352			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 2190: *NULKA Decoy*

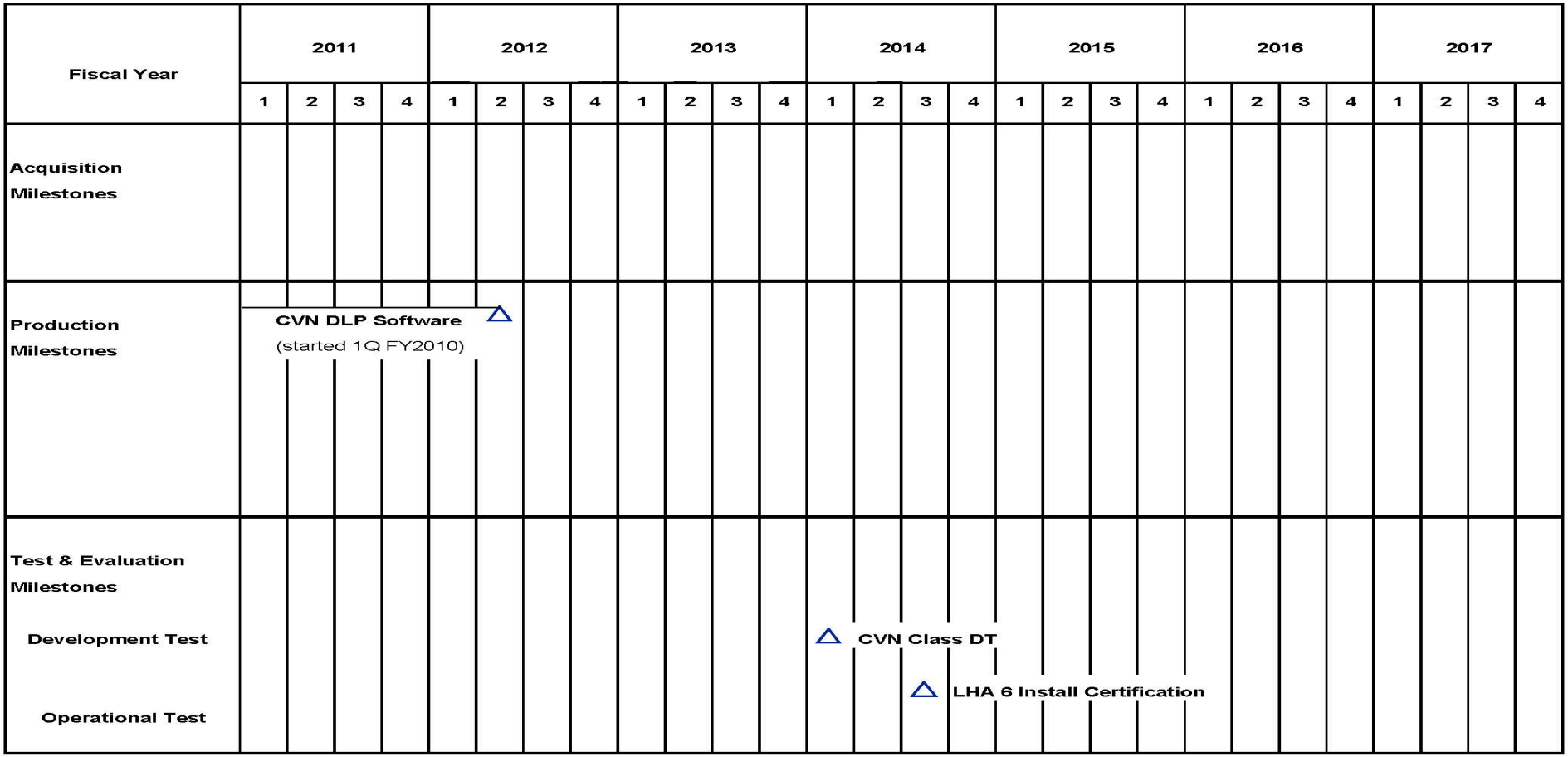


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	**PROJECT** 2190: *NULKA Decoy*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2190				
CVN DLP SOFTWARE	1	2011	2	2012
CVN CLASS DT	1	2014	1	2014
LHA 6 INSTALL CERTIFICATION	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3227: *SEWIP Block 2*	57.389	43.894	29.937	-	29.937	3.089	0.744	0.676	0.691	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The SEWIP Block 2 program is developing an upgraded antenna, receiver, and combat system interface for SLQ-32. The upgrades are necessary in order to pace the threat, improving detection, accuracy, and mitigation of EMI.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SEWIP Block 2	57.389	43.894	29.937
Articles:	0	0	0
FY 2011 Accomplishments: Continued E&MD of SEWIP Block 2. Commence integrated testing. Completed Critical Decision Review (CDR). Completed Long Lead Material Gate 6 Decision Review.			
FY 2012 Plans: Continue E&MD of SEWIP Block 2. Continue integrated testing.			
FY 2013 Plans: Continue E&MD of SEWIP Block 2. Complete integrated testing. Commence At Sea Testing.			
Accomplishments/Planned Programs Subtotals	57.389	43.894	29.937

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0204228N/2312: *OPN BA-2 AN/ SLQ-32(V)*	23.131	39.902	92.270	0.000	92.270	200.617	277.028	352.376	357.611	Continuing	Continuing
• 0204575N/1C2C: *OMN BA-1 AN/ SLQ-32(V)6*	0.000	0.000	1.442	0.000	1.442	3.066	6.789	8.037	14.702	Continuing	Continuing

D. Acquisition Strategy

SEWIP will develop Block upgrades to SLQ-32 based on integrating technology advances and adding functional capabilities in an incremental fashion. Each Block and Sub-Block will be developed and contracted in an individual yet coordinated and overlapping fashion.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	**PROJECT** 3227: *SEWIP Block 2*

E. Performance Metrics

Successfully achieve Block 2 MS C / LRIP DR.
Successfully complete Block 2 Initial Operational Test & Evaluation (IOT&E).
Successfully achieve Block 2 Full Rate Production (FRP) DR.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 2 E&MD	C/CPIF	Lockheed Martin:Syracuse, NY	64.944	21.416	Nov 2011	8.434	Nov 2012	-		8.434	Continuing	Continuing	Continuing
Block 2 Preliminary Development	C/CPIF	Lockheed Martin:Syracuse, NY	17.211	-		-		-		-	0.000	17.211	
Block 2 SEWTT Development	SS/CPFF	EWA-GSI:Fairmont, WV	-	0.750	Dec 2011	0.500	Nov 2012	-		0.500	Continuing	Continuing	Continuing
Block 2 SEWTT Development	WR	NSWC Crane:Crane, IN	-	0.047	Nov 2011	-		-		-	Continuing	Continuing	Continuing
		Subtotal	82.155	22.213		8.934		-		8.934			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 2 Integrated Logistics Support	WR	NSWC Crane, DD, NRL, APL:Crane, IN; Dahlgren, VA; Washington DC; Laurel, MD	0.769	-		-		-		-	0.000	0.769	
Block 2 Integrated Logistics Support	WR	NSWC Crane:Crane, IN	2.175	1.069	Nov 2011	1.067	Nov 2012	-		1.067	Continuing	Continuing	Continuing
Block 2 Government Engineering Support	WR	NSWC Crane, DD, NRL, APL:Crane, IN; Dahlgren, VA; Washington DC; Laurel, MD	12.214	-		-		-		-	0.000	12.214	
Block 2 Government Engineering Support	WR	NSWC Dahlgren:Dahlgren, VA	4.767	5.055	Nov 2011	6.958	Nov 2012	-		6.958	Continuing	Continuing	Continuing
Block 2 Government Engineering Support	WR	NSWC Crane:Crane, IN	2.369	3.311	Nov 2011	0.402	Nov 2012	-		0.402	Continuing	Continuing	Continuing
Block 2 Government Engineering Support	WR	NRL:Washington, DC	2.038	1.187	Dec 2011	-		-		-	Continuing	Continuing	Continuing
Block 2 Government Engineering Support	SS/CPFF	APL:Laurel, MD	2.320	2.411	Dec 2011	-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	26.652	13.033		8.427		-		8.427			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 2 Test Planning/T&E Events	WR	NSWC Crane, DD, NRL:Crane, IN; Dahlgren, VA; Washington DC;	1.582	-		-		-		-	0.000	1.582	
Block 2 Test Planning/T&E Events	WR	NSWC Crane:Crane, IN	0.827	1.471	Nov 2011	2.346	Nov 2012	-		2.346	Continuing	Continuing	Continuing
Block 2 Test Planning/T&E Events	WR	NSWC Dahlgren:Dahlgren, VA	0.292	0.975	Nov 2011	2.182	Nov 2012	-		2.182	Continuing	Continuing	Continuing
Block 2 Test Planning/T&E Events	WR	NRL:Washington, DC	1.418	1.720	Dec 2011	3.590	Nov 2012	-		3.590	Continuing	Continuing	Continuing
Block 2 Test Planning/T&E Events	WR	Surface Combat Systems Center:Wallops Island, VA	-	0.420	Jan 2012	0.870	Nov 2012	-		0.870	Continuing	Continuing	Continuing
		Subtotal	4.119	4.586		8.988		-		8.988			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 2 Program Management Support	C/CPIF	SPA (SEAPORT):Washington, DC	3.505	2.240	Nov 2011	1.819	Nov 2012	-		1.819	Continuing	Continuing	Continuing
Block 2 Program Management Support	WR	NSWC Crane, DD, PHD, NRL:Crane, IN;	15.069	-		-		-		-	0.000	15.069	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Dahlgren, VA; PHD CA; Washington DC;											
Block 2 Program Management Support	WR	NSWC Dahlgren:Dahlgren, VA	0.549	0.780	Nov 2011	0.575	Nov 2012	-		0.575	Continuing	Continuing	Continuing
Block 2 Program Management Support	WR	NSWC Crane:Crane, IN	0.947	0.241	Nov 2011	0.349	Nov 2012	-		0.349	Continuing	Continuing	Continuing
Block 2 Program Management Support	WR	NRL:Washington, DC	0.243	0.206	Dec 2011	0.154	Nov 2012	-		0.154	Continuing	Continuing	Continuing
Block 2 Program Management Support	MIPR	Navy Post GraduateSchool:Monterey, CA	0.174	-		-		-		-	0.000	0.174	
Block 2 Program Management Support	SS/CPFF	APL:Laurel, MD	1.149	0.445	Dec 2011	0.541	Nov 2012	-		0.541	Continuing	Continuing	Continuing
Block 2 Program Management	WR	NSWC PHD:Port Hueneme, CA	0.061	-		-		-		-	0.000	0.061	
Block 2 Travel	WR	NAVSEA Program Office Travel:Washington, DC	0.354	0.150	Nov 2011	0.150	Nov 2012	-		0.150	Continuing	Continuing	Continuing
Block 2 DoD Acquisition Workforce Fund	Various	Various:Various	0.137	-		-		-		-	0.000	0.137	
		Subtotal	22.188	4.062		3.588		-		3.588			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	135.114	43.894		29.937		-		29.937			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*

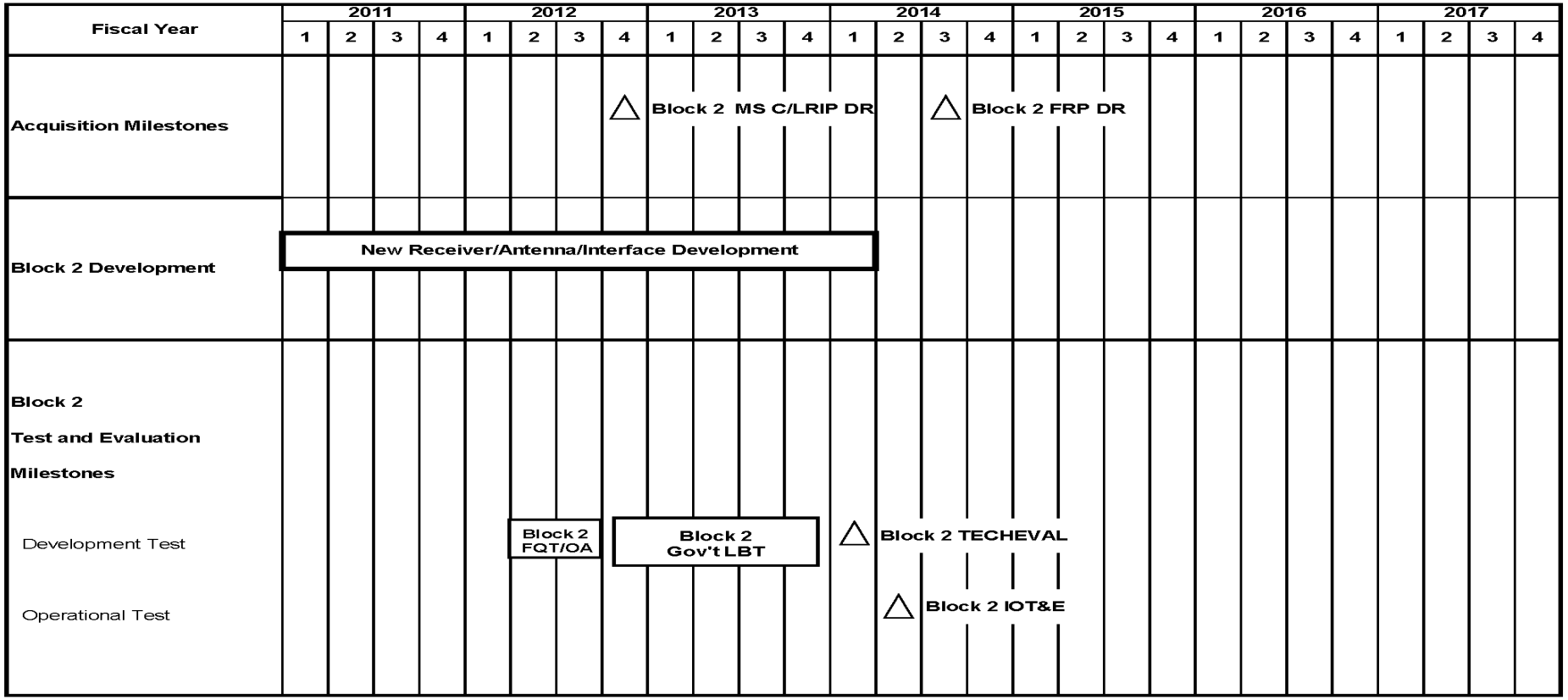


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3227: *SEWIP Block 2*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3227				
Block 2 New Receiver/Antenna/Interface Development	1	2011	2	2014
Block 2 FQT/OA	2	2012	3	2012
Block 2 MS C/LRIP DR	4	2012	4	2012
Block 2 Gov't LBT	4	2012	4	2013
Block 2 TECHEVAL	1	2014	1	2014
Block 2 IOT&E	2	2014	2	2014
Block 2 FRP DR	3	2014	3	2014

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3316: *Advanced Offboard EW*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3316: *Advanced Offboard EW*	-	22.967	23.211	-	23.211	23.793	72.341	66.058	72.546	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

This project is a new start in FY 2012.
RRE (Rapid Response Effort) is a new acronym for this submit, but it is not a new effort. RRE replaces DLF-3 development acronym in previous submissions.
DDE (Decoy Development Effort) is a new acronym for this submit, but it is not a new effort. DDE replaces SPICE acronym in previous submissions.

A. Mission Description and Budget Item Justification

3316 - The Advanced Offboard EW (AOEW) program will develop and evaluate long duration off-board decoys to counter identified EW gaps (additional details classified) in response to an urgent operational need from the Fleet that has been approved by the CNO for execution. Currently no counter to the threat exists. The program consists of two efforts: a Rapid Response Effort (RRE) to provide an initial, limited interim, decoy capability to the Fleet by 2014 and a full scale Decoy Development Effort (DDE) culminating in the delivery of a fully supported, full capability system. The RRE (FY12-FY13) consists of the evaluation and integration of commercially available decoys. The full scale DDE (commencing in FY12) concerns the development and evaluation of a long duration, active electronic offboard decoy system (vehicle and payload), integrated with onboard systems for EW coordination, and fully able to counter the threat.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AOEW - Decoy Development Effort (DDE)	-	10.700	19.767
Articles:		0	0
FY 2012 Plans: Conduct Analysis of Alternatives, conduct systems concept design and feasibility studies, develop concepts of operation and to begin derive systems requirements, interoperability analysis, systems integration studies, combat systems integration, conduct modeling and simulation, and acquisition documentation.			
FY 2013 Plans: Complete Analysis of Alternatives. Conduct engineering studies, continue to develop concepts of operation and systems requirements, continue interoperability analysis, continue systems integration studies, continue combat systems integration, conduct modeling and simulation, and continue acquisition documentation.			
Title: AOEW - Rapid Response Effort (RRE)	-	12.267	3.444
Articles:		0	0
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3316: *Advanced Offboard EW*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Procure commercially available decoy assets for evaluation. Begin integration and testing of decoy capability. ***FY 2013 Plans:*** Complete evaluation, integration, and testing of decoy capability.			
Accomplishments/Planned Programs Subtotals	-	22.967	23.211

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/5530: *Anti-Ship Missile Decoy System*	36.389	32.716	31.743	0.000	31.743	30.869	65.037	66.741	65.878	Continuing	Continuing

D. Acquisition Strategy

The AOEW DDE will be competitively contracted and developed, and builds on technologies and concepts currently in development by ONR. For the RRE, commercially available decoys will be procured for evaluation, integration and testing.

E. Performance Metrics

For the DDE, successfully complete Analysis of Alternatives. For the RRE, successfully complete evaluation, integration, and testing of commercially available decoys.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3316: *Advanced Offboard EW*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Analysis of Alternatives	WR	ONR:Arlington, VA	-	1.000	Jan 2012	0.300	Nov 2012	-		0.300	Continuing	Continuing	Continuing
Concept Analysis and Integration Assessment	SS/CPFF	APL:Laurel, MD	-	0.750	Jan 2012	1.300	Nov 2012	-		1.300	Continuing	Continuing	Continuing
Concept Development and Technology Studies	WR	NRL:Washington, D.C.	-	3.850	Jan 2012	3.952	Nov 2012	-		3.952	Continuing	Continuing	Continuing
Technology Development and Systems Requirements	WR	NSWC Dahlgren:Dahlgren, VA	-	0.550	Jan 2012	3.100	Nov 2012	-		3.100	Continuing	Continuing	Continuing
Systems Requirements and Integration Studies	WR	NSWC Crane:Crane, IN	-	2.715	Jan 2012	1.200	Nov 2012	-		1.200	Continuing	Continuing	Continuing
RRE Hardware Development	C/CPIF	TBD:Not Specified	-	5.600	Jul 2012	-		-		-	Continuing	Continuing	Continuing
		Subtotal	-	14.465		9.852		-		9.852			

Remarks

This is a new program beginning in FY12. Contract Type and Performing Activity for Prime Contractor are TBD.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Development Support	WR	NRL:Washington, DC	-	3.035	Jan 2012	2.500	Nov 2012	-		2.500	Continuing	Continuing	Continuing
Government Development and Engineering Support	WR	NSWC Dahlgren:Dahlgren, VA	-	1.150	Jan 2012	3.000	Nov 2012	-		3.000	Continuing	Continuing	Continuing
Government Engineering Support	WR	NSWC Crane:Crane, IN	-	1.385	Jan 2012	5.284	Nov 2012	-		5.284	Continuing	Continuing	Continuing
		Subtotal	-	5.570		10.784		-		10.784			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3316: *Advanced Offboard EW*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Planning and Development Testing	WR	NRL:Washington, DC	-	1.424	Jan 2012	0.450	Nov 2012	-		0.450	Continuing	Continuing	Continuing
Test and Evaluation Plan	WR	NSWC/ Dahlgren:Dahlgren, VA	-	0.100	Jan 2012	0.450	Nov 2012	-		0.450	Continuing	Continuing	Continuing
Test and Evaluation Plan	WR	NSWC Crane:Crane, IN	-	0.200	Jan 2012	0.450	Nov 2012	-		0.450	Continuing	Continuing	Continuing
		Subtotal	-	1.724		1.350		-		1.350			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPIF	SPA (SEAPORT):Washington, DC	-	1.148	Jan 2012	1.030	Nov 2012	-		1.030	Continuing	Continuing	Continuing
Travel	WR	NAVSEA Program Office Travel:Washington, DC	-	0.060	Jan 2012	0.195	Nov 2012	-		0.195	Continuing	Continuing	Continuing
		Subtotal	-	1.208		1.225		-		1.225			

	Total Prior Years Cost	FY 2012 Cost	FY 2012	FY 2013 Base Cost	FY 2013 Base	FY 2013 OCO Cost	FY 2013 OCO	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	22.967		23.211		-		23.211			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3316: *Advanced Offboard EW*

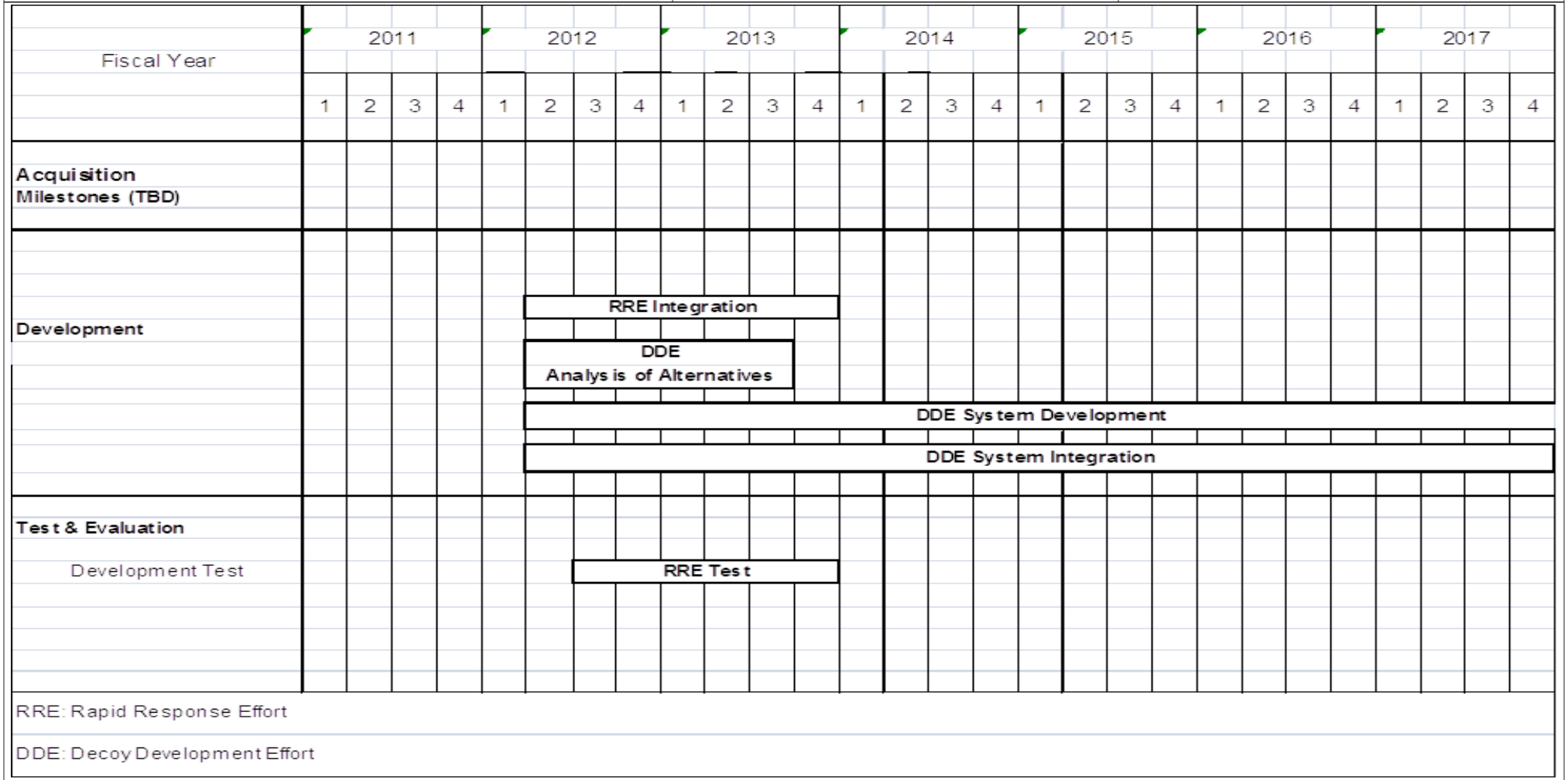


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	**PROJECT** 3316: *Advanced Offboard EW*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3316				
RRE Integration	2	2012	4	2013
DDE Analysis of Alternatives	2	2012	3	2013
DDE System Development	2	2012	4	2017
DDE System Integration	2	2012	4	2017
RRE Test	3	2012	4	2013

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3321.: *SEWIP Block 3*	14.691	95.268	77.495	-	77.495	124.063	83.253	44.197	45.046	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

SEWIP Block 3 will continue to expand the integrated shipboard combat system by providing a new integrated Electronic Attack (EA) transmitter, array, and associated EA techniques to enhance surface EW capability for legacy and new-construction platforms. EA capability enhancements are required in order to pace the anti-ship missile threat. SEWIP Block 3 will leverage the transition technology demonstrated by ONR's INTOP program. The program builds on the EW Support (ES) capability delivered by SEWIP Blocks 1 and 2.

SEWIP Block 3 also includes the modification, ruggedization, and evaluation of the Naval Research Lab (NRL) developed Transportable EW Module (TEWM) system. This program answers an urgent operational need for the Fleet to provide an initial, limited interim capability by 2014.
(Speed to Fleet) The Transportable Electronic Warfare Module (TEWM) is a compact advanced Electronic Warfare (EW) system capable of engaging a wide range of anti-ship missile seekers. Item 3321 TEWM Speed to the Fleet provides the resources to refine and accelerate the design and make it suitable for operational shipboard application. It also implements a Navy link-16 network command protocol efficiently allowing use on broad class of ships.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SEWIP Block 3	14.691	23.039	12.906
Articles:	0	0	0
FY 2011 Accomplishments: Commenced acquisition documentation, engineering analysis, and requirements formulation for SEWIP Block 3 and TEWM. Commenced TEWM development.			
FY 2012 Plans: MS B preparation; including System Engineering, Technology Readiness Assessment (TRA), and acquisition documentation.			
FY 2013 Plans: Complete MS B preparation and acquisition documentation. Continue Systems Engineering.			
Title: SEWIP Block 3 Development	-	-	40.098
Articles:			0
FY 2013 Plans: Commence Engineering and Manufacturing Development (E&MD).			
Title: SEWIP Block 3 ADM design	-	14.224	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:		0	
FY 2012 Plans: Non-recurring Hardware Design of the INTOP ADM Integration and Test.			
Title: SEWIP Block 3 ADM Hardware & Software	-	12.780	-
Articles:		0	
FY 2012 Plans: Hardware and Software prototyping of the INTOP ADM, including Design, Code, and Unit Test			
Title: SEWIP Block 3 ADM Integration and Test	-	13.225	-
Articles:		0	
FY 2012 Plans: SEWIP Block 3 INTOP ADM Integration and Test			
Title: TEWM Development	-	25.910	16.599
Articles:		0	0
FY 2012 Plans: Commence development of modifications to the TEWM system. ***FY 2013 Plans:*** Continue development of modifications to the TEWM system.			
Title: TEWM Test Planning	-	0.480	0.308
Articles:		0	0
FY 2012 Plans: Commence TEWM test planning and coordination. ***FY 2013 Plans:*** Continue TEWM test planning and coordination.			
Title: TEWM Test Assets	-	4.250	2.686
Articles:		0	0
FY 2012 Plans: TEWM Simulator and Radar test platform support. ***FY 2013 Plans:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue TEWM Simulator and Radar test platform support.			
Title: TEWM Development & Management Support	-	1.360	0.907
Articles:		0	0
FY 2012 Plans: TEWM Development and Program Management Support. ***FY 2013 Plans:*** Continue TEWM Development and Program Management Support.			
Title: Speed to Fleet- Transportable Electronic Warfare Module (TEWM)	-	-	3.991
Articles:			0
FY 2013 Plans: - Refine design shortfalls based on operator feedback and FY 2012 test results. - Conduct local field testing of all improvements design, and complete production drawings. - In preparation for final validation testing in FY 2014, Produce 2 units of the FY 2013 design.			
Accomplishments/Planned Programs Subtotals	14.691	95.268	77.495

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 0204228N/2312: *AN/SLQ-32*	23.131	39.902	92.270	0.000	92.270	200.617	277.028	352.376	357.611	Continuing	Continuing

D. Acquisition Strategy

SEWIP will develop block upgrades to SLQ-32 based on integrating technology advances and adding functional capabilities in an incremental fashion. Each block and sub-block will be developed and contracted in an individual yet coordinated and overlapping fashion. Specifically, SEWIP Block 3 involves the transitioning and leveraging work performed under the INTOP program sponsored by ONR, which focused on designing/architecting an integrated Electronic Attack (EA), Information Operations (IO), and Line of Site (LOS) Comms system for Naval Surface Platforms. SEWIP Block 3 also leverages work performed under the TEWM program that is sponsored by NRL that focuses on analysis technique development and active engagement analysis/modeling for Naval surface combatants.
(Speed to Fleet) TEWM s a non-acquisition development and demonstration program to rapidly deliver advanced counter terminal EW capability in a transportable form factor for Fleet application. The unit developed under this Speed to Fleet project provides a rapidly deployable capability. Multiple copies of the first articles can be rapidly replicated depending on operational needs.

E. Performance Metrics

Successfully achieve Block 3 Milestone B.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

Successfully achieve Block 3 MS C / LRIP DR.
Successfully complete TEWM modifications
Successfully complete TEWM integration and testing
(Speed to Fleet) Both laboratory and at sea testing against captive carry simulators will be used to evaluate the performance of the system. The same captive carry resources typically used by Operational Test and Evaluation Force (OPTEVFOR) will be used to assure a meaningful effectiveness assessment.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Technology Demonstration	SS/CPFF	Northrop Grumman: Linthicum, MD:Raytheon: Tewksbury, MA	-	39.929	Dec 2011	-		-		-	0.000	39.929	
TEWM Primary Hardware Development	C/CPFF	ITT Exelis:Alexandria, VA	-	25.910	Feb 2012	16.599	Nov 2012	-		16.599	Continuing	Continuing	Continuing
Block 3 E&MD	TBD	TBD:TBD	-	-		38.598	Feb 2013	-		38.598	Continuing	Continuing	Continuing
Block 3 SEWTT Development	SS/CPFF	EWA-GSI:Fairmont, WV	0.100	0.500	Dec 2011	1.500	Nov 2012	-		1.500	Continuing	Continuing	Continuing
		Subtotal	0.100	66.339		56.697		-		56.697			

Remarks

TEWM is a new development effort beginning in FY12. Contract Type and Performing Activity for Prime Contractor is TBD. Block 3 E&MD contract will be competed and contractor name and location will be added upon contract award.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Integrated Logistics Support	WR	NSWC Crane:Crane, IN	0.391	2.383	Nov 2011	0.861	Nov 2012	-		0.861	Continuing	Continuing	Continuing
Block 3 Government Engineering Support	WR	NSWC Dahlgren:Dahlgren, VA	0.578	2.392	Nov 2011	0.784	Nov 2012	-		0.784	Continuing	Continuing	Continuing
Block 3 Government Engineering Support	WR	NSWC Crane:Crane, IN	0.087	0.874	Nov 2011	0.385	Nov 2012	-		0.385	Continuing	Continuing	Continuing
Block 3 Government Engineering Support	WR	NRL:Washington, DC	2.110	4.367	Dec 2011	2.189	Nov 2012	-		2.189	Continuing	Continuing	Continuing
Block 3 Government Engineering Support	SS/CPFF	APL:Laurel, MD	0.711	2.465	Dec 2011	1.807	Nov 2012	-		1.807	Continuing	Continuing	Continuing
TEWM Development Support	WR	NRL:Washington, DC	9.000	1.260	Dec 2011	0.807	Nov 2012	-		0.807	Continuing	Continuing	Continuing
		Subtotal	12.877	13.741		6.833		-		6.833			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Test Planning/T&E Events	WR	NSWC Dahlgren:Dahlgren, VA	0.011	1.575	Nov 2011	0.596	Nov 2012	-		0.596	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	NSWC Crane:Crane, IN	0.012	0.961	Nov 2011	0.424	Nov 2012	-		0.424	Continuing	Continuing	Continuing
Block 3 Test Planning/T&E Events	WR	NRL:Washington, DC	0.244	2.307	Dec 2011	1.200	Nov 2012	-		1.200	Continuing	Continuing	Continuing
TEWM Test Planning	WR	NRL:Washington, DC	-	0.480	Dec 2011	0.308	Nov 2012	-		0.308	Continuing	Continuing	Continuing
TEWM Test Assets	WR	NRL:Washington, DC	-	4.250	Feb 2012	2.686	Nov 2012	-		2.686	Continuing	Continuing	Continuing
Developmental Test and Evaluation (Speed to Fleet)	Reqn	NRL:Washington DC	-	-		3.991	Oct 2012	-		3.991	0.000	3.991	Continuing
		Subtotal	0.267	9.573		9.205		-		9.205			

Remarks

TEWM is a new development effort beginning in FY12. Contract Type and Performing Activity for test assets are TBD.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 3 Program Management Supoort	C/CPIF	SPA (SEAPORT):Washington, DC	1.228	2.185	Nov 2011	2.188	Nov 2012	-		2.188	Continuing	Continuing	Continuing
Block 3 Program Management Supoort	WR	NSWC Dahlgren:Dahlgren, VA	0.029	1.069	Nov 2011	0.723	Nov 2012	-		0.723	Continuing	Continuing	Continuing
Block 3 Program Management Supoort	WR	NSWC Crane:Crane, IN	0.044	1.077	Nov 2011	0.728	Nov 2012	-		0.728	Continuing	Continuing	Continuing
Block 3 Program Management Supoort	WR	NRL:Washington, DC	0.118	1.084	Dec 2011	0.921	Nov 2012	-		0.921	Continuing	Continuing	Continuing
Block 3 Travel	WR	NAVSEA Program Office:Washington, DC	0.028	0.100	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TEWM Program Management Support	C/CPIF	SPA (SEAPORT):Washington, DC	-	0.100	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
		Subtotal	1.447	5.615		4.760		-		4.760			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.691	95.268		77.495		-		77.495			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

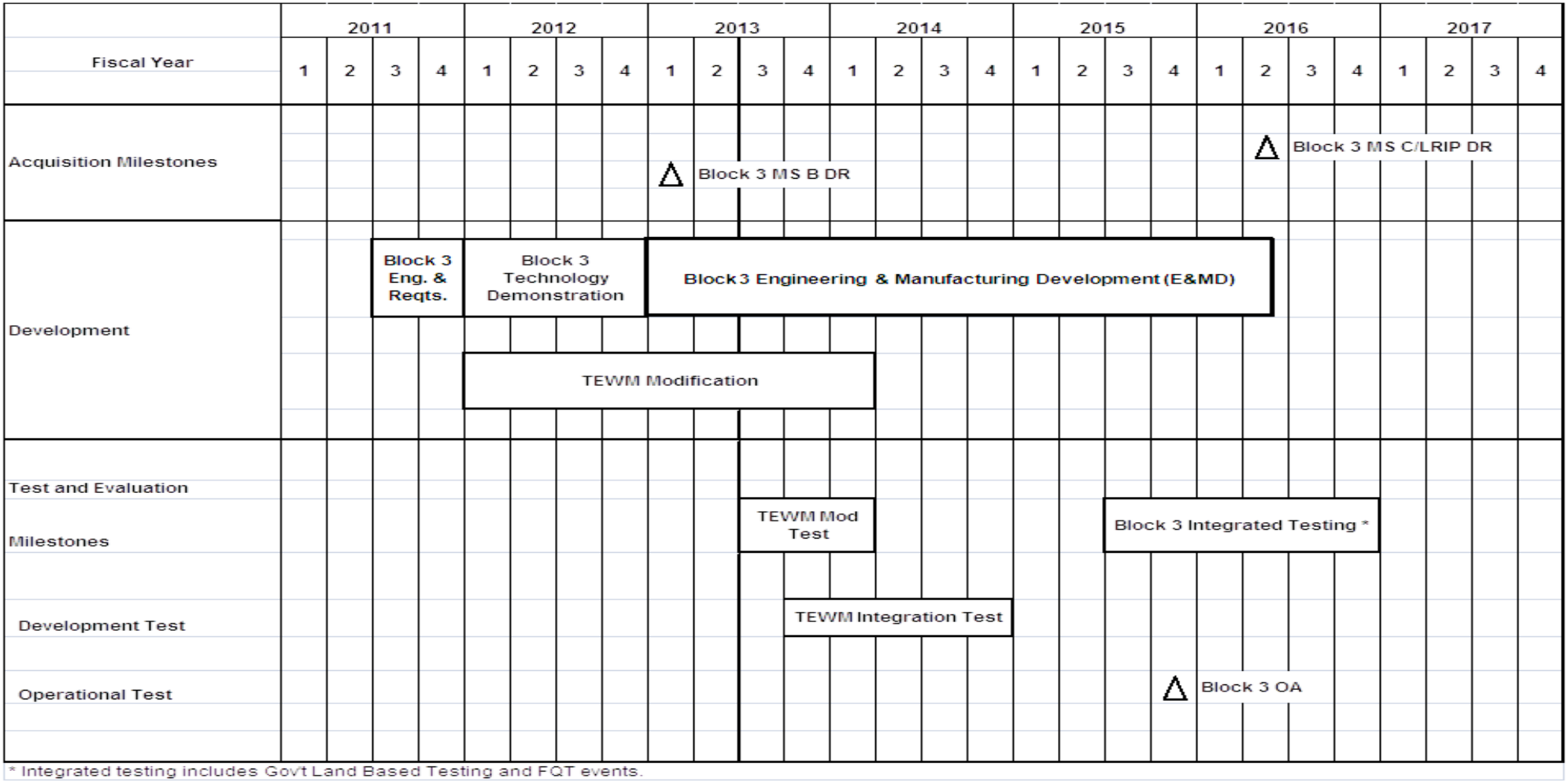


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	PROJECT 3321.: *SEWIP Block 3*

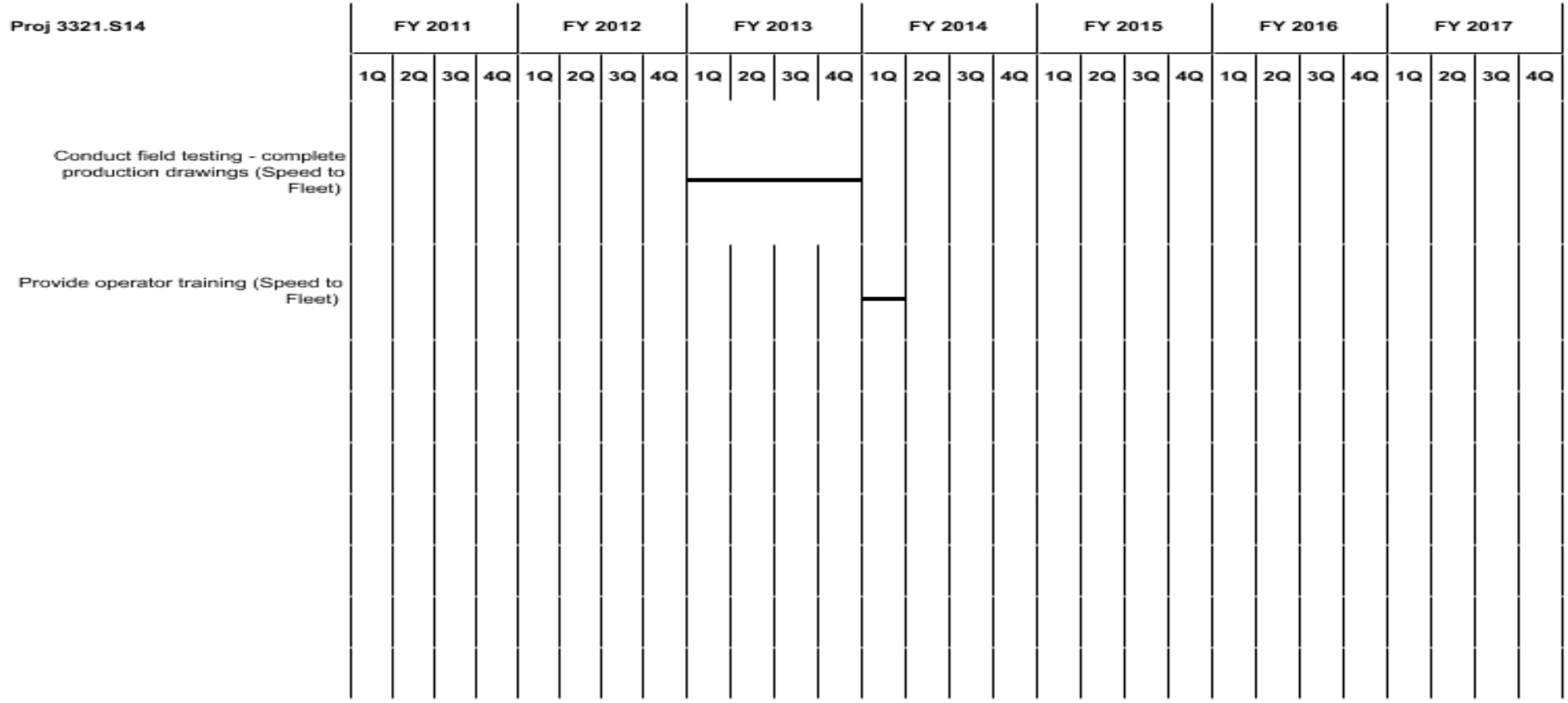


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604757N: *Ship Self Def (Engage: Soft Kill/ EW)*	**PROJECT** 3321.: *SEWIP Block 3*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3321.L24				
Block 3 Engineering & Requirements	3	2011	4	2011
Block 3 Technology Demonstration	1	2012	4	2012
Conduct field testing - complete production drawings (Speed to Fleet): Conduct field testing - complete production drawings (Speed to Fleet)	1	2013	4	2013
TEWM Modification	1	2012	1	2014
Block 3 Engineering and Manufacturing Development (E&MD)	1	2013	2	2016
Provide operator training (Speed to Fleet): Provide operator training (Speed to Fleet)	1	2014	1	2014
Block 3 MS B DR	1	2013	1	2013
TEWM Modification Test	3	2013	1	2014
TEWM Integration Test	4	2013	4	2014
Block 3 Integrated Testing	3	2015	4	2016
Block 3 Operational Assessment	4	2015	4	2015
Block 3 MS C/LRIP DR	2	2016	2	2016

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	15.831	2.196	-	-	-	-	-	4.089	4.159	Continuing	Continuing
3103: *Intelligence Engineering*	15.831	2.196	-	-	-	-	-	4.089	4.159	Continuing	Continuing

A. Mission Description and Budget Item Justification

This PE encompasses the Navy Foreign Materiel Program (FMP) and the Advanced Maritime Analysis Center (AMAC). The FMP provides high leverage cost benefit through acquisition of foreign manufactured equipment with military application and potential military application and the subsequent exploitation of that materiel for potential vulnerabilities and countermeasures. Advanced Maritime Analysis Center (AMAC) fosters continual improvements in the quality of naval intelligence analysis by identifying and developing analytic best practices with respect to methods and tools, facilitating their implementation throughout ONI's analytic workforce, and introducing them to other naval intelligence entities

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	6.820	2.217	2.139	-	2.139
Current President's Budget	15.831	2.196	-	-	-
Total Adjustments	9.011	-0.021	-2.139	-	-2.139
• Congressional General Reductions	-	-0.021			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	9.046	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	-2.139	-	-2.139
• Congressional General Reductions Adjustments	-0.035	-	-	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*	PROJECT 3103: *Intelligence Engineering*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3103: *Intelligence Engineering*	15.831	2.196	-	-	-	-	-	4.089	4.159	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The FMP provides high leverage cost benefit through acquisition of foreign manufactured equipment with military application and potential military application and the subsequent exploitation of that materiel for potential vulnerabilities and countermeasures. The AMAC/ONI Innovation Program, executes funding to research, develop, test, evaluate and integrate cutting edge technology and tradecraft into Naval Intelligence collection and analytic processes and vigorously leverages National Intelligence capabilities to satisfy requirements across the Navy and to advance Navy Information Dominance. Funding in FY16-FY17 is being repurposed to Maritime Intelligence Support to Information Dominance.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Intelligence Engineering	15.831	2.196	-
Articles:	0	0	
FY 2011 Accomplishments: Technology Integration and Transition (AMAC) MYR BTR $700K for Foreign Materiel Program (FMP) Omnibus reprogramming for Foreign Materiel Program (FMP) $9.2			
FY 2012 Plans: Technology Integration and Transition (AMAC)			
Accomplishments/Planned Programs Subtotals	15.831	2.196	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The FMP program combines operational, intelligence and RDT&E requirements into a prioritized list used to identify which acquisition opportunities will obtain priority for funding. The limited N2/N6 FMP funding line is then used to leverage additional funding from OSD in order to fulfill full costs of acquisitions. After acquisition approval, the FMP utilizes a Navy contracting office to write and execute the contract.

The AMAC Program collaborates with ONI stakeholders/external agencies to identify cutting edge technology funding priorities. The program employs ONI competitive contracts and existing Department of Defense contract vehicles to the maximum extent possible to achieve stated goals and execute funding.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*	PROJECT 3103: *Intelligence Engineering*

E. Performance Metrics

Program direction is dependent upon guidance provided by 6 warfare area planning groups.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*	PROJECT 3103: *Intelligence Engineering*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Intellipubia	MIPR	DIA:Bolling AFB	0.148	-		-		-		-	0.000	0.148	
Agile Aperture Antenna	C/FFP	NAVAIR:Pax River, MD	1.400	-		-		-		-	1.400	2.800	
ELINT Tagging	C/FFP	NRL:Washington, DC	0.100	0.100	Oct 2011	-		-		-	0.400	0.600	
Analyst Technology Enhancement	C/FFP	NRL:Washington, DC	0.991	1.540	Feb 2012	-		-		-	5.521	8.052	
Analyst Tool Enhancement	C/FFP	NRL:Washington, DC	-	0.152	Jan 2012	-		-		-	3.944	4.096	
Project Gelbray	SS/FFP	NRL:Washington, DC	2.568	-		-		-		-	0.000	2.568	
Cluster FIzzle	MIPR	FORMASO:Not Specified	1.463	-		-		-		-	0.000	1.463	
Cluster Nitrate	MIPR	NSMA:Washington,DC	0.100	-		-		-		-	0.000	0.100	
FTCPG Project A	SS/FFP	NSWC:Panama City	0.317	-		-		-		-	0.000	0.317	
Project B	Various	DIA:Bolling AFBB	8.744	-		-		-		-	0.000	8.744	
		Subtotal	15.831	1.792		-		-		-	11.265	28.888	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
System/Accreditation	C/FFP	Radius Orange:Arlington, VA	0.164	0.170	Oct 2011	-		-		-	0.688	1.022	
Security Engineer Support	C/FFP	Radius Orange:Arlington, VA	0.194	0.189	Mar 2012	-		-		-	0.838	1.221	
		Subtotal	0.358	0.359		-		-		-	1.526	2.243	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Analyst Tools Comparative Analysis	C/FFP	ONI:Washington,DC	0.040	0.045	Oct 2011	-		-		-	0.180	0.265	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*	PROJECT 3103: *Intelligence Engineering*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	0.040	0.045		-		-		-	0.180	0.265	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	16.229	2.196		-		-		-	12.971	31.396	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604761N: *Intelligence Engineering*	PROJECT 3103: *Intelligence Engineering*

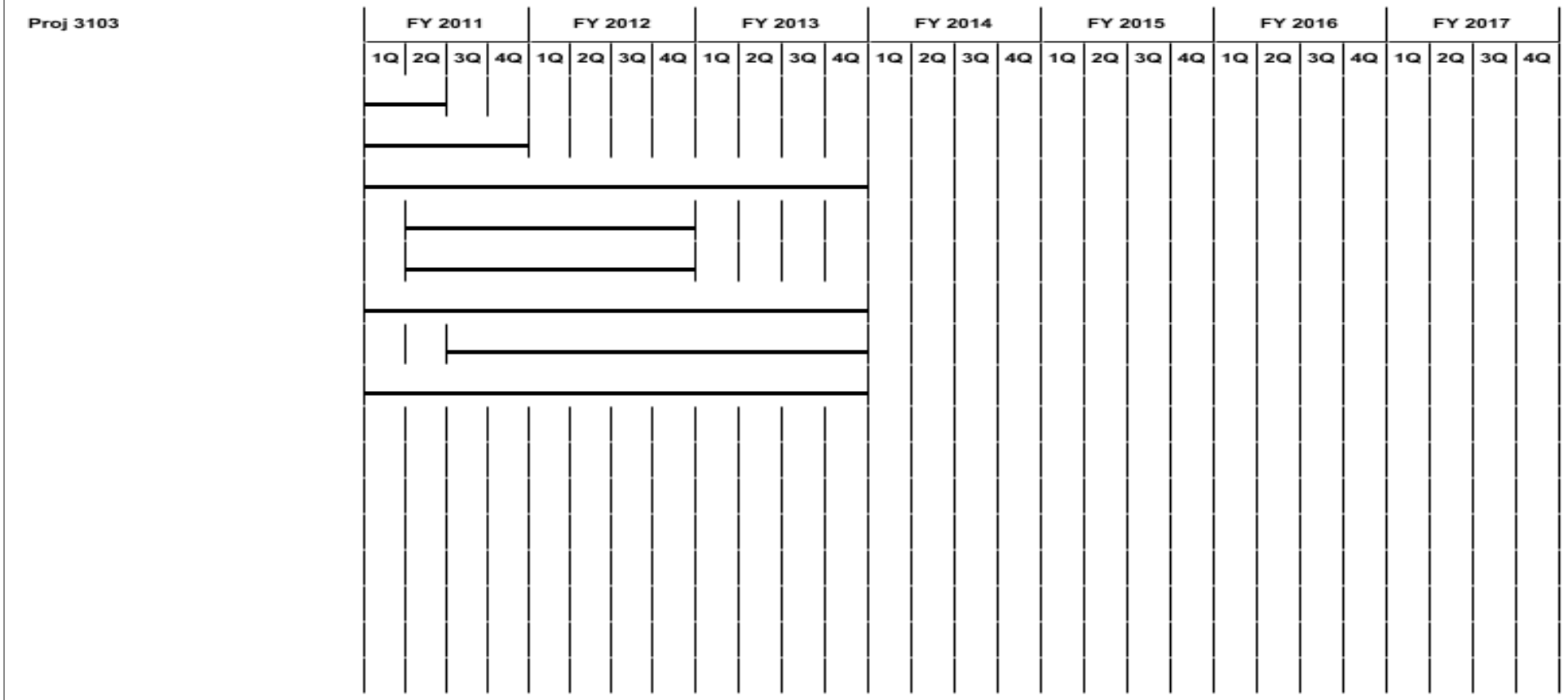


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604761N: *Intelligence Engineering*	**PROJECT** 3103: *Intelligence Engineering*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 3103				
Intellipubia Development	1	2011	2	2011
Agile Aperture Antenna	1	2011	4	2011
ELINT Tagging	1	2011	4	2013
Analyst Technology Enhancement	2	2011	4	2012
Analyst Tool Enhancement	2	2011	4	2012
System/Accreditation Support	1	2011	4	2013
Security Engineer Support	3	2011	4	2013
Analyst Tools Comparative Analysis	1	2011	4	2013
Enhance Processing, Exploitation and Dissemination capability	1	2016	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	28.407	33.034	12.707	2.173	14.880	9.471	9.665	10.253	10.450	Continuing	Continuing
0933: *Medical/Dental Equipment Dev*	11.693	14.934	12.707	2.173	14.880	9.471	9.665	10.253	10.450	Continuing	Continuing
9999: *Congressional Adds*	16.714	18.100	-	-	-	-	-	-	-	0.000	34.814

A. Mission Description and Budget Item Justification

The purpose of this budget item is to develop biomedical equipment and related techniques to reduce morbidity; to enhance the logistic feasibility of modern medical care for combat casualties; to sustain casualties for evacuation to fixed medical facilities for definitive care; and to ensure that personnel are medically qualified for military duty. There is a strong potential for dual use, technology transfer, and biotechnology firms/industry participation in the projects.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	12.337	12.984	12.902	-	12.902
Current President's Budget	28.407	33.034	12.707	2.173	14.880
Total Adjustments	16.070	20.050	-0.195	2.173	1.978
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	18.100			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.881	-			
• Program Adjustments	0.300	1.950	-0.161	2.173	2.012
• Rate/Misc Adjustments	-	-	-0.034	-	-0.034
• Congressional General Reductions Adjustments	-0.149	-	-	-	-
• Congressional Add Adjustments	16.800	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Military Dental Research*	6.367	5.100
Congressional Add: *Wound Care Research (transferred from Defense Health Program)*	10.347	13.000

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604771N: *Medical Development*

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Congressional Add Subtotals for Project: 9999	16.714	18.100
Congressional Add Totals for all Projects	16.714	18.100

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0933: *Medical/Dental Equipment Dev*	11.693	14.934	12.707	2.173	14.880	9.471	9.665	10.253	10.450	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The purpose of this budget item is to develop biomedical equipment and related techniques to reduce morbidity; to enhance the logistic feasibility of modern medical care for combat casualties; to sustain casualties for evacuation to fixed medical facilities for definitive care; and to ensure that personnel are medically qualified for military duty. There is a strong potential for dual use, technology transfer, and biotechnology firms/industry participation in the projects.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Title: Medical/Dental Equipment Dev	11.693	14.934	12.707	-	12.707
Articles:	0	0	0		0

FY 2011 Accomplishments:

Wound Management Program - Integrated efforts in wound closure, Hyperspectral Imaging, Heterotopic Ossification, and stem cell applications for wound repair.

- Monitoring, Oxygen Ventilation and External Suction (MOVES) System - Initiated field testing and airworthiness testing for device. Continued configuration management of MOVES anesthesia module. Joint effort developed system procured by the Marine Corps.
- Mobile Oxygen Ventilation and External Suction (MOVES) Anesthesia - Continued development of MOVES anesthesia module.
- Intranasal Carbon Dioxide for Headache and Trigeminal Muscle Pain - Continued efforts to provide an abortive migraine therapy with minimal side effects and high efficacy for use on deployment and in Military Treatment Facilities. Led study data integrator identified to coordinate research sites.
- Mitigation of Traumatic Brain Injury with Novel Pad Inserts - Continued effort to improve protection provided by helmets through a new helmet insert that will absorb shock, impact, and vibration.
- Attenuated Sporozoite Malaria Vaccine for Military Personnel - Continued augmented efforts with the ongoing clinical trial effort to test, for safety and efficacy, a militarily relevant malaria vaccine regimen utilizing a promising novel vaccine candidate.
- Joint Development Projects with MARCORSYSCOM Medical Acquisition - Continued Joint Development Testing and Evaluation program for medical products and equipment. Finalized development of casualty care systems for USMC Procurement.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
- USMC Suicide Prevention Program Resiliency Study and Related Efforts - Initiated research leveraging the Marine Resiliency study, adding targeted studies of Marines that may be applicable to larger controls. - Transition Projects from Force Health Protection Future Capability - Initiated Development, Testing, and Evaluation program for transition products from the Office of Naval Research 6.3 Advanced Development program. Focused on transition of novel hemostatic agents (e.g. infusible hemostatics and field/first responder devices). - Treatment Response Modeling for Crew Injuries Resulting from Weapons Attack - Completed refinement of model for medical chain requirements for evacuation patient outcomes. Determined probabilistic representation of mortality function and coordinated with software developer to ensure interoperability with the Office of Naval Research. - Individualized Fatigue - Based Scheduling and Countermeasure System - Initiated study for development of a tool that predicted, prevented, detected, and mitigated periods of high risk associated with fatigue. Research leveraged was based upon an effort funded by the Office of Naval Research. OCO - Combined Maritime Acoustic Device and Optical (Laser) Field Test - Based on a 5th Fleet requirement, initiated an evaluation of various commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) Non-Lethal Weapons (NLW) technology required to determine the effectiveness of a combined Acoustic and Laser device as a long-range NLW hailing and warning device. The future acquisition to deploy these types of systems in-theater will be determined by the Armed Services based on this evaluation.					
FY 2012 Plans: - Mobile Oxygen Ventilation and External Suction (MOVES) Anesthesia - Complete development of MOVES anesthesia module. This device is a pre-planned product improvement for FRSS deployment for MTFs, Medicine Clinics, Corpsman, and Navy or USMC Special Operations. Joint effort to result in Marine Corps procurement. - Attenuated Sporozoite Malaria Vaccine for Military Personnel - Complete augmented efforts with the ongoing clinical trial effort to test, for safety and efficacy, a militarily relevant malaria vaccine regimen utilizing a promising novel vaccine candidate. - Wound Management Program - Integrate efforts in wound closure, Hyperspectral Imaging, Heterotopic Ossification, and stem cell applications for wound repair. The system will provide improved diagnostic measures of wound healing.					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
- Intranasal Carbon Dioxide for Headache and Trigeminal Muscle Pain - Complete study supporting provision of an abortive migraine therapy with minimal side effects and high efficacy for use on deployment and in Military Treatment Facilities. - Individualized Fatigue-Based Scheduling and Countermeasure System - Continue research supporting development of a tool that predicts, prevents, detects, and mitigates periods of high risk associated with fatigue. Coordinate with the Office of Naval Research to facilitate transition. - Joint Development Projects with MARCORSYSCOM Medical Acquisition - Continue Joint Development Testing and Evaluation program for medical products and equipment. Finalize development for USMC Procurement. - Transition Projects from Force Health Protection Future Capability - Continue Development, Testing, and Evaluation program for transition products from the Office of Naval Research 6.3 Advanced Development program. Focus will be on transition of novel hemostatic agents (e.g. infusible hemostatics and field/first responder devices). OCO: - Foreign Directed Energy System Exploitation - Exploitation of foreign directed energy devices for bioeffects. - Determining and Optimizing Medical Resource Requirements for Expeditionary Medical Units Engaged in OCOs - An expeditionary medical modeling and simulation tool (the Theater Medical Logistics Planning Tool (TML+)) will be configured to project and optimize medical resource requirements. Resource projection capability will be developed for Tactical Combat Casualty Care and rhesus surgery. - Expeditionary Medical Encounter Database (CTR EMED) - Capture expeditionary tactical and medical injury and illness data and map data to long-term casualty clinical, rehabilitative and quality of life outcome data. ***FY 2013 Base Plans:*** - Attenuated Sporozoite Malaria Vaccine for Military Personnel - Complete augmented efforts with the ongoing clinical trial effort to test, for safety and efficacy, a militarily relevant malaria vaccine regimen utilizing a promising novel vaccine candidate. - Individualized Fatigue-Based Scheduling and Countermeasure System - Complete research supporting development of a tool that predicts, prevents, detects, and mitigates periods of high risk associated with fatigue. Periods of high individualized performance risk will be predicted and prevented by providing individual, specific, and fatigue optimized schedules and mitigation strategies. - USMC Suicide Prevention Program Resiliency Study and Related Efforts - Complete research leveraging the Marine Resiliency study and the execution of targeted studies of Marines. Address aims including addition					

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
of assessments to include 12-month after deployment return to determine risk for chronic PTSD and potential factors for mitigation. Effort includes assessment of postvention efforts and psychological studies. - Wound Management Program - Integrate efforts in wound closure, Hyperspectral Imaging, Heterotopic Ossification, and stem cell applications for wound repair. The system will provide improved diagnostic measures of wound healing. - Joint Development Projects with MARCORSYSCOM Medical Acquisition - Continue Joint Development Testing and Evaluation program for medical products and equipment. Finalize development for USMC Procurement. - Transition Projects from Force Health Protection Future Capability - Continue Development, Testing, and Evaluation program for transition products from the Office of Naval Research 6.3 Advanced Development program. Focus will be on transition of novel hemostatic agents (e.g. infusible hemostatics and field/first responder devices).					
Title: Tactical Logistics Planning Tool ***Articles:*** ***FY 2013 Base Plans:*** N/A ***FY 2013 OCO Plans:*** A research tool that models patient flow from the point of injury through definitive care, and an analysis tool that supports OCO operational risk assessment, field medical services planning and systems analysis. Because it can handle larger amounts of data, TML+ provides the capability to model medical treatment facilities at all levels of care and their respective functional areas, the number and type of personnel, and the type, speed, and capacity of transportation assets. The plan is to continue to develop specific modeling capabilities in TML+ to support the development of OCO medical plans that optimize clinical outcomes for combat casualties using the minimum amount of manpower, materiel, and CASEVAC/Enroute care resources.	-	-	- 0	0.481 0	0.481 0
Title: Combat Trauma Registry - Expeditionary Medical Encounter Database (CTR EMED) ***Articles:*** ***FY 2013 Base Plans:*** N/A ***FY 2013 OCO Plans:*** Tri-service database of all battle injuries, non-battle injuries, disease, and mental health encounters that occur in deployed medical treatment facilities supporting OCO. The CTR EMED tracks each casualty, develops a	-	-	- 0	0.892 0	0.892 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
detailed injury profile of the casualty's injuries and severities in near real-time. The tactical, operational, and casualty clinical data are forwarded to the intelligence, materiel developer and threat mitigation communities. Continue to maintain CTR EMED infrastructure necessary for supporting these OCO threat mitigation initiatives.					
Title: Validation of the Human Surrogate (HS) Prototype ***Articles:*** ***FY 2013 Base Plans:*** N/A ***FY 2013 OCO Plans:*** Validation of the Human Surrogate (HS) Prototype will help determine the margin of safety of microwave counter Improvised Explosive Devices (IEDs) devices and munitions. The HS model, developed by Greenwave Scientific Inc., designed to be used to make accurate measurements of the specific absorption rate (SAR) of RF energy in the human body from Counter Radio-Controlled Electronic Warfare (CREW) devices. The absorption of radiofrequency (RF) by the human body is very complex. It is well known that even uniform RF exposures lead to non-uniform absorption in almost all human exposure situations. Current methods to measure SAR in the human body are elegant and elaborate processes but they can only be carried out in the laboratory. These consist of open and closed human phantom shells filled with liquids that simulate the electrical properties of human tissue. To measure the uneven absorption of RF energy a small electric field probe is mechanically moved around inside the phantom shell during exposure. Continue work on the HS model and the evaluation of the accurate measurements of the specific absorption rate of radio frequent energy in the human body from Counter Radio-Controlled Electronic Warfare devices. Start developing some initial research studies looking at the long term use of the Counter Radio-Controlled Electronic Warfare devices.	-	-	- 0	0.400 0	0.400 0
Title: Evaluation of Various Commercial and Government Off the Shelf Non-Lethal Weapons (NLW) Technology - Based on a 5th Fleet Urgent Requirement ***Articles:*** ***FY 2013 Base Plans:*** N/A ***FY 2013 OCO Plans:***	-	-	- 0	0.400 0	0.400 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Based on a 5th Fleet Urgent Requirement, an evaluation of various commercial-off-the-shelf (COTS) and government-off-the-shelf (GOTS) Non-Lethal Weapons (NLW) technology is required to determine the effectiveness of a combined Acoustic and Laser device as a long range NLW hailing and warning device. The bioeffects effort will support legal, policy and treating development for these NLW devices and future acquisition to deploy these types of systems in-theatre. Continue the laboratory and field testing of the effectiveness of a combined Acoustic and Laser device as a long range NLW hailing and warning device. Conduct additional field testing under operational conditions.					
Accomplishments/Planned Programs Subtotals	11.693	14.934	12.707	2.173	14.880

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Medical Development Program operates with a Memorandum of Understanding with the Marine Corps Systems Command (Family of Field Medical Equipment) for co-development of products for procurement by the USMC. The acquisition strategy for these products involves direct partnership with the acquisition and procurement professionals at Marine Corps Systems Command. The program's major Product Areas in the Medical Development Program are: 1) Equipment, 2) Pharmaceuticals/ Biologics, and 3) Knowledge/Concepts. The primary Program Areas of Interest are in: 1) Expeditionary Medicine (Navy in Terrestrial, Maritime Surface, Submarine, and Aviation Operations), USMC in Expeditionary Operations. In these areas the focus is on Levels I and II in Clinical Care Medicine; and 2) Products developed for battlefield treatment of Combat Casualties and Combat Trauma, focusing on delivery of Levels III and IV of care.

For areas 1 and 2, there are two primary acquisition strategies. The first is to test and evaluate commercially-developed medical product candidates in managed trials for ultimate Food and Drug Administration (FDA) approval. Partnerships with commercial developers ensure that products of military interest are available for procurement across the DoD, Federal Government, and commercial market. During development, DoD end users are included in the process to the extent possible. The second strategy is to drive the development process with DoD program investments. This process involves developing in-house or industrial prototypes in government-managed programs to meet military and regulatory requirements for production and fielding.

Both strategies promote advanced preparation of procurement plans in line with the product availability. Major Medical Development programs falling in these categories are: MOVES and MOVES anesthesia module (Equipment).

The Third Product Area (Knowledge/Concepts) is focused on the introduction of technologies, techniques, and procedures that alter medical practice and standards of care. These primarily require early involvement of the senior leadership of military medicine, in that the result of the program is modifications of concepts of operations,

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

policy, and/or doctrine. These are often much smaller Medical Development Program examples include Navy/USMC Medical Planning Requirement Assessment and Crisis Action Planning Tool Transition.

Programs such as System for Objective Decision-Making on Timing of Wound Closure involve both material and knowledge solutions.

E. Performance Metrics

Maintaining Scheduled Milestones/Demonstration Events for individualized project/product roadmap. Ensuring critical paths across multiple efforts are primary metrics.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mobile Anesthesia Delivery Module (MADM)	SS/FP	Thornhill Research, Inc. Toronto:Canada	0.874	-		-		-		-	0.000	0.874	
SLC-Cube and Weight Reduction of Moves	SS/FP	Thornhill Research, Inc. Toronto:Canada	0.450	-		-		-		-	0.000	0.450	
Malaria Vaccine	MIPR	NMRC:Silver Spring MD	0.500	3.600	Dec 2011	0.813	Dec 2012	-		0.813	0.000	4.913	
Migraine Treatment (NPDS)	C/FFP	The McConnell Group:Rockville MD	1.938	0.618	Dec 2011	-		-		-	0.000	2.556	
USMC Suicide Prevention Research	SS/FP	University of California:San Diego	2.098	2.910	Dec 2011	2.910	Dec 2012	-		2.910	0.000	7.918	
Individualized Fatigue-Based Scheduling and Countermeasure System	SS/FP	Pulsar Informatics:Philadelphia PA	0.305	1.183	Jan 2012	0.925	Dec 2012	-		0.925	Continuing	Continuing	Continuing
Product Development	TBD	Various:Not Specified	6.409	4.673	Dec 2011	8.059	Dec 2012	-		8.059	0.000	19.141	
Medical/Dental Equipment Development (OCO)	SS/FP	Various:Not Specified	-	1.950	Jul 2012	-		2.173	Dec 2012	2.173	0.000	4.123	
		Subtotal	12.574	14.934		12.707		2.173		14.880			

Remarks

MADM is being executed as partial funding of a new contract between RDECOM Natick, MA and Thornhill Research, Inc. The total contract value is approximately $4,100K with the project jointly funded by the Navy ($1,000K) and the USMC for a POP through 29 JUN 2012. The first two proofs of concepts (under N00244-07-C-1531) and the breadboard (under W911QY-08-C-0116) are complete. Animal and human factors testing are ongoing. Next two phases of MADM will be focused on developing the Beta prototype and testing it on animals (base year), followed by building 10 units, verification and validation, environmental, EMC, and vibration testing, and human testing. POP for base year is 12 months which extends to 24 if the option is exercised. It is anticipated that MARCORSYSCOM will assume funding of this effort in FY12 under the existing MOA.

The SLC program incorporates redesign and reconfiguration efforts to enhance the USMC en route care device capability set. The core program effort is supplemented by a congressional add that augments final DT&E efforts of MOVES and configuration and redesign of SLC.

Malaria vaccine research executed as partial funding of a consortium with the National Institute of Allergy and Infectious Diseases and the Malaria Vaccine Initiative. Current year Navy Funding is $3.6M. The product is the collaborative work between MVPP and a Gates Foundation researcher to develop a vaccine against Plasmodium falciparum. The approach is based on a prime/boost adenovaccine.

The performers developing an intranasal treatment for migraines are the Naval Postgraduate Dental School in conjunction with a contract for the McConnell Group, which will perform a clinical trial to determine the safety and effectiveness of nasal carbon dioxide versus placebo in the treatment of moderate to severe migraine for pain and associated symptoms of nausea, photophobia and phonophobia. This clinical trial will be conducted at six military/VA treatment facilities.

USMC Suicide Prevention Program Resiliency Study and Related Efforts - Complete research leveraging the Marine Resiliency study and the execution of targeted studies of Marines. Address aims including addition of assessments to include 12-month after deployment return to determine risk for chronic PTSD and potential factors for mitigation. Effort includes assessment of postvention efforts and psychological studies.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Individualized Fatigue-Based Scheduling and Countermeasure System - Initial study is underway for development of a tool that predicts, prevents, detects, and mitigates periods of high risk associated with fatigue. Research leveraged is based upon an effort funded by the Office of Naval Research. Periods of high individualized performance risk will be predicted and prevented by providing individual, specific, and fatigue optimized schedules and mitigation strategies. Product Development incorporates numerous small efforts within major product lines to address the Navy Surgeon General?s priorities. These efforts include: System for Objective Decision-making on the Timing of Wound Closure, Treatment Response Modeling, Heterotopic Ossification, Hyperspectral Imaging, Spray-dried Pooled Plasma, Psychological Autopsy Study & Intranasal Scopolamine for the Prevention of Motion Sickness in Dynamic Military Environments and Biosurveillance Information Service (BIO-SERV).												

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	12.574	14.934		12.707		2.173		14.880			

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604771N: *Medical Development*	**PROJECT** 0933: *Medical/Dental Equipment Dev*

Exhibit R-4, RDT&E Program Schedule Profile					Date: FEBRUARY 2012		
Appropriation/Budget Activity: BA5		Program Element Number and Name: 0604771N Medical Development			Project Number and Name: 0933 Medical and Dental Equipment Development		
Fiscal Year	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Malaria Vaccine Research	▲							
Adenovector Manufacturing		▲						
Pre-Investigational New Drug and Toxicological Study		▲						
Preparation of materials for trials		▲						
Clinical Trial			▲					

Remarks: Malaria vaccine research executed as partial funding of a consortium with the National Institute of Allergy and Infectious Diseases and the Malaria Vaccine Initiative. Current year Navy Funding is $3.6M. The product is the collaborative work between MVPP and a Gates Foundation researcher to develop a vaccine against *Plasmodium falciparum*. The approach is based on a prime/boost adenovaccine.

▲ Milestone
▼Demonstration

Exhibit R-4, **RDT&E Schedule Profile:** PB 2013 Navy			**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604771N: *Medical Development*	**PROJECT** 0933: *Medical/Dental Equipment Dev*	

Exhibit R-4a, RDT&E Program Schedule Detail									Date: FEBRUARY 2012
Appropriation/Budget Activity BA5				Program Element Number and Name : 0604771N Medical Development			Project Number and Name 0933 Medical & Dental Equipment Development		
Schedule Profile	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	
Malaria Vaccine Research	Q1-Q4								
Adenovector Manufacturing		Q1-Q4							
Pre-Investigational New Drug and Toxicological Study		Q4							
Preparation of materials for trials		Q4							
Clinical Trial			Q1-Q4						

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Exhibit R-4, RDT&E Program Schedule Profile				Date: FEBRUARY 2012				
Appropriation/Budget Activity: BA5			Program Element Number and Name: 0604771N Medical Development			Project Number and Name: 0933 Medical and Dental Equipment Development		
Fiscal Year	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Complete IRB Process	▲							
Complete Enrollment of 400 Subjects with Migraine at MTFs and VA facilities			▲					
Analyze Data and Submit Findings to FDA			▲					
FDA Review and Follow-On			▲					
Remarks: This performer on this project is the Naval Postgraduate Dental School in conjunction with a contract for the McConnell Group to perform a clinical trial to determine the safety and effectiveness of nasal carbon dioxide versus placebo in the treatment of moderate to severe migraine for pain and associated symptoms of nausea, photophobia and phonophobia. This clinical trial will be conducted at six military/VA treatment facilities.								

▲ Milestone
▼ Demonstration

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Exhibit R-4a, RDT&E Program Schedule Detail							Date: FEBRUARY 2012		
Appropriation/Budget Activity BA5				Program Element Number and Name : 0604771N Medical Development			Project Number and Name 0933 Medical & Dental Equipment Development		
Schedule Profile	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	
Complete IRB Process	Q4								
Complete Enrollment of 400 Subjects with Migraine at MTFs and VA facilities		Q4							
Analyze Data and Submit Findings to FDA			Q1-Q4						
FDA Review and Follow-On			Q4						

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Exhibit R-4, RDT&E Program Schedule Profile				Date: FEBRUARY 2012			
Appropriation/Budget Activity: BA5		Program Element Number and Name: 0604771N Medical Development			Project Number and Name: 0933 Medical and Dental Equipment Development		
Fiscal Year	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18
Psychological Autopsy Study – Full Report with Conclusions and Risk Checklist		▲						
Impact of USMC Suicide on Family Survivors – Recommendations for Postvention Efforts		▲						
Marine Resiliency Study II	▲		▲					
Remarks: USMC Suicide Prevention Program Resiliency Study and Related Efforts - Complete research leveraging the Marine Resiliency study and the execution of targeted studies of Marines. Address aims including addition of assessments to include 12-month after deployment return to determine risk for chronic PTSD and potential factors for mitigation. Effort includes assessment of postvention efforts and psychological studies.								

▲ Milestone
▼ Demonstration

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 0933: *Medical/Dental Equipment Dev*

Exhibit R-4a, RDT&E Program Schedule Detail							Date: FEBRUARY 2012		
Appropriation/Budget Activity BA5				Program Element Number and Name : 0604771N Medical Development		Project Number and Name 0933 Medical & Dental Equipment Development			
Schedule Profile	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	
Psychological Autopsy Study – Full Report with Conclusions and Risk Checklist		Q1-Q4							
Impact of USMC Suicide on Family Survivors – Recommendations for Postvention Efforts		Q1-Q4							
Marine Resiliency Study II	Q3-Q4	Q1-Q4	Q1-Q4						

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604771N: *Medical Development*	**PROJECT** 0933: *Medical/Dental Equipment Dev*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0933				
0933 - SLC Verification and Validation Testing	1	2012	2	2012
0933 - MADM - Critical Design Review	2	2011	3	2011
0933 - MADM - Animal Studies	1	2011	4	2011
0933 - MADM - Human Studies	1	2012	4	2012
0933 - MADM - Final Report	4	2012	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604771N: *Medical Development*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	16.714	18.100	-	-	-	-	-	-	-	0.000	34.814
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Adds

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Military Dental Research ***FY 2011 Accomplishments:*** Continued the development of novel treatments for wounds based on the use of cells and factors to improve wound healing. ***FY 2012 Plans:*** N/A	6.367	5.100
Congressional Add: Wound Care Research (transferred from Defense Health Program) ***FY 2011 Accomplishments:*** The Wound Care Research Program is a comprehensive effort to develop novel diagnostics and treatments to enhance the care of the wounded warfighter. The program utilizes cutting edge molecular assays and advanced computational biology to develop a device to predict the outcome of wounds. The development of novel treatments for wounds is based on the use of cells and factors to improve wound healing. ***FY 2012 Plans:*** N/A	10.347	13.000
Congressional Adds Subtotals	16.714	18.100

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

N/A

E. Performance Metrics

Not required for Congressional adds.

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	58.727	39.331	47.764	-	47.764	50.259	32.508	32.596	42.294	Continuing	Continuing
0253: *Nav & Electro-Optical Supt*	7.292	5.958	7.527	-	7.527	7.598	7.755	7.890	8.029	Continuing	Continuing
0676: *Improve ID Development*	2.586	1.842	2.335	-	2.335	2.367	2.311	2.319	2.426	Continuing	Continuing
0921: *NAVSTAR GPS Equipment*	19.108	20.019	19.652	-	19.652	19.749	19.832	20.043	20.420	Continuing	Continuing
1253: *Combat Ident System*	29.741	11.512	18.250	-	18.250	20.545	2.610	2.344	11.419	Continuing	Continuing

A. Mission Description and Budget Item Justification

Reliable and secure navigation and positive identification (ID) systems are essential elements of battle management in the naval environment. The Photonics Imaging System (0253) is a non-hull penetrating replacement for existing optical periscopes. The Photonics Imaging System exploits a wide portion of the electro-magnetic spectrum utilizing advanced Electro-Optic/thermal imaging, and communications intercept/Electronic Warfare Support (ES). The Integrated Submarine Imaging System (ISIS) (0253) is a back fit system to integrate all imaging capabilities on existing submarine classes. The Combat Identification System (CIS) project (1253) for Mark XIIA, and Improved Identification Development (0676) for AN/UPX-29(V), covers the Mark XIIA Mode 5 upgrade to the existing Mark XII family of systems that is Joint and North Atlantic Treaty Organization (NATO) interoperable. Per OSD direction, NATO participation is encouraged and performance data is exchanged to ensure the opportunity for interoperability with allied identification systems is maximized. In addition to distinguishing friend from foe for weapons employment, the Navy requires secure, jam resistant Identification Friend or Foe (IFF) systems for battle group air defense management and air traffic control. Identification is multifaceted and includes information received from several sensors (both cooperative and non-cooperative systems).

NAVSTAR Global Positioning System (GPS) project (0921) is a space-based positioning, navigation and timing (PNT) system that provides authorized users with secure, worldwide, all weather, three dimensional position, velocity and precise time data. Navigation Sensor System Interface (NAVSSI) is a system that provides an integrated navigation message structure for network distribution to support combat, command and control, information and other mission critical capabilities. Navy Air and Sea Navigation Warfare (NAVWAR) are major elements of the GPS program. NAVWAR's mission is to provide continued access to GPS information in a denied environment. NAVWAR accomplishes this through the use of enhanced user equipment (UE). GPS modernization addresses the Navy's future integration of GPS Joint Program Office (JPO) Modernized User Equipment (MUE) products being developed that will enable the use of new signals in space. WRN-X is a modernized ship GPS equipment development program required to provide a replacement for the existing WRN-6 receiver and other shipboard receivers. Navigation Sensor System Interface (NAVSSI) is a surface based system that integrates shipboard position, navigation and timing data, and distributes the processed output to user systems and networks.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	66.636	50.178	48.151	-	48.151
Current President's Budget	58.727	39.331	47.764	-	47.764
Total Adjustments	-7.909	-10.847	-0.387	-	-0.387
• Congressional General Reductions	-	-0.047			
• Congressional Directed Reductions	-	-10.800			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-5.883	-			
• SBIR/STTR Transfer	-1.666	-			
• Program Adjustments	-	-	-0.448	-	-0.448
• Rate/Misc Adjustments	-	-	0.061	-	0.061
• Congressional General Reductions Adjustments	-0.360	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Project 0676 and 1253: Initial Operational Test and Evaluation (IOT&E) has moved from 4QFY11 to 1QFY12 due to ship availability. This schedule change has pushed the IOT&E Outbrief, the Full Rate Production Decision Review, the Initial Operational Capability, and the Full Rate Production Contract Award to 3QFY12.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0253: *Nav & Electro-Optical Supt*	7.292	5.958	7.527	-	7.527	7.598	7.755	7.890	8.029	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Navigation and Electro-Optical (E-O) Support program develops Submarine Electro-Optical and imagery systems and equipment that will improve submarine imaging capability in the areas of: ship safety, Intelligence, Surveillance and Reconnaissance (ISR), and tactical control (contact management in the littorals). The Photonics Imaging System, mounted on the Universal Modular Mast, will provide imaging capability for the SSGN and VIRGINIA Class submarines. The Photonics Imaging System design exploits a wide portion of the electro-magnetic spectrum through advanced E-O and thermal imaging and Electronic Warfare Support (ES)/ Communications intercept. It will provide significant improvements in submarine stealth and Infra-Red (IR) imaging capability. The non-hull penetrating design provides freedom in ship design and space savings for SSGN and VIRGINIA Class and future submarines designs. Specific efforts include: (1) Low Light Level TV development, digital sensor development and integration, and displays, and (2) Imaging System Test Efforts.

The Department of the Navy established the Integrated Submarine Imaging System (ISIS) to rapidly field the Type 18 Periscope Patriot Rangefinder, Type 8 Mod 4 IR Periscope systems, and integrate existing periscope imagery systems into a single system for installation on board SSN 688 Class and SEAWOLF Class submarines. The ISIS baseline includes the Type 18 Periscope Patriot Rangefinder, Type 8 Mod 4 IR Periscope, and supports high intensity operations in the littorals and provides the submarine force with the tactical imaging systems necessary to safely and effectively employ its surveillance and weapons capabilities. Specific efforts undertaken to meet the ISIS requirements are: (1) Type 18 Periscope Automated Range Finder development; (2) Development of hardware capabilities common to ISIS and Photonics via the Technology Insertion process. The AN/BVS-1 Photonics Mast Program (PMP) provides for the development and acquisition of a non-hull penetrating submarine electronic imaging system for VIRGINIA Class submarines. The Integrated Submarine Imaging System (ISIS) provides mission critical, all weather, visual, and electronic search, digital image management, indication, warning, and platform architecture interface capabilities for SSN 688, SSN 21, SSN 774 and SSGN Class submarines.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Upgrade/Resolve Obsolescent Photonics On-Board Team Trainer development. (PMOBT)	0.131	-	-
Articles:	0		
FY 2011 Accomplishments: Updated hardware and software of the PMOBT system for obsolescence and other associated improvements.			
Title: ISIS and Photonics common hardware capabilities development and obsolescence.	3.989	3.227	5.872
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
ISIS Technical Insertion (TI-12) development for LOS ANGELES and SEAWOLF Classes. ***FY 2012 Plans:*** Continue ISIS Technical Insertion (TI) development for LOS ANGELES and SEAWOLF Classes. ***FY 2013 Plans:*** ISIS Technical Insertion (TI) development for LOS ANGELES, SEAWOLF and VIRGINIA Classes.			
Title: Low Light Level TV development, digital sensor development and integration and displays. ***Articles:*** ***FY 2011 Accomplishments:*** Incorporation of IR Camera Upgrades into ISIS Inboard Systems. ***FY 2012 Plans:*** Completion of display upgrades.	1.604 0	1.307 0	-
Title: Imaging Systems Test Efforts. ***Articles:*** ***FY 2011 Accomplishments:*** ISIS TI-10 OT Testing. ***FY 2012 Plans:*** ISIS TI-12 EDM Testing. ***FY 2013 Plans:*** TI-12 OT Testing.	1.063 0	0.860 0	1.081 0
Title: Patriot Radar Range Finder Development for Photonics for SSGN and VIRGINIA Class Submarine. ***Articles:*** ***FY 2011 Accomplishments:*** Upgraded the Type 18 Periscope Automated Rangefinder Software. Integrated the ISIS TI-10 Patriot Rangefinder and Software Development for VIRGINIA and SSGN Classes. ***FY 2012 Plans:*** Continue upgrade of the Type 18 Periscope Automated Rangefinder Software. Continue integration of the ISIS TI-10 Patriot Rangefinder and Software Development for VIRGINIA and SSGN Classes. ***FY 2013 Plans:***	0.505 0	0.564 0	0.574 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Development and integration of Patriot Radar Range Finder into ISIS Technical Insertion kit design			
Accomplishments/Planned Programs Subtotals	7.292	5.958	7.527

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/201300: *Photonics Mast*	38.978	36.250	36.975	0.000	36.975	18.857	38.469	39.238	40.023	Continuing	Continuing
• OPN/0831: *Sub Periscopes & Imaging Equip.*	72.360	57.033	53.809	0.000	53.809	57.867	53.322	52.077	44.282	Continuing	Continuing
• RDT&E/0604558N: *VIRGINIA Class Design Development*	4.550	3.000	3.200	0.000	3.200	3.500	4.500	3.000	3.000	Continuing	Continuing

D. Acquisition Strategy

The Acquisition Strategy for AN/BVS-1 Photonics Mast Program (PMP) is dated 24 Sept 2001. The PMP provides for the development and acquisition of a non-hull penetrating submarine electronic imaging system for VIRGINIA Class submarines. The Acquisition Strategy for Integrated Submarine Imaging System (ISIS) is dated 07 Jul 2003. The ISIS will provide mission critical, all weather, visual, and electronic search, digital image management, indication, warning, and platform architecture interface capabilities for SSN 688, SSN 21, SSN 774 and SSGN class submarines.

E. Performance Metrics

Successful application of system engineering processes. Design and development of improvements. Site acceptance of product improvements with no Priority 1 or 2 problem reports. Completion of 2 upgrades per year. Acceptance of product improvements with no Priority 1 or 2 problem reports.

The RDD program goal is to respond to urgent operational needs within 30 days and provide for rapid development and fielding of prototype solutions within 270 days.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NUWC:Newport, RI	11.034	-		-		-		-	0.000	11.034	
Software Development	C/CPIF	Lockheed Martin:Manassas, VA	11.203	1.328	Apr 2012	1.552	Mar 2013	-		1.552	Continuing	Continuing	Continuing
Systems Engineering	WR	NUWC:Newport, RI	12.774	1.791	Oct 2011	2.157	Oct 2012	-		2.157	Continuing	Continuing	Continuing
Miscellaneous	WR	NUWC:Newport, RI	3.589	0.286	Oct 2011	0.528	Oct 2012	-		0.528	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPIF	Lockheed Martin:Manassas, VA	1.956	1.421	Apr 2012	1.809	Mar 2013	-		1.809	Continuing	Continuing	Continuing
		Subtotal	40.556	4.826		6.046		-		6.046			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	AT&T:Vienna, VA	3.521	0.406	Oct 2011	0.579	Oct 2012	-		0.579	Continuing	Continuing	Continuing
		Subtotal	3.521	0.406		0.579		-		0.579			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Test & Evaluation	WR	NUWC:Newport, RI	5.455	0.672	Oct 2011	0.847	Oct 2012	-		0.847	Continuing	Continuing	Continuing
		Subtotal	5.455	0.672		0.847		-		0.847			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*

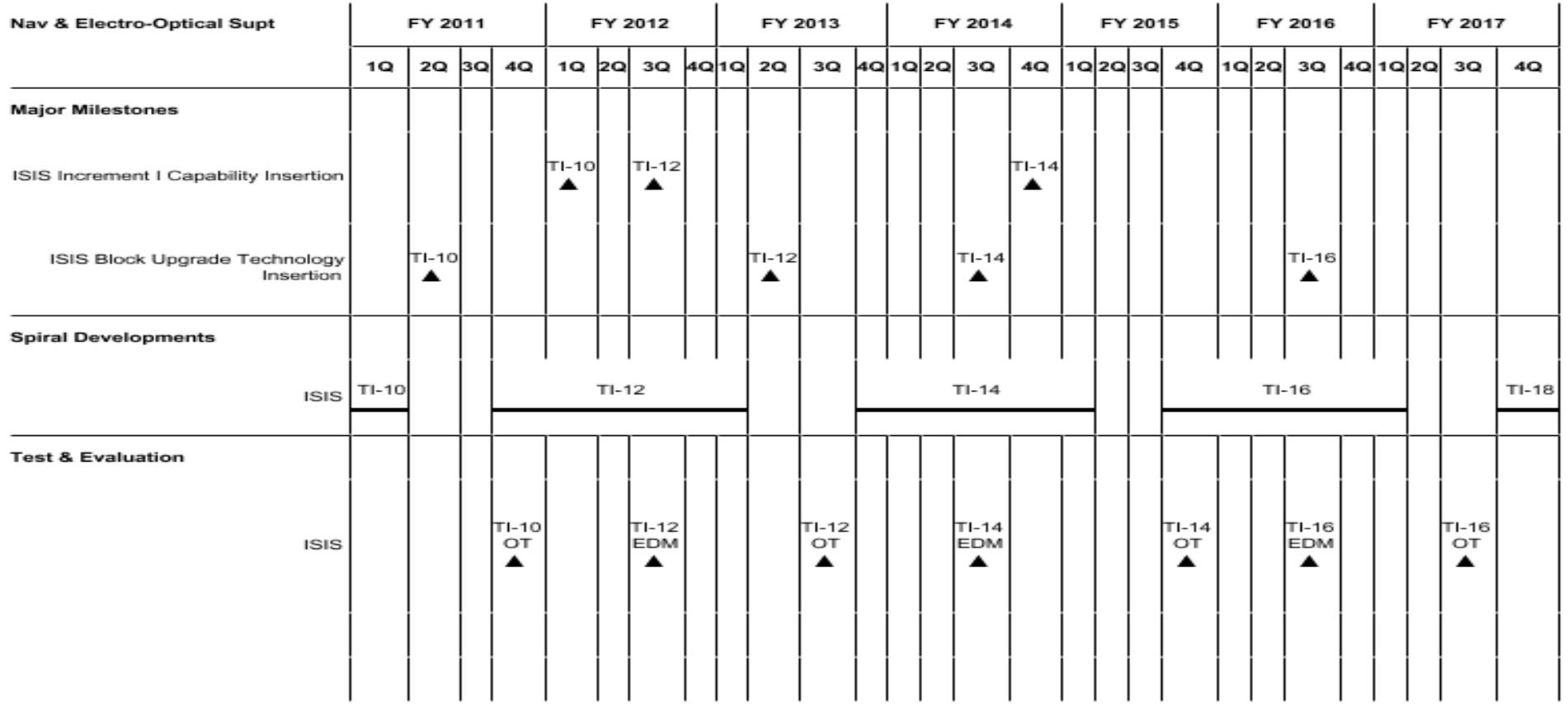
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	C/CPAF	NAVSEA:Washington, DC	0.303	0.054	Oct 2011	0.055	Oct 2012	-		0.055	Continuing	Continuing	Continuing
		Subtotal	0.303	0.054		0.055		-		0.055			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	49.835	5.958		7.527		-		7.527			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*



2013PB - 0604777N - 0253

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604777N: *Navigation/Id System*	**PROJECT** 0253: *Nav & Electro-Optical Supt*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Nav & Electro-Optical Supt				
Major Milestones: ISIS Increment I Capability Insertion: ISIS Increment I Capability Insertion Fielding (TI-10)	1	2012	1	2012
Major Milestones: ISIS Increment I Capability Insertion: ISIS Increment I Capability Insertion Fielding (TI-12)	3	2012	3	2012
Major Milestones: ISIS Increment I Capability Insertion: ISIS Increment I Capability Insertion Fielding (TI-14)	4	2014	4	2014
Major Milestones: ISIS Block Upgrade Technology Insertion: ISIS Block Upgrade Technology Insertion Fielding (TI-10)	2	2011	2	2011
Major Milestones: ISIS Block Upgrade Technology Insertion: ISIS Block Upgrade Technology Insertion Fielding (TI-12)	2	2013	2	2013
Major Milestones: ISIS Block Upgrade Technology Insertion: ISIS Block Upgrade Technology Insertion Fielding (TI-14)	3	2014	3	2014
Major Milestones: ISIS Block Upgrade Technology Insertion: ISIS Block Upgrade Technology Insertion Fielding (TI-16)	3	2016	3	2016
Spiral Developments: ISIS: Spiral Development: ISIS TI-10	1	2011	1	2011
Spiral Developments: ISIS: Spiral Development: ISIS TI-12	4	2011	1	2013
Spiral Developments: ISIS: Spiral Development: ISIS TI-14	4	2013	1	2015
Spiral Developments: ISIS: Spiral Development: ISIS TI-16	4	2015	1	2017
Spiral Developments: ISIS: Spiral Developments: ISIS TI-18	4	2017	4	2017
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-10 OT	4	2011	4	2011
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-12 EDM	3	2012	3	2012
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-12 OT	3	2013	3	2013
Test & Evaluation: ISIS: ISIS Test & Evaluation - TI-14 EDM	3	2014	3	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0253: *Nav & Electro-Optical Supt*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-14 OT	4	2015	4	2015
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-16 EDM	3	2016	3	2016
Test & Evaluation: ISIS: Test & Evaluation - ISIS TI-16 OT	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0676: *Improve ID Development*	2.586	1.842	2.335	-	2.335	2.367	2.311	2.319	2.426	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Reliable and secure navigation and positive identification (ID) systems are essential elements of battle management in the naval environment. In addition to providing platform identification for weapons employment, the Navy requires secure, jam resistant Identification Friend or Foe (IFF) systems for battle group air defense management and air traffic control. The Improved ID Development project addresses the Mark XIIA Mode 5 upgrade to the existing AN/UPX-29(V) Mark XII family of systems that is Joint and North Atlantic Treaty Organization (NATO) interoperable. This exhibit also addresses the AN/UPX-29(V) antenna, the OE-120/UPX.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: AN/UPX-29 (V) - OE-120/UPX Antenna Replacement	1.438	1.368	1.373
Articles:	0	0	0
Description: Engineering and integration development for antenna group OE-120/UPX modernization. Develop design studies and Analysis of Alternitives (AoA), draft specifications, and perform system development and integration efforts.			
FY 2011 Accomplishments: Initiated vendor Class 1 Part 1 ECP to address obsolescence/producibility of the OE-120 antenna system for commissioned ships and new ship construction program.			
FY 2012 Plans: Finalize the Class 1 Part 1 ECP.			
FY 2013 Plans: Develop Antenna Group OE-120/UPX system requirements and address obsolescence issues as required.			
Title: Mark XIIA Mode 5 Improvement for AN/UPX-29(V)	0.968	0.334	0.814
Articles:	0	0	0
Description: Engineering, development, and integration of Mark XIIA Improvements to the AN/UPX-29 (V). Correct deficiencies from Integrated Test and Operational Test (IT - OT) and baseline software and documentation. Funds development and integration of Mark XIIA Improvement to the AN/UPX-29 (V) system on CG 47, DDG 51, LHD 1, LPD 17 and CV/CVN class ships. Provides core Integrated Logistics Support (ILS) documentation; formalizes hardware/software configuration; finalizes technical/ design data, and resolves testing anomalies.			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Prepared systems and platforms for Initial Operational Test and Evaluation. Prepared final deficiency resolution. Resolved remaining system deficiencies and final Integrated Logistics Support documentation updates. Continued integration on LHD 1 class and began LPD 17 integration Certification testing. Conducted interface certification testing and qualification with CEC/7.1 ***FY 2012 Plans:*** Continue AN/UPX-29(V) integration and interface certification testing with ship baselines. Evaluate and replace system processors due to obsolescence. ***FY 2013 Plans:*** Continue AN/UPX-29(V) integration and interface certification testing with ship baselines. Continue evaluating and replacing system processors due to obsolescence (as required).			
Title: AN/UPX-29(V) Management Support	0.180	0.140	0.148
Articles:	0	0	0
Description: Engineering and Program Management of the AN/UPX 29 (V). Perform system integration efforts. ***FY 2011 Accomplishments:*** Managed engineering investigations (EI), provided engineering assessments, and recommended resolution. Reviewed and evaluated reports. ***FY 2012 Plans:*** Manage engineering assessments/evaluations/development efforts that provide resolution to EIs and obsolescence issues. ***FY 2013 Plans:*** Manage engineering assessments/evaluations/development efforts that provide resolution to EIs and obsolescence issues.			
Accomplishments/Planned Programs Subtotals	2.586	1.842	2.335

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2851: *Identification Systems*	22.998	31.470	35.474	0.000	35.474	39.119	38.719	35.276	29.072	Continuing	Continuing

D. Acquisition Strategy

The acquisition strategy is to develop Mode 5 Engineering Change Proposals for modern Mark XII IFF equipment and integrate into all Navy Combat Weapons systems platforms and augment the Navy's Cooperative Identification Capability to include Mode 5.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*

E. Performance Metrics

Achieve Full Rate Production (FRP) Decision and Initial Operational Capability and award FRP contract in FY 2012.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	WR	NAWCAD:St Inigoes, MD	3.985	1.093	Nov 2011	1.140	Nov 2012	-		1.140	Continuing	Continuing	Continuing
Ship Integration	WR	NAWCAD:St Inigoes, MD	2.077	0.075	Nov 2011	0.152	Nov 2012	-		0.152	Continuing	Continuing	Continuing
Systems Engineering	WR	NAWCAD:St Inigoes, MD	5.002	0.200	Nov 2011	0.410	Nov 2012	-		0.410	Continuing	Continuing	Continuing
		Subtotal	11.064	1.368		1.702		-		1.702			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Configuration Management	WR	NAWCAD:St Inigoes, MD	0.169	-		-		-		-	0.000	0.169	
ILS	WR	NAWCAD:St Inigoes, MD	2.371	0.056	Nov 2011	0.059	Nov 2012	-		0.059	Continuing	Continuing	Continuing
Software Development	WR	NAWCAD:St Inigoes, MD	5.081	0.093	Nov 2011	0.193	Nov 2012	-		0.193	Continuing	Continuing	Continuing
Technical Data	WR	NAWCAD:St Inigoes, MD	1.247	0.185	Nov 2011	0.233	Nov 2012	-		0.233	Continuing	Continuing	Continuing
Training	WR	NAWCAD:St Inigoes, MD	0.200	-		-		-		-	0.000	0.200	
		Subtotal	9.068	0.334		0.485		-		0.485			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	NAWCAD:St Inigoes, MD	0.500	-		-		-		-	0.000	0.500	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	NAWCAD:St Inigoes, MD	1.328	-		-		-		-	0.000	1.328	
Test Assets	WR	NAWCAD:St Inigoes, MD	0.731	-		-		-		-	0.000	0.731	
		Subtotal	2.559	-		-		-		-	0.000	2.559	

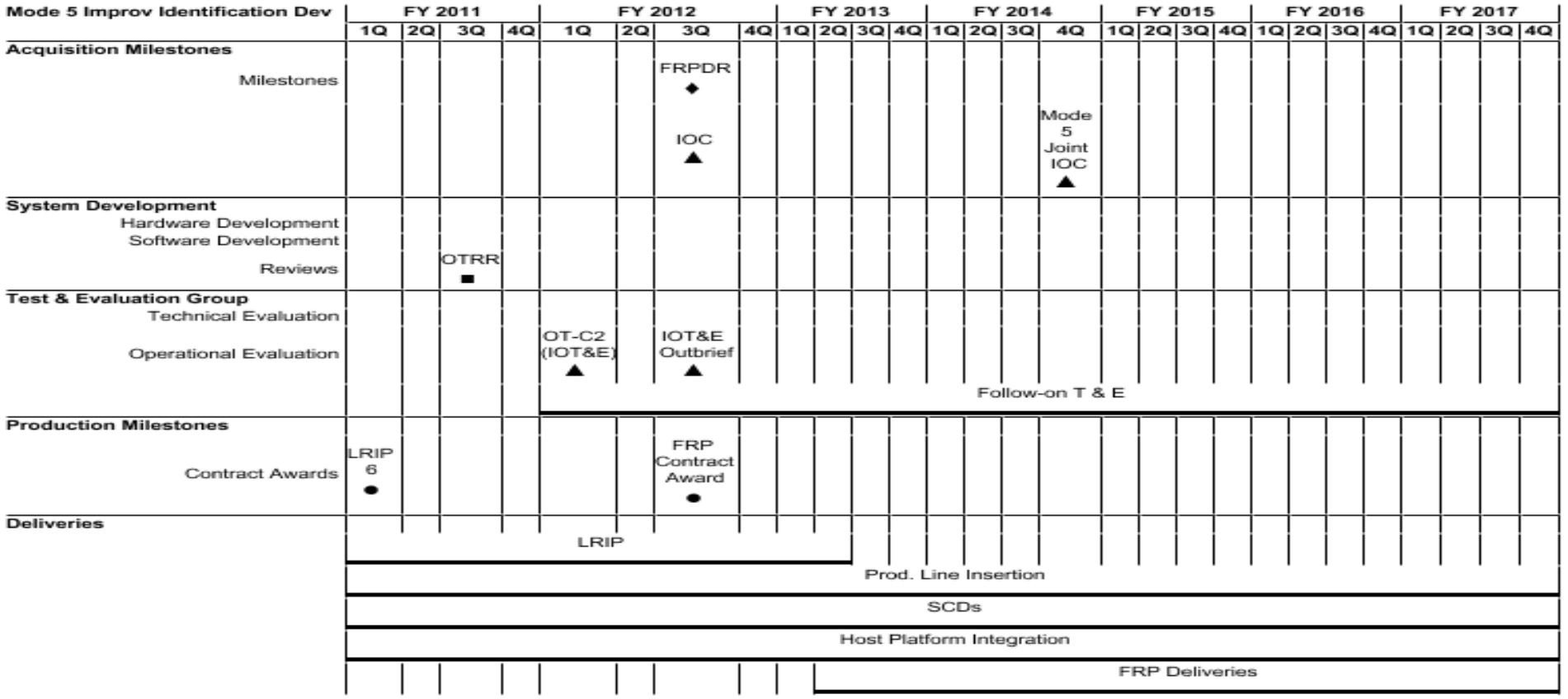
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	American Electronics:California, MD	1.408	0.140	Dec 2011	0.148	Nov 2012	-		0.148	Continuing	Continuing	Continuing
Engineering Support	WR	NAWCAD:PAX River, MD	0.244	-		-		-		-	Continuing	Continuing	Continuing
		Subtotal	1.652	0.140		0.148		-		0.148			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	24.343	1.842		2.335		-		2.335			

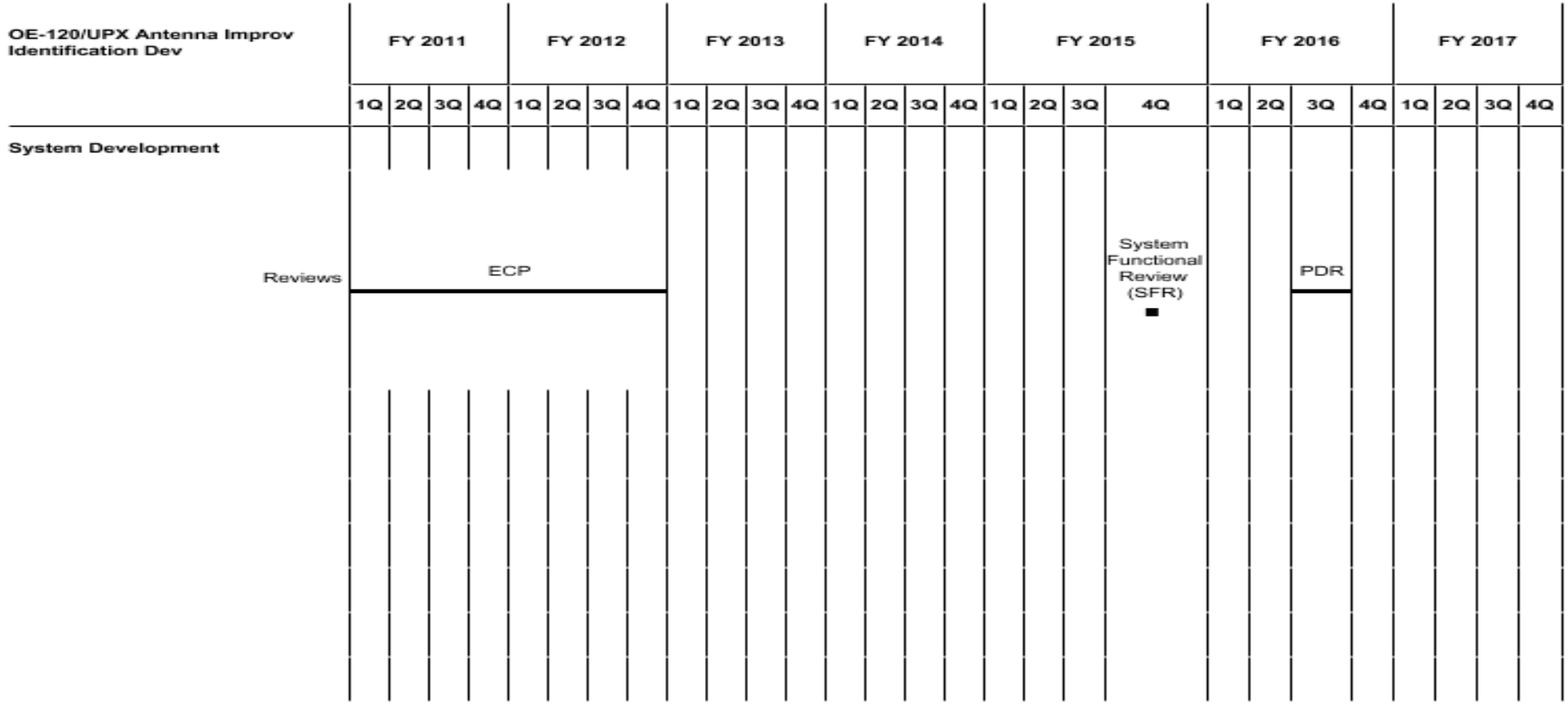
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*



2013PB - 0604777N - 0676

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*



2013PB - 0604777N - 0676

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604777N: *Navigation/Id System*	**PROJECT** 0676: *Improve ID Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Mode 5 Improv Identification Dev				
Acquisition Milestones: Milestones: Mode 5 - Full Rate Production Decision Review (FRPDR)	3	2012	3	2012
Acquisition Milestones: Milestones: IOC	3	2012	3	2012
Acquisition Milestones: Milestones: Mode 5 - Joint IOC	4	2014	4	2014
System Development: Reviews: Operational Test Readiness Review (OTRR)	3	2011	3	2011
Test & Evaluation Group: Operational Evaluation: Mode 5 - OT-C2 (IOT&E)	1	2012	1	2012
Test & Evaluation Group: Operational Evaluation: Mode 5 - IOT&E Outbrief	3	2012	3	2012
Test & Evaluation Group: Operational Evaluation: Mode 5 - Follow-on Test and Evaluation	1	2012	4	2017
Production Milestones: Contract Awards: Mode 5 - LRIP 6 Contract Award (OPN, APN5, RDTEN)	1	2011	1	2011
Production Milestones: Contract Awards: Mode 5 - FRP Contract Award	3	2012	3	2012
Deliveries: Mode 5 - Low-Rate Initial Production Deliveries (DI,CXP) (OPN, APN5, RDTEN)	1	2011	2	2013
Deliveries: Mode 5 - Production Line Insertion	1	2011	4	2017
Deliveries: Mode 5 - Prepare and Evaluate ECPs/SCDs	1	2011	4	2017
Deliveries: Mode 5 - Host Platform Integrations	1	2011	4	2017
Deliveries: Mode 5 - FRP Deliveries	2	2013	4	2017
OE-120/UPX Antenna Improv Identification Dev				
System Development: Reviews: OE-120/UPX Antenna - System Functional Review (SFR)	4	2015	4	2015
System Development: Reviews: OE-120/UPX Antenna - PDR	3	2016	3	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0676: *Improve ID Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
System Development: Reviews: Part 1 Engeneering Change Proposal Class 1	1	2011	4	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0921: *NAVSTAR GPS Equipment*	19.108	20.019	19.652	-	19.652	19.749	19.832	20.043	20.420	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

NAVSTAR Global Positioning System (GPS) project (0921) is a space-based positioning, navigation, and timing (PNT) system that provides authorized users with secure, worldwide, all weather, three dimensional position, velocity, and precise time data. Research, Development, Testing and Evaluation (RDT&E) funds are used to perform all the non-recurring GPS Surface Ship, Submarine and Aircraft Development, Integration, and Testing efforts. GPS continues to be integrated in all DoD platforms and the development of enhanced GPS is a national security priority.

The Naval Research Advisory Committee (NRAC) GPS Vulnerability Study Panel assessed the Navy's GPS Vulnerabilities and recommended specific actions to resolve serious issues to ensure the continued availability of GPS information in a high risk hostile jamming environment. As a result, the Navy Enhanced GPS User Equipment Operational Requirement Document (ORD) was drafted to address operational requirements. NAVWAR's mission is to provide continued access to GPS information in a denied environment. RDT&E continues to support platform integration requirements, Developmental Test/Operational Test (DT/OT), the Navy's development of a smaller Anti-Jam (AJ) antenna and a conformal low-observable AJ antenna for aircraft with unique requirements, and new technology AJ solutions for submarines.

Two similar but separate ACAT III programs (Air and Sea NAVWAR) have been established and have become the basis for the Navy's Air and Sea Navigation Warfare (NAVWAR) programs. The Sea NAVWAR Program is executed in 3 increments. The GPS Antenna System (GAS-1) is integrated on surface platforms in Increment 1. Increment 2 is Advanced Digital Antenna Production (ADAP). It is an enhanced adaptive AJ antenna system based on advanced digital electronics and digital signal processing planned for surface ship integrations. Increment 3 addresses AJ capabilities for submarines. The Air NAVWAR program is a single increment with GAS-1, ADAP, and other efforts continuing. The Capability Production Document for Sea NAVWAR Increment 2 (12/08) was approved to support the ADAP production and procurement.

The primary GPS shipboard systems fielded on the majority of U.S. Navy ships today include the AN/WRN-6 and the Navigation Sensor System Interface (NAVSSI). These military GPS systems provide precise Position, Navigation, and Time (PNT) data required for many combat, weapons, command, control, communications, navigation, and other systems, as well as providing the time synchronization critical to the network environments.

The Global Positioning System (GPS)-based Positioning, Navigation, and Timing (PNT) Service (GPNTS) system is being developed to replace stand-alone AN/WRN-6 receivers and integrated Navigation Sensor System Interface (NAVSSI) systems. Additionally, future capability will migrate toward a Common Computing Environment (CCE) such as Consolidated Afloat Networks Enterprise Services (CANES).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Air Navigation Warfare (NAVWAR)	6.157	5.379	2.279

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Articles:	0	0	0
FY 2011 Accomplishments: Completed integration, developmental and operational testing of the NAVWAR anti-jam capability on F/A-18 E/F/G. Monitored Small Antenna System (SAS)/Miniature - Controlled Reception Pattern Antenna (M-CRPA) development. Continued integration of NAVWAR on other Air platforms which included unmanned air systems and weapons. Continued GPS Modernization platform impact studies and provided Navy unique requirements to the GPS Wing. Continued to coordinate GPS Modernization efforts with other programs and DoD services to reduce impacts to platform navigation systems. Started studies for integration of GPS Wing developed Military GPS User Equipment (MGUE) into Air platforms. Participated in joint NAVWAR Memorandum of Understanding (MOU) initiatives with Canada, United Kingdom and Australia.			
FY 2012 Plans: Continue to assist other air platforms with integration of anti-jam capability to include Unmanned Air Systems (UAS) and weapons. Provide assured PNT efforts to Naval aircraft. Continue to provide GPS Modernization Navy unique requirements to GPS Wing. Continue to keep the Fleet apprised of GPS Enterprise Selective Availability Anti-Spoofing Module (SAASM) developments. Continue to coordinate GPS Modernization efforts with other programs and DoD services to reduce impacts to platform navigation systems. Participate in joint NAVWAR MOU initiatives with Canada, United Kingdom and Australia.			
FY 2013 Plans: Continue to assist other air platforms with integration of anti-jam capability to include UAS and weapons. Continue to provide GPS Modernization Navy unique requirements to GPS Wing. Continue to assist the Fleet with GPS Enterprise SAASM developments. Continue to coordinate GPS Modernization efforts with other programs and DoD services to reduce impacts to platform navigation systems. Participate in joint NAVWAR MOU initiatives with Canada, United Kingdom and Australia. Begin Assured PNT development. Continue to assist other air platforms with integration of anti-jam capability to include UAS, EP-3E, Fire Scout and weapons.			
Title: Sea Navigation Warfare (NAVWAR)	4.583	2.990	1.367
Articles:	0	0	0
FY 2011 Accomplishments: Increment 2 Advanced Digital Antenna Production (ADAP): Conducted developmental testing (DT) and integration of ADAP on Cruiser Guided Missile (CG) ships and Carrier Vessel Nuclear (CVN) ships. Initiated discussion of Increment 3 Submarine Anti-Jam (SUB AJ) Analysis of Alternatives (AoA). Participated in joint NAVWAR Memorandum Of Understanding (MOU) initiatives with Canada, United Kingdom, and Australia.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Increment 2 (ADAP): Conduct DT and integration on CVN ships and CG ships. Complete Technical Readiness Assessment (TRA) in support of MS B decision. Increment 3 (SUB AJ): Begin acquisition and logistics documentation in support of Milestone B award. Award Engineering, Manufacturing, Development (EMD) Cost Plus Incentive Fee (CPIF) contract for Sub AJ development. Participation in joint NAVWAR MOU initiatives with Canada, United Kingdom, and Australia. ***FY 2013 Plans:*** Increment 2 (ADAP): Conduct DT on amphibious helicopter assault ship (LHA) and amphibious transport dock (LPD) ships. Increment 3 (SUB AJ): Begin acquisition and logistics documentation in support of Milestone C Low Rate Initial Production (LRIP). Begin developmental testing and operational assessment (DT/OA) of Sub AJ. Participate in joint NAVWAR MOU initiatives with Canada, United Kingdom, and Australia.			
Title: Global Positioning System (GPS) - Based Positioning, Navigation and Timing (PNT) Service (GPNTS)	8.368	11.650	16.006
Articles:	0	0	0
FY 2011 Accomplishments: Completed DoD 5000 series statutory and regulatory acquisition documentation and obtained a Milestone B decision. Completed systems engineering reviews System Readiness Review (SRR) and a Technology Readiness Assessment (TRA). Obtained a Milestone B Acquisition Decision Memorandum authorizing entry into the EMD phase. Released a Request for Proposal (RFP) and completed source selection activities. Completed pre-post award contract activities. ***FY 2012 Plans:*** Complete a post award kick off conference. Conduct the Initial Baseline Review (IBR) and Integrated Logistics Assessment (ILA) meetings with the Contractor. Complete a Preliminary Design Review (PDR) with the Contractor and brief the Milestone Decision Authority (MDA) on the design review outcome. Provide engineering and technical support to the Contractor to ensure system design and software development are in alignment with the Capabilities Development Document (CDD) and the Technical Requirements Document (TRD). Review all contract deliverables and attend Contractor Engineering, Program Management, Test and Evaluation, and Logistics Integrated Product Team (IPT) meetings. Report on contract Earned Value Management (EVM) objectives and manage the program's Integrated Master Schedule (IMS) with the Contractor. Update program acquisition documentation as necessary. ***FY 2013 Plans:*** Prepare the program for the Critical Design Review (CDR). Brief the MDA on the design review outcomes. Obtain an updated Acquisition Decision Memorandum (ADM) to proceed from CDR to Milestone B. Complete the draft Capabilities Production Document (CPD) to support a milestone C decision. Prepare the program for the delivery of the Engineering Development Models (EDMs) and begin lab testing including Independent Verification and Validation (IV&V) test events. Track the programs			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
IMS and report EVM metrics as required. Begin updates of all DoD series acquisition statutory and regulatory documentation as required to support a MS C decision.			
Accomplishments/Planned Programs Subtotals	19.108	20.019	19.652

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN / 2657, 0604777N: *Other Procurement, Navy*	9.269	9.926	9.089	0.000	9.089	11.810	17.640	16.670	16.463	Continuing	Continuing
• APN / 0577: *Common Avionics*	11.121	8.434	8.025	0.000	8.025	8.361	8.387	8.785	8.933	173.909	577.517

D. Acquisition Strategy

Navigation Warfare (NAVWAR): The Sea NAVWAR Program is executed in 3 increments. The Global Positioning System (GPS) Antenna System (GAS-1) is integrated on surface platforms in Increment 1. Increment 2 is Advanced Development Antenna Production (ADAP). Increment 3 is a submarine anti-jam solution (SUB AJ). The Air NAVWAR program is executed in a single increment with GAS-1 and ADAP to integrate on air platforms, and development of a smaller Anti-Jam (AJ) antenna and a conformal low-observable AJ antenna for aircraft with unique requirements.

GPNTS: The GPS-based Positioning, Navigation, and Timing Service (GPNTS) program will be conducted in two increments. Increment 1 will develop, acquire, and field the GPNTS, a scalable Selective Availability / Anti-Spoofing Module (SAASM) GPS based Service Oriented Architecture Positioning, Navigation, and Timing (PNT) system that will provide an open, extensible, modernized replacement for the current fleet PNT systems, while targeting Common Computing Environments (CCE). Increment 2 will integrate Military GPS User Equipment (MGUE) that will allow the U.S. Navy to leverage current and future technology development provided by the GPS Wing, formerly known as the GPS Joint Program Office (JPO). GPNTS will operate at the UNCLASSIFIED level, and can provide the PNT data to higher classified systems.

E. Performance Metrics

The primary metric used for the Air NAVWAR Program is acceptable system performance in a GPS denied environment which is defined by classified values of jamming to signal ratio (J/S) identified in the Enhanced GPS User Equipment (UE) Operational Requirements Document (ORD) 562-06-00 of 7 June 2000. The performance goal is met if acceptable system performance is achieved in the threshold J/S environment cited in the classified appendix.

The primary metric used for the Sea NAVWAR is acceptable system performance in a GPS denial environment defined by classified values of jamming to signal ratio (J/S) identified in the Sea NAVWAR Increment 2 Capabilities Production Document (CPD) (12/08). The performance goal is met if acceptable system performance is achieved in the threshold J/S environment cited in the CPD.

The primary metrics used for the GPNTS is successful completion of the system development as outlined in the GPNTS Technical Requirement Document.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	WR	SSC PAC/NAWC:San Diego/China Lake, Pax River	275.775	-		-		-		-	0.000	275.775	
Product Development	WR	SSC PAC:San Diego	71.009	0.900	Oct 2011	0.910	Oct 2012	-		0.910	Continuing	Continuing	Continuing
Product Dev (other in house)	WR	SSC PAC:San Diego	439.397	-		-		-		-	0.000	439.397	
Systems Engineering	WR	Govt/Contractor:San Diego	20.141	0.855	Jan 2012	0.900	Jan 2013	-		0.900	Continuing	Continuing	Continuing
Product Development	C/CPIF	Unknown:Unknown	2.593	8.531	Jan 2012	6.995	Jan 2013	-		6.995	Continuing	Continuing	Continuing
Product Development	C/CPFF	Boeing:St Louis	15.445	-		-		-		-	0.000	15.445	
		Subtotal	824.360	10.286		8.805		-		8.805			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	SSC PAC/NAWC:San Diego/Pax River/China Lake	12.710	-		-		-		-	0.000	12.710	
Software Development	WR	SSC PAC/NAWC:San Diego/Pax River/ China Lake	10.450	-		-		-		-	0.000	10.450	
Integrated Logistics Support	WR	SSC PAC/NAWC:San Diego/Pax River	7.102	0.596	Dec 2011	0.650	Dec 2012	-		0.650	Continuing	Continuing	Continuing
Training Development	WR	SSC PAC/NAWC:San Diego/Pax River	5.375	-		-		-		-	0.000	5.375	
Technical Data	WR	Platform PMOs:San Diego	4.650	-		-		-		-	0.000	4.650	
Technical Data	C/CPAF	BAH:San Diego, Pax River	-	0.496	Jan 2012	0.630	Jan 2013	-		0.630	Continuing	Continuing	Continuing
Technical Data	WR	SSC PAC:San Diego	-	2.000	Dec 2011	2.240	Dec 2012	-		2.240	Continuing	Continuing	Continuing
Technical Data	WR	NAWC:Pax River	-	0.254	Dec 2011	0.275	Dec 2012	-		0.275	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Data	WR	NAWC:China Lake	-	0.250	Dec 2011	0.290	Dec 2012	-		0.290	Continuing	Continuing	Continuing
		Subtotal	40.287	3.596		4.085		-		4.085			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	SSC PAC/NAWC PAX:San Diego/Pax River	29.729	0.608	Nov 2011	0.700	Nov 2012	-		0.700	Continuing	Continuing	Continuing
Test & Evaluation	C/CPAF	BAH:Pax River	5.276	-		-		-		-	0.000	5.276	
Test & Evaluation	WR	SSC PAC:San Diego	8.875	2.677	Dec 2011	3.000	Dec 2012	-		3.000	Continuing	Continuing	Continuing
Test & Evaluation Platform Testing	WR	SSC PAC:San Diego	32.027	-		-		-		-	0.000	32.027	
		Subtotal	75.907	3.285		3.700		-		3.700			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPAF	BAH:Pax River, San Diego	19.989	2.852	Jan 2012	3.062	Jan 2013	-		3.062	Continuing	Continuing	Continuing
Acquistion Workforce	Allot	Unknown:Uknown	0.139	-		-		-		-	0.000	0.139	
Contractor Engineering Services	C/CPAF	BAH:San Diego, Pax River, China Lake	1.400	-		-		-		-	0.000	1.400	
Government Engineering Services	WR	SSC PAC, NAWC:San Diego, China Lake, Pax River	1.800	-		-		-		-	0.000	1.800	
		Subtotal	23.328	2.852		3.062		-		3.062			

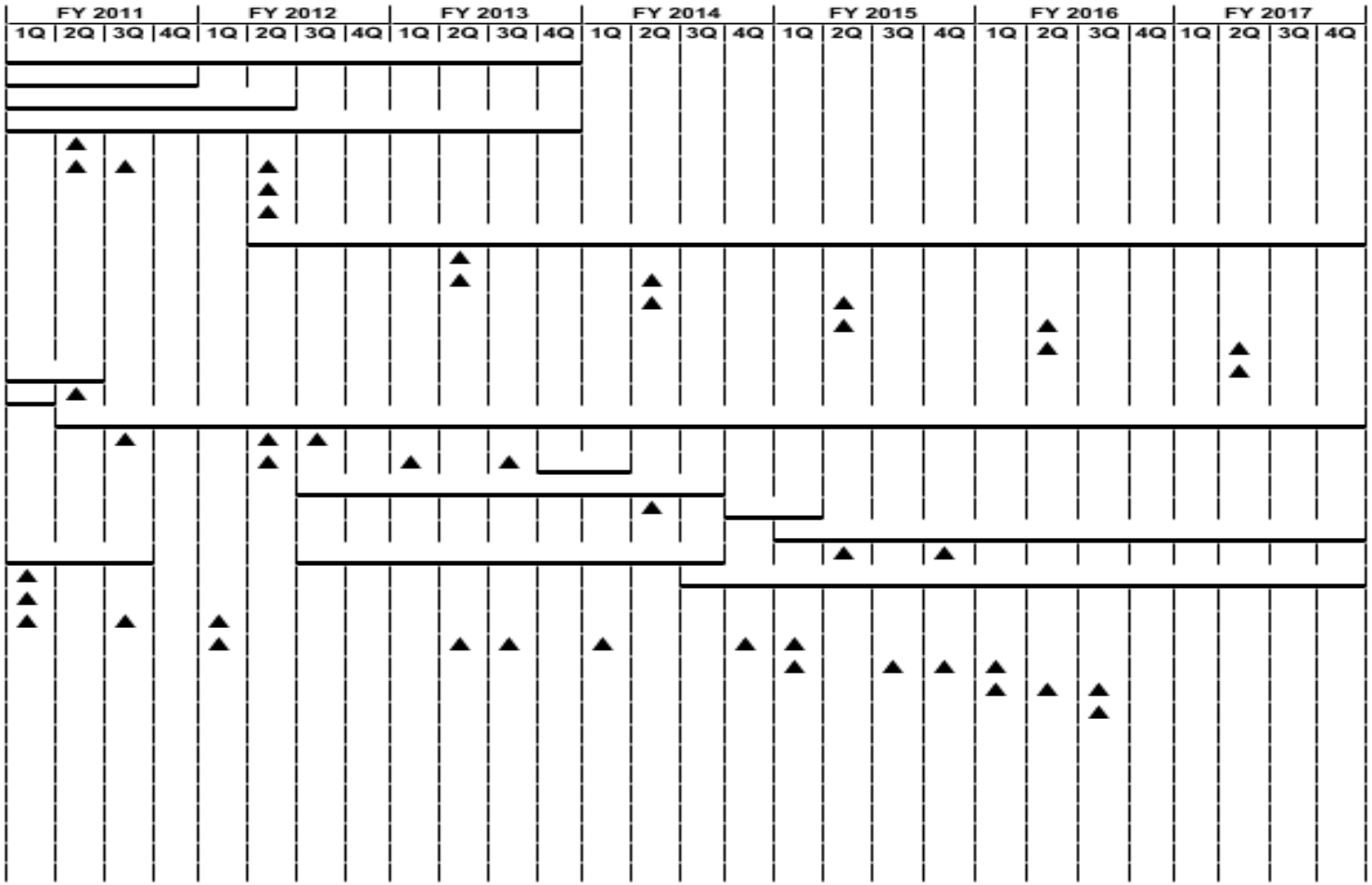
Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	963.882	20.019		19.652		-		19.652			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

Proj 0921



2013PB - 0604777N - 0921

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Proj 0921				
Air Navigation AV-8B Installations	1	2011	4	2013
Air Navigation P-3C installations	1	2011	4	2011
Air Navigation F/A 18 E/F/G DT/OT	1	2011	2	2012
Air Navigation MH-53E Installations	1	2011	4	2013
Air Navigation GAS-1 Option 2011	2	2011	2	2011
Air Navigation ADAP Option 2011	2	2011	2	2011
Air Navigation Conformal Antenna (C-CRPA) Production Award	3	2011	3	2011
Air Navigation GAS-1 Option 2012	2	2012	2	2012
Air Navigation ADAP Option 2012	2	2012	2	2012
Air Navigation C-CRPA Option 2012	2	2012	2	2012
Air Navigation F/A-18 E/F/G Installations	2	2012	4	2017
Air Navigation ADAP Option 2013	2	2013	2	2013
Air Navigation C-CRPA Option 2013	2	2013	2	2013
Air Navigation ADAP Option 2014	2	2014	2	2014
Air Navigation C-CRPA Option 2014	2	2014	2	2014
Air Navigation ADAP Option 2015	2	2015	2	2015
Air Navigation C-CRPA Option 2015	2	2015	2	2015
Air Navigation ADAP Option 2016	2	2016	2	2016
Air Navigation C-CRPA Option 2016	2	2016	2	2016
Air Navigation ADAP Option 2017	2	2017	2	2017
Air Navigation C-CRPA Option 2017	2	2017	2	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
Sea Navigation Increment 3 (Sub A/J) AoA	1	2011	2	2011
Sea Navigation Increment 2 (ADAP) DT/OT	1	2011	1	2011
Sea Navigation Increment 2 (ADAP) FRP	2	2011	2	2011
Sea Navigation Increment 2 (ADAP) Installations	2	2011	4	2017
Sea Navigation Increment 2 (ADAP) IOC	3	2011	3	2011
Sea Navigation Increment 2 (ADAP) CVN DT	2	2012	2	2012
Sea Navigation Increment 2 (ADAP) CG DT	3	2012	3	2012
Sea Navigation Increment 3 (Sub A/J) M/S B	2	2012	2	2012
Sea Navigation Increment 2 (ADAP) LHA DT	1	2013	1	2013
Sea Navigation Increment 2 (ADAP) LPD DT	3	2013	3	2013
Sea Navigation Increment 3 (Sub A/J) DT/OA	4	2013	1	2014
Sea Navigation Increment 3 (Sub A/J) Development	3	2012	3	2014
Sea Navigation Increment 3 (Sub A/J) M/S C LRIP	2	2014	2	2014
Sea Navigation Increment 3 (Sub A/J) DT/OT	4	2014	1	2015
Sea Navigation Increment 3 (Sub A/J) Installations	1	2015	4	2017
Sea Navigation Increment 3 (Sub A/J) FRP	2	2015	2	2015
Sea Navigation Increment 3 (Sub A/J) IOC	4	2015	4	2015
Sea Navigation Increment 3 (Sub) USAF Competitive Prototyping	1	2011	3	2011
Sea Navigation Increment 3 EMD Contracting (CPIF)	3	2012	3	2014
Sea Navigation Increment 3 LRIP Production	3	2014	4	2017
GPNTS INCREMENT 1 MS B	1	2011	1	2011
GPNTS APB	1	2011	1	2011
GPNTS AP	1	2011	1	2011
GPNTS Increment 1 Award	3	2011	3	2011
GPNTS Post PDR Assessment	1	2012	1	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 0921: *NAVSTAR GPS Equipment*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
GPNTS PDR	1	2012	1	2012
GPNTS Increment 1 Integrated Test 3rd Qtr	3	2013	3	2013
GPNTS CDR	2	2013	2	2013
GPNTS Increment 1 EDM Delivery	1	2014	1	2014
GPNTS INCREMENT 2 MS B Prep Activities	4	2014	4	2014
GPNTS MS C	1	2015	1	2015
GPNTS M/S C LRIP	1	2015	1	2015
GPNTS Increment 1 OTRR	3	2015	3	2015
GPNTS Increment 1 Tech Eval	4	2015	4	2015
GPNTS Increment 1 IOT&E	1	2016	1	2016
GPNTS Increment 1 JITC Testing	1	2016	1	2016
GPNTS IOC	2	2016	2	2016
GPNTS FRP DR	3	2016	3	2016
GPNTS Increment 1 FRP Option A	3	2016	3	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
1253: *Combat Ident System*	29.741	11.512	18.250	-	18.250	20.545	2.610	2.344	11.419	Continuing	Continuing
Quantity of RDT&E Articles	0	11	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

In 1995, the Under Secretary of Defense (Acquisition and Technology)/Vice Chairman, Joint Chiefs of Staff (USD(A7T)/VCJCS) tasked the Services to develop a high-level plan and long-range strategy for migrating to new Mark XII equipment. The services were also tasked to work with participating North Atlantic Treaty Organization (NATO) Allies to develop a new Mark XII waveform and document it in NATO Standard Agreement (STANAG). The Navy took the lead in a waveform development effort conducted in coordination with a five nation Technical Working Group (TWG), supported by Joint Services and Industry. The Navy, in conjunction with the TWG, designed, developed, modeled, and tested a new waveform - Mark XIIA Mode 5. A separate five nation Communications Security group, led by the National Security Administration, developed a new cryptographic algorithm and associated cryptographic equipment interoperability requirements specification, STANAG 4193, Part V has been ratified and promulgated to all NATO nations, and Part VI was approved for promulgation in January 2002.

In August 2003 the Navy Mark XIIA Mode 5 program was approved for entry in Systems Development and Demonstration phase with approval to develop prototypes. In July 2006, the Navy Mark XIIA Mode 5 program was approved for entry into the Production and Deployment Phase and Low Rate Initial Production. In March 2007, Joint Requirements Oversight Council Memorandum (047-07) endorsed a Mode 5 Joint Initial Operational Capability (IOC) in FY14 and Joint Full Operational Capability in 2020.

RDT&E articles include Mode 5 cryptographic modules and associated hardware and software changes, AN/APX-123, AN/APX-119, and AN/APX-111. These RDT&E units are to support hardware, software, and integration efforts to host systems on remaining aircraft Type/Model/Series, including AH-1Z/UH-1Y, E-2D, MH-60R/S, MV-22, KC-130J, and F/A-18E/F and EA-18G.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Mode 5 prototype hardware, cryptographic module	17.167	5.438	12.568
Articles:	0	11	0
Description: Perform development of kits for installation into existing fleet assets including AN/UPX-37/41C Interrogator, AN/APX-118/123 Common Digital Transponder, and AN/APX-111 Combined Interrogator Transponder. Repair and correct deficiencies identified during testing and procure low rate initial production (LRIP) units (OPN, APN5, and RDTE) to support testing and platform integration. LRIP units include Mode 5 cryptographic module install kits for AN/UPX-37/41C, AN/APX-118/123, AN/APX-119, and AN/UPX-24 with associated hardware and software changes to the host boxes. Perform platform integration efforts for the AN/UPX-37/41C Interrogator, AN/APX-118/123 Common Digital Transponder, AN/APX-119 Transponder, and AN/APX-111 Combined Interrogator Transponder.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Continued integration in MV-22, F/A-18E/F and EA-18G aircraft. ***FY 2012 Plans:*** Continue integration in MV-22, F/A-18E/F and EA-18G aircraft. ***FY 2013 Plans:*** Continue production line insertions and host platform integrations. Cost growth from FY12 to FY13 stems from the reinsertion of AN/APX-111 Combined Interrogator Transponder (CIT) integration for the F/A-18E/F and EA-18G with the new H12 software, which was terminated in FY12 due to budget reductions. In addition, maturation of the CIT will continue and begin integration into the F/A-18 A+/C/C+/D platform. The MV-22 platform integration will finalize in FY13.			
Title: Mode 5 systems Engineering and Integrated Logistics Support (ILS)	6.620	1.692	1.851
Articles:	0	0	0
Description: Performed systems engineering and analysis in support of Mode 5 hardware/software development on AN/UPX-37/41C Interrogator, AN/APX-118/123 Common Digital Transponder, AN/APX-119 Transponder, AN/APX-111 Combined Interrogator Transponder, Cryptographic Module, Mode 5 Engineering Test Equipment, and Mode 5 support equipment. The Cryptographic Module included, but is not limited to, activities such as ILS, Design and Engineering Studies and Analysis, and Configuration Management performed as the Lead Service. ***FY 2011 Accomplishments:*** Continued systems engineering and analysis for deficiency correction, and implementation of Mode 5 in AN/APX-111 equipment. Initiated systems engineering for F/A-18E/F, EA-18G, E-2D and MV-22 aircraft. ***FY 2012 Plans:*** Continue systems engineering and analysis for MV-22, F/A-18E/F and EA-18G aircraft. ***FY 2013 Plans:*** Continue systems engineering and analysis for MV-22, F/A-18E/F and EA-18G aircraft and begin flight test.			
Title: Mode 5 Upgrade Developmental Test & Operational Test	5.954	4.382	3.831
Articles:	0	0	0
Description: Perform Mode 5 developmental and operational test phases for AN/UPX-37/41C Interrogator, AN/APX-118/123 Common Transponder, AN/APX-119 Transponder, and AN/APX-111 Combined Interrogator Transponder. ***FY 2011 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conducted Integrated testing and Operational Testing for the AN/APX-123 on the MH-60R/S, AH-1Z/UH-1Y, E-2D, and AN/UPX-41C. ***FY 2012 Plans:*** Conduct initial lab testing on Mode 5 AN/APX-111, integrated testing on the MV-22 and operational testing on the E-2D and MV-22. ***FY 2013 Plans:*** Continue lab testing on Mode 5 AN/APX-111, integrated testing on the MV-22 and operational testing on the E-2D and MV-22.			
Accomplishments/Planned Programs Subtotals	29.741	11.512	18.250

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2851: *Identification Systems*	22.998	31.470	35.474	0.000	35.474	39.119	38.719	35.276	29.072	Continuing	Continuing
• APN/0582: *Identification Systems*	20.280	32.030	39.846	0.000	39.846	41.957	46.992	55.528	47.239	Continuing	Continuing

D. Acquisition Strategy

The Acquisition Strategy is to develop Mode 5 Engineering Change Proposals for modern Mark XII Identification Friend or Foe equipment and integrate into all Navy Combat Weapons systems platforms and transition the Navy's Cooperative Identification Capability to Mode 5.

E. Performance Metrics

Complete Operational Test Readiness Review (OTRR) in 3rd Quarter FY 2011. Begin Full Rate Production and achieve Initial Operational Capability in FY 2012.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/FFP	Lockheed:Owego, NY	3.354	-		-		-		-	3.651	7.005	7.005
Primary Hardware Development	WR	NAWCWD:China Lake CA	12.027	-		2.735	Jan 2013	-		2.735	16.014	30.776	
Primary Hardware Development	SS/CPFF	Northrup Grumman:Bethpage NY	3.886	-		-		-		-	1.701	5.587	5.587
Primary Hardware Development	Various	BAE:Greenlawn NY	26.343	0.093	Apr 2012	0.114	Jan 2013	-		0.114	0.547	27.097	27.097
Primary Hardware Development	Various	Boeing:Philiadelphia, PA	6.683	0.250	Jun 2012	-		-		-	0.614	7.547	7.547
Primary Hardware Development	Various	Raytheon:Towson, MD	1.164	-		-		-		-	0.353	1.517	1.517
Primary Hardware Development	Various	Boeing:St Louis. MO	17.521	5.095	Jun 2012	8.960	Jan 2013	-		8.960	28.882	60.458	61.461
Systems Engineering	WR	NAWCAD:PAX River, MD	10.671	1.507	Nov 2011	1.682	Nov 2012	-		1.682	8.991	22.851	
Systems Engineering	WR	NAWCAD:St Inigoes, MD	13.457	0.068	Nov 2011	0.125	Nov 2012	-		0.125	2.191	15.841	
Systems Engineering	WR	NAWCWD:China Lake, CA	0.600	-		-		-		-	0.000	0.600	
Primary Hardware Development	Various	L-3:Waco, TX	-	-		0.759	Mar 2013	-		0.759	2.516	3.275	3.275
		Subtotal	95.706	7.013		14.375		-		14.375	65.460	182.554	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
ILS	Various	Various:Various	3.552	0.117	Nov 2011	0.045	Nov 2012	-		0.045	0.869	4.583	
Software Development	Various	Various:Various	2.708	-		-		-		-	0.000	2.708	
Technical data	Various	Various:Various	0.053	-		-		-		-	0.000	0.053	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	6.313	0.117		0.045		-		0.045	0.869	7.344	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental T & E	WR	NAWCAD:PAX River MD	14.612	4.192	Nov 2011	3.830	Nov 2012	-		3.830	12.832	35.466	
Operational T & E	WR	NAWCAD:PAX River MD	16.433	0.190	Nov 2011	-		-		-	3.611	20.234	
Test Assets	Various	Various:Various	3.396	-		-		-		-	0.000	3.396	
		Subtotal	34.441	4.382		3.830		-		3.830	16.443	59.096	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contract Engineering Support	Various	Various:Various	0.450	-		-		-		-	0.000	0.450	0.450
Government Engineering Support	Various	Various:Various	1.811	-		-		-		-	0.000	1.811	
Program Management Support	Various	Various:Various	1.961	-		-		-		-	0.000	1.961	
ETS (Non-FFRDC)	WR	Various:PAX River MD	0.174	-		-		-		-	0.000	0.174	
		Subtotal	4.396	-		-		-		-	0.000	4.396	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	140.856	11.512		18.250		-		18.250	82.772	253.390	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

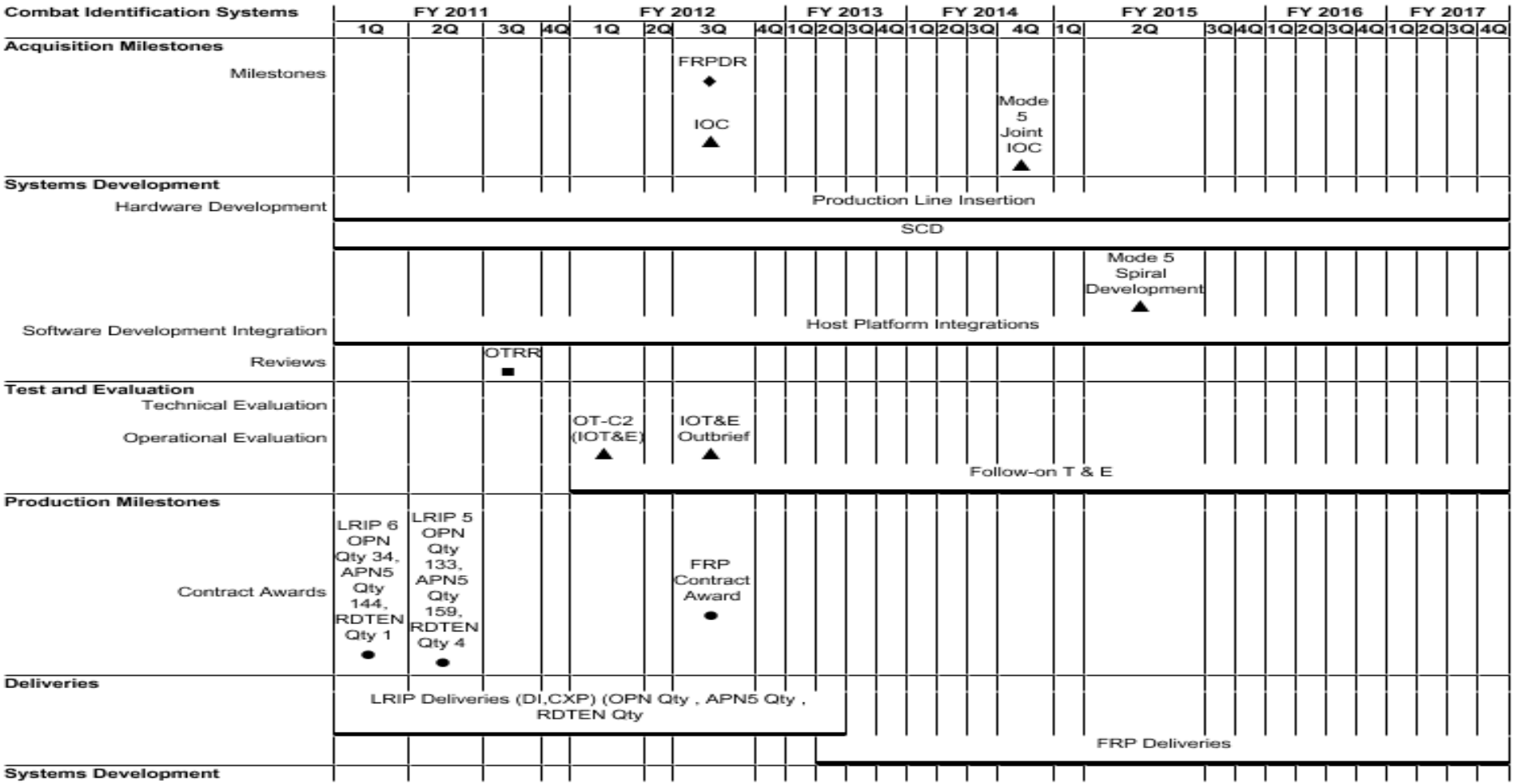


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

2013PB - 0604777N - 1253

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604777N: *Navigation/Id System*	PROJECT 1253: *Combat Ident System*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Combat Identification Systems				
Acquisition Milestones: Milestones: Full Rate Production Decision Review (FRPDR)	3	2012	3	2012
Acquisition Milestones: Milestones: IOC	3	2012	3	2012
Acquisition Milestones: Milestones: Mode 5 Joint IOC	4	2014	4	2014
Systems Development: Hardware Development: Production Line Insertion	1	2011	4	2017
Systems Development: Hardware Development: Prepare & Evaluate ECPs/SCDs	1	2011	4	2017
Systems Development: Hardware Development: Mode 5 Spiral Development	2	2015	2	2015
Systems Development: Software Development Integration: Host Platform Integrations	1	2011	4	2017
Systems Development: Reviews: Operational Test Readiness Review (OTRR)	3	2011	3	2011
Test and Evaluation: Operational Evaluation: OT-C2 (IOT&E)	1	2012	1	2012
Test and Evaluation: Operational Evaluation: IOT&E Outbrief	3	2012	3	2012
Test and Evaluation: Operational Evaluation: Follow-on Test and Evaluation	1	2012	4	2017
Production Milestones: Contract Awards: LRIP 5 Contract Award (OPN, APN5, RDTEN)	2	2011	2	2011
Production Milestones: Contract Awards: LRIP 6 Contract Award (OPN, APN5, RDTEN)	1	2011	1	2011
Production Milestones: Contract Awards: FRP Contract Award	3	2012	3	2012
Deliveries: Low-Rate Initial Production (LRIP) Deliveries (DI,CXP) (OPN, APN5, RDTEN)	1	2011	2	2013
Deliveries: FRP Deliveries	2	2013	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	602.142	651.786	737.149	-	737.149	693.484	574.746	448.498	340.123	Continuing	Continuing
2262: *Joint Strike Fighter EMD STOVL*	602.142	651.786	737.149	-	737.149	693.484	574.746	448.498	340.123	Continuing	Continuing

Note

Effective in FY 11 budget year, the F-35B United States Marine Corps (USMC) Short Take-off Vertical Landing (STOVL) and F-35C United States Navy (USN) Carrier Variant (CV) budgets are reported against separate budget line items and PEs. Starting in FY 11, F-35B budget is reported against PE 0604800M. The F-35C USN budget continues to report under PE 0604800N.

A. Mission Description and Budget Item Justification

The F-35 Lightning II Joint Strike Fighter (JSF) program will develop and field a family of aircraft that meets needs of USN, United States Air Force (USAF), USMC, and allies, with maximum commonality among variants, consistent with National Disclosure Policy, to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom, other International countries, and Foreign Military Sales cases are also participants in JSF program. The program shown here reflects USN, USMC, USAF, and International Partner funding. The top line PE cost (R-2) reflects USN F-35C CV budgetary information only. However, funding at accomplishment/planned program level (R-2A) is reported in total (all services and partners) as activities support all aircraft variants.

The System Development and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles, to include 6 ground test articles and 14 flight test articles for Navy and Air Force use. The following reflects the scheduled first flight of each flight test asset or production line roll out of each ground test asset:

FY07: 1 Conventional Take Off and Landing (CTOL) flight test article
FY08: 1 Short Take Off Vertical Landing (STOVL) flight test article, 1 STOVL ground test article
FY09: 1 STOVL flight test article, 2 CTOL ground test articles
FY10: 6 flight test articles (3 CTOL, 2 STOVL, 1 CV), 3 ground test articles (1 STOVL, 2 CV)
FY11: 4 flight test articles (1 CTOL, 1 STOVL, 2 CV)
FY12: 1 flight test article (CV)

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	667.916	670.723	741.600	-	741.600
Current President's Budget	602.142	651.786	737.149	-	737.149
Total Adjustments	-65.774	-18.937	-4.451	-	-4.451
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-18.937			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-8.600	-			
• Program Adjustments	-	-	-0.721	-	-0.721
• Rate/Misc Adjustments	-	-	-3.730	-	-3.730
• Congressional General Reductions Adjustments	-3.122	-	-	-	-
• Congressional Directed Reductions Adjustments	-54.052	-	-	-	-

Change Summary Explanation

Schedule: Initial estimated dates associated with PB12 schedule milestones, to include Initial Operational Capability and Intial Operational Testing and Evaluation timeframes have been adjusted pending program rebaseline. The FY12 Defense Program Review is now scheduled for 2nd Quarter FY12 and a Milestone B decision is expected at that time. Navy Follow-on Development will begin in FY13 due to Congressional decision to not fund in FY12. The FY11 Testing and Evaluation schedule changes include extending the completion of Block 3C to 3rd Quarter FY16.

United States Reprogramming Laboratory (USRL) schedule updated to reflect Verification and Validation efforts. The schedule also incorporates a one-year extension to USRL as result of rephasing of program.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2262: *Joint Strike Fighter EMD STOVL*	602.142	651.786	737.149	-	737.149	693.484	574.746	448.498	340.123	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Development efforts for Joint Strike Fighter are funded by Navy, Air Force, and International Partners through agreements and memorandums of understanding. Cost details in R-2A Section B and R-3 reflect total effort.

A. Mission Description and Budget Item Justification

The F-35 Lightning II Joint Strike Fighter (JSF) program will develop and field a family of aircraft that meets needs of USN, United States Air Force (USAF), USMC, and allies, with maximum commonality among variants, consistent with National Disclosure Policy, to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom, other International countries, and Foreign Military Sales cases are participants in JSF Program. The program combines USN, USMC, USAF, and International Partner funding. The top line PE cost (R-2) reflects USN F-35C CV budgetary information only. However, funding at accomplishment/planned program level (R-2A) is reported in total (all services and partners) as activities support all aircraft variants. Within Navy, funding is roughly equal contribution of annual funding between USN and USMC.

The System Developement and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles, to include 6 ground test articles and 14 flight test articles for Navy and Air Force use. The following fiscal year phasing of test articles reflects the scheduled first flight of each flight test asset or production line roll out of each ground test asset:

FY07: 1 Conventional Take Off and Landing (CTOL) flight test article
FY08: 1 Short Take Off Vertical Landing (STOVL) flight test article, 1 STOVL ground test
FY09: 1 STOVL flight test article, 2 CTOL ground test articles
FY10: 6 flight test articles (3 CTOL, 2 STOVL, 1 CV), 3 ground test articles (1 STOVL, 2 CV)
FY11: 4 flight test articles (1 CTOL, 1 STOVL, 2 CV)
FY12: 1 flight test article (CV)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SDD	1,480.978	1,754.840	1,792.649
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) execution of the Air System, with Lockheed Martin including International Commonality Effort which included airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. ***FY 2012 Plans:*** Continue SDD execution of the Air System, with Lockheed Martin including International Commonality Effort which includes airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. ***FY 2013 Plans:*** Continue SDD execution of Air System (Lockheed Martin), including International Commonality Effort. Efforts include airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts.			
Title: F135 Propulsion System	375.628	360.000	359.618
Articles:	0	0	0
FY 2011 Accomplishments: Continued SDD execution of the F135 Propulsion System with Pratt & Whitney that included engine testing, autonomic logistics, integration and performing technology maturation efforts. ***FY 2012 Plans:*** Continue SDD execution of the F135 Propulsion System with Pratt & Whitney that includes engine testing, autonomic logistics, integration and performing technology maturation efforts. ***FY 2013 Plans:*** Continue SDD execution of F135 Propulsion System (Pratt & Whitney), including engine testing, autonomic logistics, integration and performing technology maturation efforts.			
Title: F136 Propulsion System	69.288	-	-
Articles:	0		
FY 2011 Accomplishments: Continued F136 Propulsion System development effort by the General Electric/Rolls Royce Fighter Engine team.			
Title: System Engineering	39.345	45.457	20.063
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) Systems Engineering that included systems operations requirements analysis, program integration, requirements integration, and interoperability support. ***FY 2012 Plans:*** Continue SDD Systems Engineering including systems operations requirements analysis, program integration, requirements integration, and interoperability support. ***FY 2013 Plans:*** Continue SDD Systems Engineering, including systems operations requirements analysis, program integration, requirements integration, and interoperability support.			
Title: Development Test and Evaluation	183.951	323.150	374.258
Articles:	0	0	0
FY 2011 Accomplishments: Continued government Development Test and Evaluation (DT&E)/Operational Evaluation in support of envelope expansion, Low Rate Initial Production aircraft deliveries, and initial service training. Continued flight sciences testing of Conventional Take Off and Landing (CTOL), Short Take Off and Vertical Landing (STOVL), and Carrier Variant (CV) variants to expand the air vehicle envelope to support mission systems testing. Commenced and completed Block 1 Mission Systems flight test, and commenced Block 2 flight test. Elements of DT&E included preparation for flight testing, weapons integration testing, and component capabilities testing. ***FY 2012 Plans:*** Continue government DT&E/Operational Testing in support of test aircraft. Continue flight sciences testing of CTOL, STOVL, and CV variants to expand the air vehicle envelope to support mission systems testing to include initial Block 2B. Elements of DT&E include preparation for flight testing, weapons integration testing, and component capabilities testing. ***FY 2013 Plans:*** Continue government DT&E/Operational Testing in support of test aircraft. Continue flight sciences testing of CTOL, STOVL, and CV variants to expand air vehicle envelope and support mission systems testing (include initial Block 2B). Elements of DT&E include preparation for flight testing, weapons integration testing, and component capabilities testing.			
Title: Development Support	109.293	237.128	146.887
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	**PROJECT** 2262: *Joint Strike Fighter EMD STOVL*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) Support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities. ***FY 2012 Plans:*** Continue SDD Support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities. ***FY 2013 Plans:*** Continue SDD support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities			
Title: Program Management Support ***Articles:*** ***FY 2011 Accomplishments:*** Continued management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives. ***FY 2012 Plans:*** Continue management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives. ***FY 2013 Plans:*** Continue management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives.	76.876 0	103.447 0	113.875 0
Title: Follow-On Development (FoD) ***Articles:*** ***FY 2013 Plans:*** Initiate disciplined systems engineering, requirements decomposition, and life cycle cost estimation of high priority, gap-driven Block 4 candidates, and technical development of suitability candidates. Continue technical maturation of validated Block 4 FoD capabilities to appropriate Technical Readiness Levels to reduce integration risk.	-	-	8.717 0
Accomplishments/Planned Programs Subtotals	2,335.359	2,824.022	2,816.067
0604800F	931.599	1,387.926	1,210.306
International	185.912	152.474	144.220
0604800N	615.706	631.836	724.392

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Navy Subtotals	602.142	651.786	737.149

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDT&E/0604800F: *Joint Strike Fighter*	931.599	1,387.926	1,210.306	0.000	1,210.306	1,019.035	635.732	387.694	155.591	0.000	22,224.453
• International: *International Partner (SDD/FOD)*	185.912	152.474	144.220	0.000	144.220	2.800	0.000	0.000	0.000	0.000	5,123.601
• APAF/0207142F: *F-35 Joint Strike Strike Fighter*	4,297.566	3,518.592	3,417.702	0.000	3,417.702	3,357.676	4,547.095	6,026.187	5,949.391	144,091.949	179,224.735
• RDT&E/0604800N: *JT Strike Fighter (JSF) - EMD*	654.198	658.549	743.926	0.000	743.926	702.100	584.341	458.302	349.869	0.000	4,151.285
• APN/0152: *F-35 Joint Strike Fighter STOVL*	838.204	1,259.162	1,510.936	0.000	1,510.936	1,521.174	1,562.016	1,953.170	2,576.560	31,607.019	42,828.241
• APN/0605B: *F-35 Joint Strike Fighter STOVL Spares*	150.251	23.430	99.006	0.000	99.006	97.805	107.292	186.345	175.615	2,381.670	3,221.414
• APN/0147: *F-35 Joint Strike Fighter CV*	1,852.890	1,557.162	1,072.812	0.000	1,072.812	1,273.910	1,432.190	1,724.077	2,429.677	26,609.510	45,442.497
• APN/0605C: *F-35 Joint Strike Fighter CV Spares*	88.923	29.902	41.466	0.000	41.466	114.749	116.392	106.869	144.044	1,792.760	2,865.797
• OPN/4265: *Other Aviation Support Equipment*	5.381	5.665	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.875
• International 2: *International Procurement*	726.936	1,223.348	3,054.443	0.000	3,054.443	5,362.214	7,449.007	8,361.881	8,094.783	0.000	35,000.074
• MC/0207142F: *USAF MILCON*	121.292	24.250	13.530	0.000	13.530	72.000	69.050	65.000	66.170	0.000	498.821
• APAF/0204142F: *USAF Modification Funding*	4.610	0.000	147.995	0.000	147.995	157.777	245.462	223.683	252.141	0.000	1,031.668
• FOD/0207142F: *USAF Follow-on Development*	0.000	9.967	8.117	0.000	8.117	50.084	104.866	132.174	229.912	0.000	535.120
• 0207142F/USAF: *USAF Spares*	261.924	149.556	181.833	0.000	181.833	197.737	265.692	274.415	264.251	12,779.030	14,564.830
• OPN/4267: *Autonomic Logistics Information System (ALIS)*	0.000	0.000	3.826	0.000	3.826	4.869	5.592	5.647	5.744	43.524	69.202

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 27142F: *USAF/OPAF*	0.000	0.000	0.600	0.000	0.600	2.200	2.943	2.471	2.345	0.000	10.559

D. Acquisition Strategy

The System Development and Demonstration program consists of a cost-reimbursement contract awarded to Lockheed Martin Aeronautics Company to develop F-35 Air System, consisting of three aircraft variants and associated logistics support system, for the U.S. Services and international participants. Similarly, a cost-reimbursement contract was awarded to Pratt & Whitney to develop the F135 propulsion system. Ground and flight testing is being conducted during development to accomplish validation and verification, with extensive use of modeling and simulation to offset risk of this large, complex, and concurrent life-cycle program. A comprehensive logistics support environment, including an integrated training system for aircrew, maintenance, and support personnel, is also being developed.

The F-35 Program has made international involvement a key element of acquisition strategy. This includes international partnership in development, production, and sustainment phases of life-cycle. Additional international participation includes Foreign Military Sales arrangements.

In Fiscal Year (FY) 2007, separate cost-type contracts were awarded to Lockheed Martin Aeronautics Company and Pratt & Whitney to begin low rate initial production for F-35 air vehicles, propulsion systems, and sustainment for fielded systems. Transition to fixed-price-type contracts occurred with fourth low rate lot. To provide logistics support for delivered aircraft, Performance-Based Logistics cost-type contracts are being awarded Lockheed Martin Aeronautics Company and Pratt & Whitney.

At completion of Low Rate Initial Production, a Defense Acquisition Board review, and Milestone Decision Authority approval, the F-35 Program will enter Full Rate Production. Fixed-price procurement contracts will be awarded for F-35 air vehicles and propulsion systems for U.S. Services and international participants. Multiyear procurement authority for the F-35 Air System will be requested for Full Rate Production. Concurrently, multiple-year, fixed-price-type Performance Based Logistics contracts for sustainment will be executed to support multi-Service and multi-national requirements.

E. Performance Metrics

Performance Metrics reflect Key Program Performance data.

Combat Radius
Conventional Take Off and Landing Does Not Meet Requirement
Carrier Variant (CV) Meets Tripwire Requirement
Short Take off Vertical Landing (STOVL) Meets/Exceeds Tripwire Requirement

CV Recovery
Maximum Approach Speed Meets Requirement In Tripwire Band

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

STOVL Performance
Flat Deck (High-High-High Profile Fuel) Meets Requirement In Tripwire Band
Ski Jump (High-Medium-Medium-High Profile Fuel) Meets Requirement In Tripwire Band
Vertical Landing Bring Back Meets Requirement In Tripwire Band

Interoperability
Net Ready Criteria- Meets Requirement In Tripwire Band

Radio Frequency Signature Meets/Exceeds Tripwire Requirement

Force Protection
CB Pilot Protection (New Key Performance Parameters Per CN3) - Meets/Exceeds Tripwire Requirement

Mission Reliability
Conventional Take Off and Landing (CTOL) Meets/Exceeds Tripwire Requirement
Carrier Variant (CV) Exceeds ORD Objective
Short Take Off Vertical Landing (STOVL) USMC Meets/Exceeds Tripwire Requirement
STOVL UK Meets/Exceeds Tripwire Requirement

Sortie Generation Rate
CTOL Meets/Exceeds Tripwire Requirement
CV Meets/Exceeds Tripwire Requirement
STOVL USMC Meets/Exceeds Tripwire Requirement
STOVL UK Meets/Exceeds Tripwire Requirement

Logistics Footprints
CTOL Meets/Exceeds Tripwire Requirement
STOVL USMC Meets/Exceeds Tripwire Requirement

Logistics Footprint- Volume
CV Exceeds ORD Objective
STOVL USMC Exceeds ORD Objective
STOVL UK Meets/Exceeds Tripwire Requirement

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

Logistics Footprint-Weight
Carrier Variant (CV) Exceeds ORD Objective
STOVL USMC Exceeds ORD Objective
STOVL UK Meets/Exceeds Tripwire Requirement

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary H/W Development - SDD	C/CPAF	Lockheed Martin:Ft. Worth, TX	28,954.680	1,750.839	Oct 2011	1,781.259	Oct 2012	-		1,781.259	2,918.167	35,404.945	35,398.869
Primary H/W Development - IDIQ (0022)	C/CPAF	Lockheed Martin:Ft. Worth, TX	16.162	4.000	Oct 2011	-		-		-	0.000	20.162	20.162
Primary H/W Development - IDIQ (0009)	C/CPAF	Lockheed Martin:Ft. Worth, TX	16.759	-		-		-		-	0.000	16.759	16.759
Primary H/W Development - BOA(3104)	SS/CR	Lockheed Martin:Ft. Worth, TX	3.511	-		-		-		-	0.000	3.511	3.511
Primary H/W Development - SDD (3003)	SS/CPAF	Pratt & Whitney:Hartford, CT	7,282.249	360.000	Dec 2011	359.618	Dec 2012	-		359.618	772.503	8,774.370	8,774.370
Primary H/W Development (C-0132)	SS/CPAF	Pratt & Whitney:Hartford, CT	1.364	-		-		-		-	0.000	1.364	1.364
Primary H/W Development (C-0050)	SS/CPAF	Pratt & Whitney:Hartford, CT	2.211	-		-		-		-	0.000	2.211	2.211
Primary H/W Development BOA(G-3053)	SS/CPAF	Pratt & Whitney:Hartford, CT	35.983	-		-		-		-	0.000	35.983	35.983
Primary H/W Development IDIQ (D-0077)	SS/CPAF	Pratt & Whitney:Hartford, CT	10.925	-		-		-		-	0.000	10.925	10.925
Primary H/W Development GE (C-0093)	SS/CPAF	Pratt & Whitney:Hartford, CT	2,224.861	-		-		-		-	0.000	2,224.861	2,418.868
Primary H/W Development GE (C-0009)	SS/CPAF	GE:Cinn, Ohio	0.264	-		-		-		-	0.000	0.264	0.264
Primary H/W Development GE (04-D-0074	SS/CPAF	GE:Cinn, Ohio	4.175	-		-		-		-	0.000	4.175	4.175
Primary H/W Dev0elopment GE (04-C-0102	SS/CPAF	GE:Cinn, Ohio	100.400	-		-		-		-	0.000	100.400	100.400
Primary H/W Development GE (02-G-3236	SS/CPAF	GE:Cinn, Ohio	5.548	-		-		-		-	0.000	5.548	5.548
Primary H/W Development GE (96-C-0176	SS/CPAF	GE:Cinn, Ohio	382.753	-		-		-		-	0.000	382.753	382.753
Product Development Systems Engineering	Various	Various:Various	329.301	45.457	Oct 2011	20.063	Oct 2012	-		20.063	89.855	484.676	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NAWC CHLK FOD	Various	NAWC WD:China Lake, CA	-	-		-		-		-	0.000	0.000	
NAWC PAX FOD	Various	NAWC AD:Patuxent River, MD	-	-		-		-		-	0.000	0.000	
PRIME LM FOD	Various	Lockheed Martin:Ft. Worth, TX	-	-		1.860	Oct 2012	-		1.860	396.902	398.762	
PRIME ENGINE P&W FOD	Various	Pratt & Whitney:Hartford, CT	-	-		-		-		-	0.000	0.000	
Systems Engineering FOD	Various	Various:Various	-	-		0.447	Oct 2012	-		0.447	43.099	43.546	
Prime LM Deployability and Suitability Enhancements	Various	Lockheed Martin:Ft. Worth, TX	-	-		17.800	Oct 2012	-		17.800	97.000	114.800	
		Subtotal	39,371.146	2,160.296		2,181.047		-		2,181.047	4,317.526	48,030.015	

Remarks

Note: Cumulative Award Fee Earned in prior years for Pratt & Whitney is 85.2%.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Eglin AFB:Eglin, FL	115.621	14.929	Oct 2011	15.340	Oct 2012	-		15.340	37.168	183.058	
Development Support	Various	ASC/AFRL:Dayton, OH	65.367	7.625	Oct 2011	8.255	Oct 2012	-		8.255	13.938	95.185	
Development Support	Various	ASC/CIVPAY:Dayton, Ohio	-	19.554	Oct 2011	-		-		-	0.000	19.554	
Development Support	Various	Bolling AFB:Washington, DC	6.775	-		-		-		-	0.000	6.775	
Development Support	Various	DMEA:McClellan, CA	7.148	25.500	Oct 2011	1.400	Oct 2012	-		1.400	0.800	34.848	
Development Support	MIPR	ESC:Hanscom AFB, MA	7.358	0.377	Oct 2011	0.511	Oct 2012	-		0.511	1.585	9.831	
Development Support	Various	AEDC/Fuel:Arnold, TN	156.105	58.764	Oct 2011	23.266	Oct 2012	-		23.266	39.948	278.083	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NAS Jacksonville:Jacksonville, FL	9.437	1.985	Oct 2011	1.757	Oct 2012	-		1.757	1.800	14.979	
Development Support	Various	Various:Various	249.093	21.298	Oct 2011	21.332	Oct 2012	-		21.332	30.343	322.066	
Development Support	Various	NAWC WD:China Lake, CA	108.289	30.641	Oct 2011	24.833	Oct 2012	-		24.833	56.204	219.967	
Development Support	Various	NAWC AD:Patuxent, MD	331.122	53.484	Oct 2011	42.672	Oct 2012	-		42.672	122.425	549.703	
Development Support	Various	NAWC TSD:Orlando, FL	11.610	2.362	Oct 2011	0.771	Oct 2012	-		0.771	3.555	18.298	
Development Support	WR	NSWC:Indian Head, MD	4.266	0.572	Oct 2011	0.308	Oct 2012	-		0.308	0.640	5.786	
Development Support	Various	SPAWAR:San Diego, CA	10.322	0.038	Oct 2011	0.032	Oct 2012	-		0.032	0.138	10.530	
Prior Years costs no longer funded in the FYDP	Various	SIBR Cong ADD:Various	24.187	-		-		-		-	0.000	24.187	
Misc/Other FOD	Various	Various:Various	-	-		6.410	Oct 2012	-		6.410	86.994	93.404	
		Subtotal	1,106.700	237.129		146.887		-		146.887	395.538	1,886.254	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	NAWC AD:Patuxent River, MD	381.021	130.731	Oct 2011	115.186	Oct 2012	-		115.186	304.105	931.043	
Developmental Test & Evaluation	Various	NAWC WD:China Lake, CA	37.805	11.637	Oct 2011	5.829	Oct 2012	-		5.829	11.972	67.243	
Developmental Test & Evaluation	Various	Edwards AFB:Edwards AFB, CA	399.018	94.841	Oct 2011	82.500	Oct 2012	-		82.500	228.811	805.170	
Developmental Test & Evaluation	Various	Various:Various	36.486	26.441	Oct 2011	56.449	Oct 2012	-		56.449	170.510	289.886	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	MIPR	WEPS:Eglin AFB, FL	35.173	2.600	Oct 2011	-		-		-	0.000	37.773	
Developmental Test & Evaluation	MIPR	OT-AFOTEC/ AFFTC:Kirkland AFB, NM/Eglin AFB, FL	108.726	52.200	Oct 2011	108.518	Oct 2012	-		108.518	401.683	671.127	
Developmental Test & Evaluation	Various	OT-JITC/ OPTEC:Various	8.581	4.700	Oct 2011	5.776	Oct 2012	-		5.776	5.926	24.983	
Developmental Test & Evaluation	Various	JITC:Various	-	-		-		-		-	0.000	0.000	
		Subtotal	1,006.810	323.150		374.258		-		374.258	1,123.007	2,827.225	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	SS/CPFF	ACT I:Arlington, VA	8.419	3.418	Oct 2011	3.049	Oct 2012	-		3.049	13.798	28.684	28.684
Program Management - Mantech	C/FP	Mantech:Arlington, VA	59.469	8.366	Oct 2011	11.046	Oct 2012	-		11.046	49.993	128.874	128.874
Program Management - DRC	C/CPFF	DRC:Arlington, VA	5.916	-		-		-		-	0.000	5.916	5.916
Program Management	C/CPFF	First Principles:Arlington, VA	4.634	1.936	Oct 2011	1.836	Oct 2012	-		1.836	8.308	16.714	16.714
Program Management	Various	ASC CIVPAY:VARIOUS	-	3.500	Oct 2011	35.724	Oct 2012	-		35.724	150.762	189.986	
Program Management	C/CPFF	Wyle:Arlington, VA	102.871	27.418	Oct 2011	23.305	Oct 2012	-		23.305	109.904	263.498	263.498
Program Management	C/CPAF	Saftas:Arlington, VA	123.593	26.600	Oct 2011	12.867	Oct 2012	-		12.867	71.197	234.257	234.257
Program Management	C/CPAF	Stanley:Arlington, VA	186.584	27.940	Oct 2012	22.051	Oct 2012	-		22.051	101.523	338.098	338.098
Program Management	C/CPFF	GE F136-COG Studies:Cinn., OH	0.800	-		-		-		-	0.000	0.800	0.800
Travel and Miscellaneous	Various	Various:Various	17.124	4.269	Oct 2011	3.997	Oct 2012	-		3.997	17.225	42.615	
		Subtotal	509.410	103.447		113.875		-		113.875	522.710	1,249.442	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Cumulative Award Fee earned in prior years for Stanley is 99%.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals	41,994.066	2,824.022		2,816.067		-		2,816.067	6,358.781	53,992.936	
0604800F		1,387.926		1,210.306		-		1,210.306			
International		152.474		144.220		-		144.220			
0604800N		631.836		724.392		-		724.392			
Project Cost Totals	41,994.066	651.786		737.149		-		737.149	6,358.781	53,992.936	

Remarks

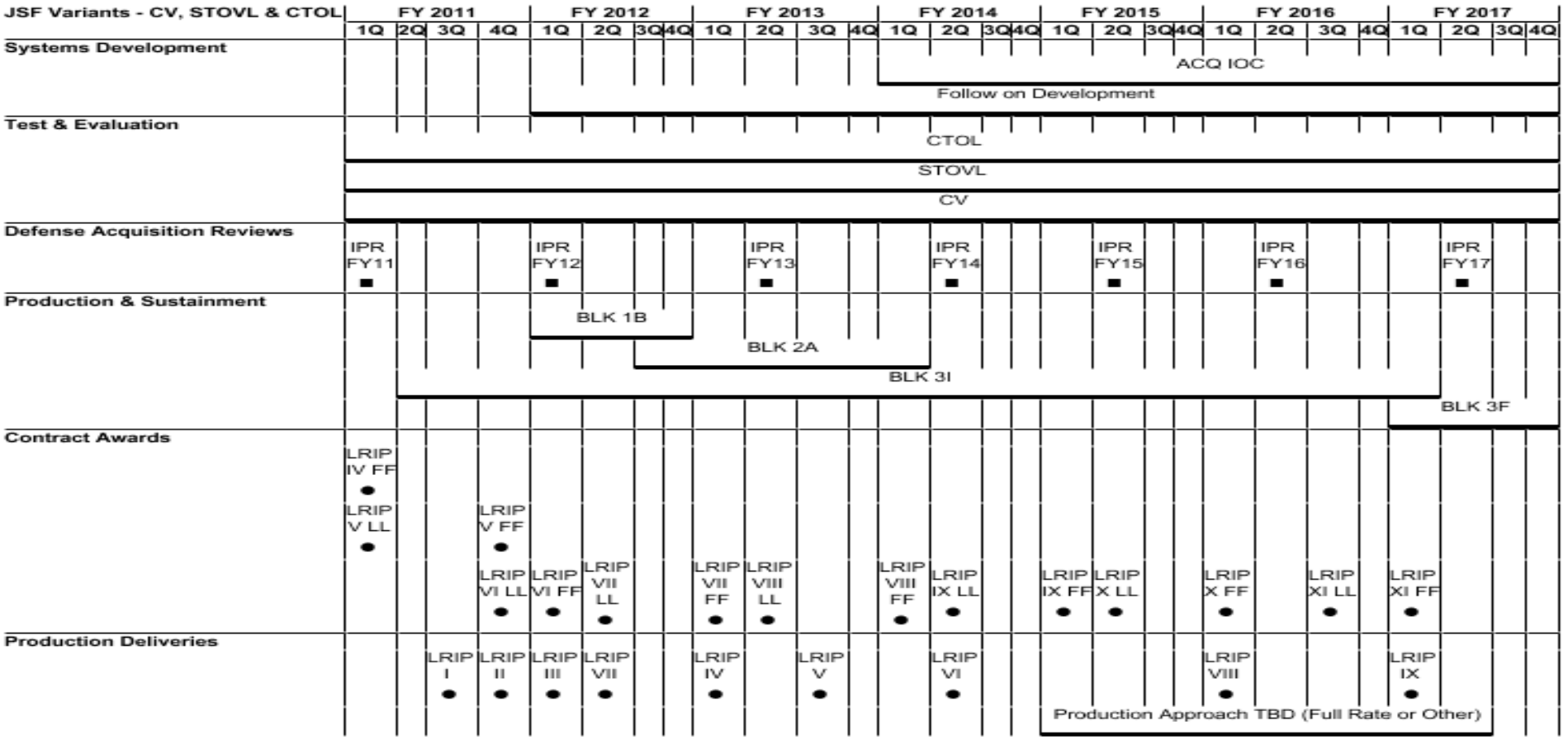
Subtotals and totals may not add due to rounding.

Name PU 2011 2012 2013
0604800F 3831 $931.599 $1,387.926 $1,210.306
0604800M 2262 $602.142 $651.786 $737.149
0604800N 2261 $615.706 $631.836 $724.392
International R&D $185.912 $152.474 $144.220

Total 2261&2262 (R2-A/R-3) FY11 $2,335.359 FY12 $2,824.022 FY13 $2,816.067

Navy 3194 $38.492 $26.713 $19.534

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*



2013PB - 0604800M - 2262

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	**PROJECT** 2262: *Joint Strike Fighter EMD STOVL*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JSF Variants - CV, STOVL & CTOL				
Systems Development: Acqusition Milestone: Services Initial Operational Capability TBD	1	2014	4	2017
Systems Development: Follow-on Development	1	2012	4	2017
Test & Evaluation: Conventional Take Off and Landing (CTOL) (DT/OT)	1	2011	4	2017
Test & Evaluation: Short Take Off and Landing (STOVL) (DT/OT)	1	2011	4	2017
Test & Evaluation: Carrier Variant (CV) (DT/OT)	1	2011	4	2017
Defense Acquisition Reviews: Defense Acquisition Board Program Reviews (IPRs) FY11	1	2011	1	2011
Defense Acquisition Reviews: Interim Program Reviews (IPR) FY12	1	2012	1	2012
Defense Acquisition Reviews: IPR FY13	2	2013	2	2013
Defense Acquisition Reviews: IPR FY14	2	2014	2	2014
Defense Acquisition Reviews: IPR FY15	2	2015	2	2015
Defense Acquisition Reviews: IPR FY16	2	2016	2	2016
Defense Acquisition Reviews: IPR FY17	2	2017	2	2017
Production & Sustainment: BLK 1B TR1 LRIP 3	1	2012	4	2012
Production & Sustainment: BLK 2A TR1 LRIP 4&5	3	2012	1	2014
Production & Sustainment: BLK 3I TR2 LRIP 6, 7, &8	2	2011	1	2017
Production & Sustainment: BLK 3F TR2 LRIP 9+	1	2017	4	2017
Contract Awards: Low Rate Inital Production (LRIP) IV Full Funding	1	2011	1	2011
Contract Awards: LRIP V Long Lead	1	2011	1	2011
Contract Awards: LRIP V Full Funding	4	2011	4	2011
Contract Awards: LRIP VI Long Lead	4	2011	4	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800M: *(U)Joint Strike Fighter (JSF) - EMD*	PROJECT 2262: *Joint Strike Fighter EMD STOVL*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Contract Awards: LRIP VI Full Funding	1	2012	1	2012
Contract Awards: LRIP VII Long Lead	2	2012	2	2012
Contract Awards: LRIP VII Full Funding	1	2013	1	2013
Contract Awards: LRIP VIII Long Lead	2	2013	2	2013
Contract Awards: LRIP VIII Full Funding	1	2014	1	2014
Contract Awards: LRIP IX Long Lead	2	2014	2	2014
Contract Awards: LRIP IX Full Funding	1	2015	1	2015
Contract Awards: LRIP X Long Lead	2	2015	2	2015
Contract Awards: LRIP X Full Funding	1	2016	1	2016
Contract Awards: LRIP XI Long Lead	3	2016	3	2016
Contract Awards: LRIP XI Full Funding	1	2017	1	2017
Production Deliveries: LRIP I Delivery (APAF)	3	2011	3	2011
Production Deliveries: LRIP II (APAF & APN)	4	2011	4	2011
Production Deliveries: LRIP III (APAF & APN) INTL	1	2012	1	2012
Production Deliveries: LRIP IV (APAF & APN) INTL	1	2013	1	2013
Production Deliveries: LRIP V (APAF & APN) INTL	3	2013	3	2013
Production Deliveries: LRIP VI (APAF & APN) INTL	2	2014	2	2014
Production Deliveries: LRIP VII (APAF & APN) INTL	2	2012	2	2012
Production Deliveries: LRIP VIII (APAF & APN) INTL	1	2016	1	2016
Production Deliveries: LRIP IX (APAF & APN) INTL	1	2017	1	2017
Production Deliveries: Production Approach Single Lot /MYP - TBD	1	2015	2	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	654.198	658.549	743.926	-	743.926	702.100	584.341	458.302	349.869	Continuing	Continuing
2261: *Joint Strike Fighter EMD*	615.706	631.836	724.392	-	724.392	702.100	584.341	458.302	349.869	Continuing	Continuing
3194: *Joint Reprogramming Center*	38.492	26.713	19.534	-	19.534	-	-	-	-	0.000	84.739

Note

Effective in FY 11 budget year, the F-35B United States Marine Corps (USMC) Short Take-off Vertical Landing (STOVL) and F-35C United States Navy (USN) Carrier Variant (CV) budgets are reported against separate budget line items and PEs. Starting in FY 11, F-35B budget is reported against PE 0604800M. The F-35C USN budget continues to report under PE 0604800N.

A. Mission Description and Budget Item Justification

The F-35 Lightning II Joint Strike Fighter (JSF) program will develop and field a family of aircraft that meets needs of USN, United States Air Force (USAF), USMC, and allies, with maximum commonality among variants, consistent with National Disclosure Policy, to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom, other International countries, and Foreign Military Sales cases are also participants in JSF program. The program shown here reflects USN, USMC, USAF, and International Partner funding. The top line PE cost (R-2) reflects USN F-35C CV budgetary information only. However, funding at accomplishment/planned program level (R-2A) is reported in total (all services and partners) as activities support all aircraft variants.

The System Development and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles, to include 6 ground test articles and 14 flight test articles for Navy and Air Force use. The following reflects the scheduled first flight of each flight test asset or production line roll out of each ground test asset:

FY07: 1 Conventional Take Off and Landing (CTOL) flight test article
FY08: 1 Short Take Off Vertical Landing (STOVL) flight test article, 1 STOVL ground test article
FY09: 1 STOVL flight test article, 2 CTOL ground test articles
FY10: 6 flight test articles (3 CTOL, 2 STOVL, 1 CV), 3 ground test articles (1 STOVL, 2 CV)
FY11: 4 flight test articles (1 CTOL, 1 STOVL, 2 CV)
FY12: 1 flight test article (CV)

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	707.791	677.486	744.516	-	744.516
Current President's Budget	654.198	658.549	743.926	-	743.926
Total Adjustments	-53.593	-18.937	-0.590	-	-0.590
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-18.937			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-19.166	-			
• Program Adjustments	-	-	-1.187	-	-1.187
• Rate/Misc Adjustments	-	-	0.597	-	0.597
• Congressional General Reductions Adjustments	-3.442	-	-	-	-
• Congressional Directed Reductions Adjustments	-30.985	-	-	-	-

Change Summary Explanation

Schedule: Initial estimated dates associated with PB12 schedule milestones, to include Initial Operational Capability and Intial Operational Testing and Evaluation timeframes have been adjusted pending program rebaseline. The FY12 Defense Program Review is now scheduled for 2nd Quarter FY12 and a Milestone B decision is expected at that time. Navy Follow-on Development will begin in FY13 due to Congressional decision to not fund in FY12. The FY11 Testing and Evaluation schedule changes include extending the completion of Block 3C to 3rd Quarter FY16.

United States Reprogramming Laboratory (USRL) schedule updated to reflect Verification and Validation efforts. The schedule also incorporates a one-year extension to USRL as result of rephasing of program.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2261: *Joint Strike Fighter EMD*	615.706	631.836	724.392	-	724.392	702.100	584.341	458.302	349.869	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Development efforts for Joint Strike Fighter are funded by Navy, Air Force, and International Partners through agreements and memorandums of understanding. Cost details in R-2A Section B and R-3 reflect total effort.

A. Mission Description and Budget Item Justification

The F-35 Lightning II Joint Strike Fighter (JSF) program will develop and field a family of aircraft that meets needs of USN, United States Air Force (USAF), USMC, and allies, with maximum commonality among variants, consistent with National Disclosure Policy, to minimize life cycle costs. This is a joint program with no executive service. Navy and Air Force each provide approximately equal shares of annual funding to the program. The United Kingdom, other International countries, and Foreign Military Sales cases are participants in JSF Program. The program combines USN, USMC, USAF, and International Partner funding. The top line PE cost (R-2) reflects USN F-35C CV budgetary information only. However, funding at accomplishment/planned program level (R-2A) is reported in total (all services and partners) as activities support all aircraft variants. Within Navy, funding is roughly equal contribution of annual funding between USN and USMC.

The System Development and Demonstration (SDD) budget funds a total quantity of 20 RDT&E test articles, to include 6 ground test articles and 14 flight test articles for Navy and Air Force use. The following fiscal year phasing of test articles reflects the scheduled first flight of each flight test asset or production line roll out of each ground test asset:

FY07: 1 Conventional Take Off and Landing (CTOL) flight test article
FY08: 1 Short Take Off Vertical Landing (STOVL) flight test article, 1 STOVL ground test
FY09: 1 STOVL flight test article, 2 CTOL ground test articles
FY10: 6 flight test articles (3 CTOL, 2 STOVL, 1 CV), 3 ground test articles (1 STOVL, 2 CV)
FY11: 4 flight test articles (1 CTOL, 1 STOVL, 2 CV)
FY12: 1 flight test article (CV)

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: SDD	1,480.978	1,754.840	1,792.649
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) execution of the Air System, with Lockheed Martin including International Commonality Effort which included airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. ***FY 2012 Plans:*** Continue SDD execution of the Air System, with Lockheed Martin including International Commonality Effort which includes airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts. ***FY 2013 Plans:*** Continue SDD execution of Air System (Lockheed Martin), including International Commonality Effort. Efforts include airframe, vehicle systems, mission systems, autonomic logistics, systems engineering, and integrated test efforts.			
Title: F135 Propulsion System	375.628	360.000	359.618
Articles:	0	0	0
FY 2011 Accomplishments: Continued SDD execution of the F135 Propulsion System with Pratt & Whitney that included engine testing, autonomic logistics, integration and performing technology maturation efforts. ***FY 2012 Plans:*** Continue SDD execution of the F135 Propulsion System with Pratt & Whitney that includes engine testing, autonomic logistics, integration and performing technology maturation efforts. ***FY 2013 Plans:*** Continue SDD execution of F135 Propulsion System (Pratt & Whitney), including engine testing, autonomic logistics, integration and performing technology maturation efforts.			
Title: F136 Propulsion System	69.288	-	-
Articles:	0		
FY 2011 Accomplishments: Continued F136 Propulsion System development effort by the General Electric/Rolls Royce Fighter Engine team.			
Title: Systems Engineering	39.345	45.457	20.063
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) Systems Engineering that included systems operations requirements analysis, program integration, requirements integration, and interoperability support. ***FY 2012 Plans:*** Continue SDD Systems Engineering including systems operations requirements analysis, program integration, requirements integration, and interoperability support. ***FY 2013 Plans:*** Continue SDD Systems Engineering, including systems operations requirements analysis, program integration, requirements integration, and interoperability support.			
Title: Development Test and Evaluation	183.951	323.150	374.258
Articles:	0	0	0
FY 2011 Accomplishments: Continued government Development Test and Evaluation (DT&E)/Operational Evaluation in support of envelope expansion, Low Rate Initial Production aircraft deliveries, and initial service training. Continued flight sciences testing of Conventional Take Off and Landing (CTOL), Short Take Off and Vertical Landing (STOVL), and Carrier Variant (CV) variants to expand the air vehicle envelope to support mission systems testing. Commenced and completed Block 1 Mission Systems flight test, and commenced Block 2 flight test. Elements of DT&E included preparation for flight testing, weapons integration testing, and component capabilities testing. ***FY 2012 Plans:*** Continue government DT&E/Operational Testing in support of test aircraft. Continue flight sciences testing of CTOL, STOVL, and CV variants to expand the air vehicle envelope to support mission systems testing to include initial Block 2B. Elements of DT&E include preparation for flight testing, weapons integration testing, and component capabilities testing. ***FY 2013 Plans:*** Continue government DT&E/Operational Testing in support of test aircraft. Continue flight sciences testing of CTOL, STOVL, and CV variants to expand air vehicle envelope and support mission systems testing (include initial Block 2B). Elements of DT&E include preparation for flight testing, weapons integration testing, and component capabilities testing.			
Title: Development Support	109.293	237.128	146.887
Articles:	0	0	0
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued System Development and Demonstration (SDD) Support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities. ***FY 2012 Plans:*** Continue SDD Support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities. ***FY 2013 Plans:*** Continue SDD support efforts for airframe, air vehicle systems, mission systems, weapons integration, mission support, and autonomic logistics development activities			
Title: Program Management Support ***Articles:*** ***FY 2011 Accomplishments:*** Continued management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives. ***FY 2012 Plans:*** Continue management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives. ***FY 2013 Plans:*** Continue management support services, travel, engineering technical services, and studies analyses and evaluations in support of program objectives.	76.876 0	103.447 0	113.875 0
Title: Follow-on Development (FoD) ***Articles:*** ***FY 2013 Plans:*** Initiate disciplined systems engineering, requirements decomposition, and life cycle cost estimation of high priority, gap-driven Block 4 candidates, and technical development of suitability candidates. Continue technical maturation of validated Block 4 FoD capabilities to appropriate Technical Readiness Levels to reduce integration risk.	-	-	8.717 0
Accomplishments/Planned Programs Subtotals	2,335.359	2,824.022	2,816.067
0604800F	931.599	1,387.926	1,210.306
0604800M	602.142	651.786	737.149
International	185.912	152.474	144.220

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Navy Subtotals	615.706	631.836	724.392

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDT&E/0604800F: *Joint Strike Fighter.*	931.599	1,387.926	1,210.306	0.000	1,210.306	1,019.035	635.732	387.694	155.591	0.000	22,224.453
• International: *International Partner (SDD/FOD)*	185.912	152.474	144.220	0.000	144.220	2.800	0.000	0.000	0.000	0.000	5,123.601
• APAF/0207142F: *F-35 Joint Strike Strike Fighter*	4,297.566	3,518.592	3,417.702	0.000	3,417.702	3,357.676	4,547.095	6,026.187	5,949.391	144,091.949	179,224.735
• RDT&E/0604800M: *JT Strike Fighter (JSF) - EMD*	602.142	651.786	737.149	0.000	737.149	693.484	574.746	448.498	340.123	0.000	4,047.928
• APN/0152: *F-35 Joint Strike Fighter STOVL*	838.204	1,259.162	1,510.936	0.000	1,510.936	1,521.174	1,562.016	1,953.170	2,576.560	31,607.019	42,828.241
• APN/0605B: *F-35 Joint Strike Fighter STOVL Spares*	150.251	23.430	99.006	0.000	99.006	97.805	107.292	186.345	175.615	2,381.670	3,221.414
• APN/0147: *F-35 Joint Strike Fighter CV*	1,852.890	1,557.162	1,072.812	0.000	1,072.812	1,273.910	1,432.190	1,724.077	2,429.677	26,609.510	45,442.497
• APN/0605C: *F-35 Joint Strike Fighter CV Spares*	88.923	29.902	41.466	0.000	41.466	114.749	116.392	106.869	144.044	1,792.760	2,865.797
• OPN/4265: *Other Aviation Support Equipment*	5.381	5.665	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	17.875
• International 2: *International Procurement*	726.936	1,223.348	3,054.443	0.000	3,054.443	5,362.214	7,449.007	8,361.881	8,094.783	0.000	35,000.074
• MC/0207142F: *USAF MILCON*	121.292	24.250	13.530	0.000	13.530	72.000	69.050	65.000	66.170	0.000	498.821
• APAF/0204142F: *USAF Modification Funding*	4.610	0.000	147.995	0.000	147.995	157.777	245.462	223.683	252.141	0.000	1,031.668
• FOD/0207142F: *USAF Follow-on Development*	0.000	9.967	8.117	0.000	8.117	50.084	104.866	132.174	229.912	0.000	535.120
• 0207142F/USAF: *USAF Spares*	261.924	149.556	181.833	0.000	181.833	197.737	265.692	274.415	264.251	12,779.030	14,564.830
• OPN/4267: *Logistics Information System (ALIS)*	0.000	0.000	3.826	0.000	3.826	4.869	5.592	5.647	5.744	43.524	69.202

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 27142F: *USAF/OPAF*	0.000	0.000	0.600	0.000	0.600	2.200	2.943	2.471	2.345	0.000	10.559

D. Acquisition Strategy

The System Development and Demonstration program consists of a cost-reimbursement contract awarded to Lockheed Martin Aeronautics Company to develop F-35 Air System, consisting of three aircraft variants and associated logistics support system, for the U.S. Services and international participants. Similarly, a cost-reimbursement contract was awarded to Pratt & Whitney to develop the F135 propulsion system. Ground and flight testing is being conducted during development to accomplish validation and verification, with extensive use of modeling and simulation to offset risk of this large, complex, and concurrent life-cycle program. A comprehensive logistics support environment, including an integrated training system for aircrew, maintenance, and support personnel, is also being developed.

The F-35 Program has made international involvement a key element of acquisition strategy. This includes international partnership in development, production, and sustainment phases of life-cycle. Additional international participation includes Foreign Military Sales arrangements.

In Fiscal Year (FY) 2007, separate cost-type contracts were awarded to Lockheed Martin Aeronautics Company and Pratt & Whitney to begin low rate initial production for F-35 air vehicles, propulsion systems, and sustainment for fielded systems. Transition to fixed-price-type contracts occurred with fourth low rate lot. To provide logistics support for delivered aircraft, Performance-Based Logistics cost-type contracts are being awarded Lockheed Martin Aeronautics Company and Pratt & Whitney.

At completion of Low Rate Initial Production, a Defense Acquisition Board review, and Milestone Decision Authority approval, the F-35 Program will enter Full Rate Production. Fixed-price procurement contracts will be awarded for F-35 air vehicles and propulsion systems for U.S. Services and international participants. Multiyear procurement authority for the F-35 Air System will be requested for Full Rate Production. Concurrently, multiple-year, fixed-price-type Performance Based Logistics contracts for sustainment will be executed to support multi-Service and multi-national requirements.

E. Performance Metrics

Performance Metrics reflect Key Program Performance data.

Combat Radius
Conventional Take Off and Landing Does Not Meet Requirement
Carrier Variant (CV) Meets Tripwire Requirement
Short Take off Vertical Landing (STOVL) Meets/Exceeds Tripwire Requirement

CV Recovery
Maximum Approach Speed Meets Requirement In Tripwire Band

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

STOVL Performance
Flat Deck (High-High-High Profile Fuel) Meets Requirement In Tripwire Band
Ski Jump (High-Medium-Medium-High Profile Fuel) Meets Requirement In Tripwire Band
Vertical Landing Bring Back Meets Requirement In Tripwire Band

Interoperability
Net Ready Criteria- Meets Requirement In Tripwire Band

Radio Frequency Signature Meets/Exceeds Tripwire Requirement

Force Protection
CB Pilot Protection (New Key Performance Parameters Per CN3) - Meets/Exceeds Tripwire Requirement

Mission Reliability
Conventional Take Off and Landing (CTOL) Meets/Exceeds Tripwire Requirement
Carrier Variant (CV) Exceeds ORD Objective
Short Take Off Vertical Landing (STOVL) USMC Meets/Exceeds Tripwire Requirement
STOVL UK Meets/Exceeds Tripwire Requirement

Sortie Generation Rate
CTOL Meets/Exceeds Tripwire Requirement
CV Meets/Exceeds Tripwire Requirement
STOVL USMC Meets/Exceeds Tripwire Requirement
STOVL UK Meets/Exceeds Tripwire Requirement

Logistics Footprints
CTOL Meets/Exceeds Tripwire Requirement
STOVL USMC Meets/Exceeds Tripwire Requirement

Logistics Footprint- Volume
CV Exceeds ORD Objective
STOVL USMC Exceeds ORD Objective
STOVL UK Meets/Exceeds Tripwire Requirement

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

Logistics Footprint-Weight
Carrier Variant (CV) Exceeds ORD Objective
STOVL USMC Exceeds ORD Objective
STOVL UK Meets/Exceeds Tripwire Requirement

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary H/W Development - SDD	C/CPAF	Lockheed Martin:Ft. Worth, TX	28,954.680	1,750.839	Oct 2011	1,781.259	Oct 2012	-		1,781.259	2,918.167	35,404.945	35,398.869
Primary H/W Development - IDIQ (0022)	C/CPAF	Lockheed Martin:Ft. Worth, TX	16.162	4.000	Oct 2011	-		-		-	0.000	20.162	20.162
Primary H/W Development - IDIQ (0009)	C/CPAF	Lockheed Martin:Ft. Worth, TX	16.759	-		-		-		-	0.000	16.759	16.759
Primary H/W Development - BOA(3104)	SS/CR	Lockheed Martin:Ft. Worth, TX	3.511	-		-		-		-	0.000	3.511	3.511
Primary H/W Development - SDD (3003)	C/CPAF	Pratt & Whitney:Hartford, CT	7,282.249	360.000	Dec 2011	359.618	Dec 2012	-		359.618	772.503	8,774.370	8,774.370
Primary H/W Development (C-0132)	SS/CPAF	Pratt & Whitney:Hartford, CT	1.364	-		-		-		-	0.000	1.364	1.364
Primary H/W Development (C-0050)	SS/CPAF	Pratt & Whitney:Hartford, CT	2.211	-		-		-		-	0.000	2.211	2.211
Primary H/W Development BOA(G-3053)	SS/CPAF	Pratt & Whitney:Hartford, CT	35.983	-		-		-		-	0.000	35.983	35.983
Primary H/W Development IDIQ (D-0077)	SS/CPAF	Pratt & Whitney:Hartford, CT	10.925	-		-		-		-	0.000	10.925	10.925
Primary H/W Development GE (C-0093)	SS/CPAF	GE:Cinn, Ohio	2,224.861	-		-		-		-	0.000	2,224.861	2,418.868
Primary H/W Development GE (C-0009)	SS/CPAF	GE:Cinn, Ohio	0.264	-		-		-		-	0.000	0.264	0.264
Primary H/W Development GE (04-D-0074	SS/CPAF	GE:Cinn, Ohio	4.175	-		-		-		-	0.000	4.175	4.175
Primary H/W Development GE (04-C-0102	SS/CPAF	GE:Cinn, Ohio	100.400	-		-		-		-	0.000	100.400	100.400
Primary H/W Development GE (02-G-3236	SS/CPAF	GE:Cinn, Ohio	5.548	-		-		-		-	0.000	5.548	5.548
Primary H/W Development GE (96-C-0176	SS/CPAF	GE:Cinn, Ohio	382.753	-		-		-		-	0.000	382.753	382.753
Product Development Systems Engineering	Various	Various:Various	329.301	45.457	Oct 2011	20.063	Oct 2012	-		20.063	89.855	484.676	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
NAWC CHLK FOD	Various	NAWC WD:China Lake, CA	-	-		-		-		-	0.000	0.000	
NAWC PAX FOD	Various	NAWC AD:Patuxent River, MD	-	-		-		-		-	0.000	0.000	
PRIME LM FOD	Various	Lockheed Martin:Ft. Worth, TX	-	-		1.860	Oct 2012	-		1.860	396.902	398.762	
PRIME ENGINE P&W FOD	Various	Pratt & Whitney:Hartford, CT	-	-		-		-		-	0.000	0.000	
Systems Engineering FOD	Various	Various:Various	-	-		0.447	Oct 2012	-		0.447	43.099	43.546	
Prime LM Deployability and Suitability Enhancements	Various	Lockheed Martin:Ft. Worth, TX	-	-		17.800	Oct 2012	-		17.800	97.000	114.800	
		Subtotal	39,371.146	2,160.296		2,181.047		-		2,181.047	4,317.526	48,030.015	

Remarks

Note: Cumulative Award Fee Earned in prior years for Pratt & Whitney is 85.2%.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	Eglin AFB:Eglin AFB, FL	115.621	14.929	Oct 2011	15.340	Oct 2012	-		15.340	37.168	183.058	
Development Support	Various	ASC/AFRL:Dayton, Ohio	65.367	7.625	Oct 2011	8.255	Oct 2012	-		8.255	13.938	95.185	
Development Support	Various	ASC/CIVPAY:Dayton, Ohio	-	19.554	Oct 2011	-		-		-	0.000	19.554	
Development Support	Various	Bolling AFB:Washington, DC	6.775	-		-		-		-	0.000	6.775	
Development Support	Various	DMEA:McClellan, CA	7.148	25.500	Oct 2011	1.400	Oct 2012	-		1.400	0.800	34.848	
Development Support	MIPR	ESC:Hanscom AFB, MA	7.358	0.377	Oct 2011	0.511	Oct 2012	-		0.511	1.585	9.831	
Development Support	Various	AEDC/Fuel:Arnold ,TN	156.105	58.764	Oct 2011	23.266	Oct 2012	-		23.266	39.948	278.083	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NAS Jacksonville:Jacksonville, FL	9.437	1.985	Oct 2011	1.757	Oct 2012	-		1.757	1.800	14.979	
Development Support	Various	Various:Various	249.093	21.298	Oct 2011	21.332	Oct 2012	-		21.332	30.343	322.066	
Development Support	Various	NAWC WD:China Lake, CA	108.289	30.641	Oct 2011	24.833	Oct 2012	-		24.833	56.204	219.967	
Development Support	Various	NAWC AD:Patuxent River, MD	331.122	53.484	Oct 2011	42.672	Oct 2012	-		42.672	122.425	549.703	
Development Support	Various	NAWC TSD:Orlando, FL	11.610	2.362	Oct 2011	0.771	Oct 2012	-		0.771	3.555	18.298	
Development Support	WR	NSWC:Indian Head, MD	4.266	0.572	Oct 2011	0.308	Oct 2012	-		0.308	0.640	5.786	
Development Support	Various	SPAWAR:San Diego, CA	10.322	0.038	Oct 2011	0.032	Oct 2012	-		0.032	0.138	10.530	
Prior Years costs no longer funded in FYDP	Various	SIBR Cong ADD:Various	24.187	-		-		-		-	0.000	24.187	
Misc/Other FOD	Various	Various:Various	-	-		6.410	Oct 2012	-		6.410	86.994	93.404	
		Subtotal	1,106.700	237.129		146.887		-		146.887	395.538	1,886.254	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	NAWC AD:Patuxent River, MD	381.021	130.731	Oct 2011	115.186	Oct 2012	-		115.186	304.105	931.043	
Developmental Test & Evaluation	Various	NAWC WD:China Lake, CA	37.805	11.637	Oct 2011	5.829	Oct 2012	-		5.829	11.972	67.243	
Developmental Test & Evaluation	Various	Edwards AFB:Edwards AFB, CA	399.018	94.841	Oct 2011	82.500	Oct 2012	-		82.500	228.811	805.170	
Developmental Test & Evaluation	Various	Various:Various	36.486	26.441	Oct 2011	56.449	Oct 2012	-		56.449	170.510	289.886	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	MIPR	WEPS:Eglin AFB, FL	35.173	2.600	Oct 2011	-		-		-	0.000	37.773	
Developmental Test & Evaluation	MIPR	OT-AFOTEC/ AFFTC:Various	108.726	52.200	Oct 2011	108.518	Oct 2012	-		108.518	401.683	671.127	
Developmental Test & Evaluation	Various	OT-JITC/ OPTEC:Various	8.581	4.700	Oct 2011	5.776	Oct 2012	-		5.776	5.926	24.983	
Developmental Test & Evaluation	Various	JITC:Various	-	-		-		-		-	0.000	0.000	
		Subtotal	1,006.810	323.150		374.258		-		374.258	1,123.007	2,827.225	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management	SS/CPFF	ACT I:Arlington, VA	8.419	3.418	Oct 2011	3.049	Oct 2012	-		3.049	13.798	28.684	28.684
Program Management - Mantech	C/FP	Mantech:Arlington, VA	59.469	8.366	Oct 2011	11.046	Oct 2012	-		11.046	49.993	128.874	128.874
Program Management - DRC	C/CPFF	DRC:Arlington, VA	5.916	-		-		-		-	0.000	5.916	5.916
Program Management	C/CPFF	First Principles:Arlington, VA	4.634	1.936	Oct 2011	1.836	Oct 2012	-		1.836	8.308	16.714	16.714
Program Management	Various	ASC CIVPAY:Various	-	3.500	Oct 2011	35.724	Oct 2012	-		35.724	150.762	189.986	
Program Management	C/CPFF	Wyle:Arlington, VA	102.871	27.418	Oct 2011	23.305	Oct 2012	-		23.305	109.904	263.498	263.498
Program Management	C/CPAF	Saftas:Arlington, VA	123.593	26.600	Oct 2011	12.867	Oct 2012	-		12.867	71.197	234.257	234.257
Program Management	SS/CPAF	Stanley:Arlington, VA	186.584	27.940	Oct 2011	22.051	Oct 2012	-		22.051	101.523	338.098	338.098
Program Management	SS/CPFF	GE F136-COG Studies:Cinn., OH	0.800	-		-		-		-	0.000	0.800	0.800
Program Management	Various	Various:Various	17.124	4.269	Oct 2011	3.997	Oct 2012	-		3.997	17.225	42.615	
		Subtotal	509.410	103.447		113.875		-		113.875	522.710	1,249.442	

Remarks

Cumulative Award Fee earned in prior years for Stanley is 99%.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Subtotals	41,994.066	2,824.022		2,816.067		-		2,816.067	6,358.781	53,992.936	
0604800F		1,387.926		1,210.306		-		1,210.306			
0604800M		651.786		737.149		-		737.149			
International		152.474		144.220		-		144.220			
Project Cost Totals	41,994.066	631.836		724.392		-		724.392	6,358.781	53,992.936	

Remarks

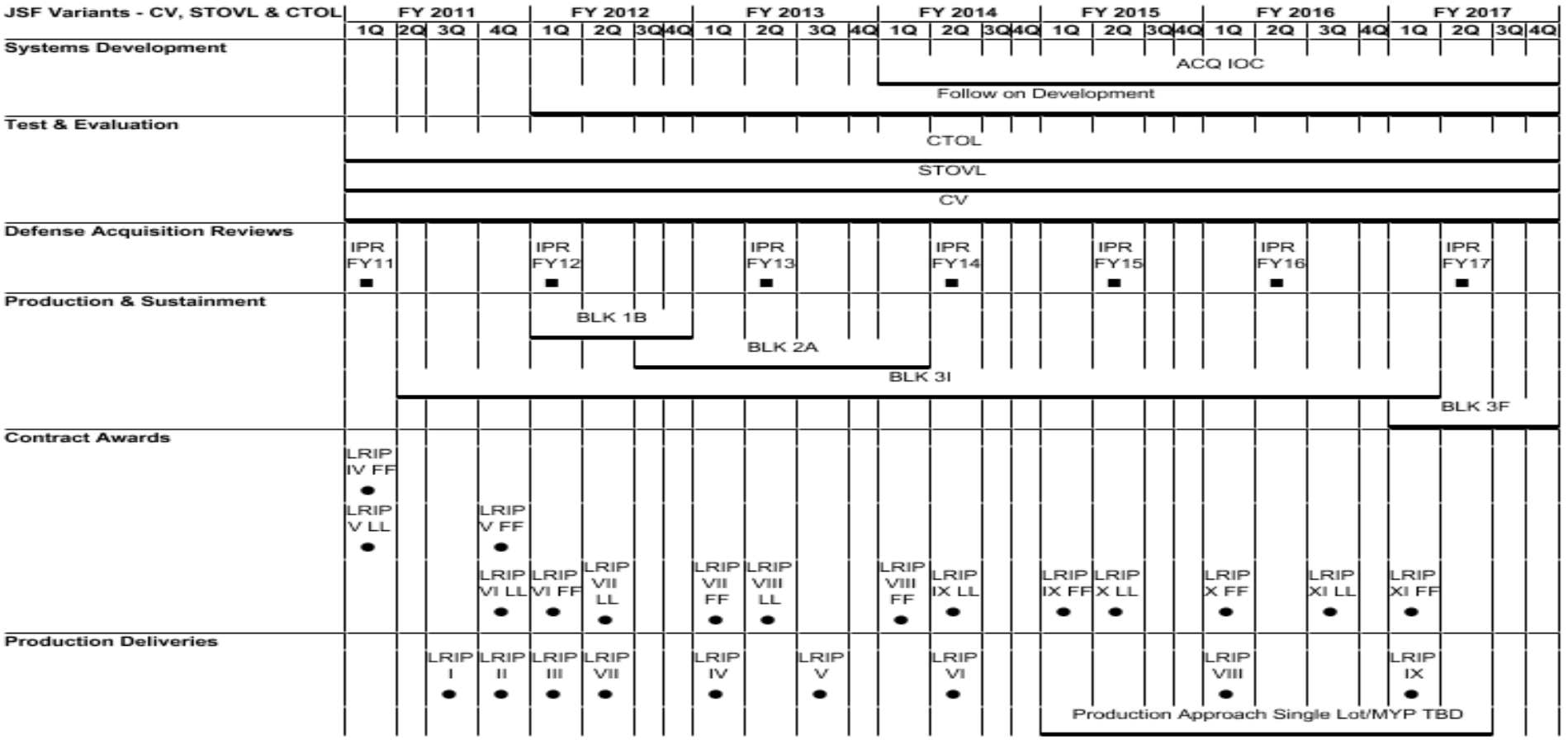
Subtotals and totals may not add due to rounding.

Name PU 2011 2012 2013
0604800F 3831 $931.599 $1,387.926 $1,210.306
0604800M 2262 $602.142 $651.786 $737.149
0604800N 2261 $615.706 $631.836 $724.392
International R&D $185.912 $152.474 $144.220

Total 2261&2262 (R2-A/R-3) FY11 $2,335.359 FY12 $2,824.022 FY13 $2,816.067

Navy 3194 $38.492 $26.713 $19.534

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604800N: *JT Strike Fighter (JSF) - EMD*	**PROJECT** 2261: *Joint Strike Fighter EMD*



2013PB - 0604800N - 2261

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0604800N: *JT Strike Fighter (JSF) - EMD*	**PROJECT** 2261: *Joint Strike Fighter EMD*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JSF Variants - CV, STOVL & CTOL				
Systems Development: Acquisition Milestone: Services Initial Operational Capability TBD	1	2014	4	2017
Systems Development: Follow-on Development	1	2012	4	2017
Test & Evaluation: Conventional Take Off and Landing (CTOL) (DT/OT)	1	2011	4	2017
Test & Evaluation: Short Take Off and Landing (STOVL) (DT/OT)	1	2011	4	2017
Test & Evaluation: Carrier Variant (CV) (DT/OT)	1	2011	4	2017
Defense Acquisition Reviews: Defense Acquisition Board Program Reviews FY11	1	2011	1	2011
Defense Acquisition Reviews: Interim Program Reviews (IPR) FY12	1	2012	1	2012
Defense Acquisition Reviews: IPR FY13	2	2013	2	2013
Defense Acquisition Reviews: IPR FY14	2	2014	2	2014
Defense Acquisition Reviews: IPR FY15	2	2015	2	2015
Defense Acquisition Reviews: IPR FY16	2	2016	2	2016
Defense Acquisition Reviews: IPR FY17	2	2017	2	2017
Production & Sustainment: BLK 1B TR1 LRIP 3	1	2012	4	2012
Production & Sustainment: BLK 2A TR1 LRIP 4&5	3	2012	1	2014
Production & Sustainment: BLK 3I TR2 LRIP 6, 7, &8	2	2011	1	2017
Production & Sustainment: BLK 3F TR2 LRIP 9+	1	2017	4	2017
Contract Awards: Low Rate Initial Production (LRIP) IV Full Funding	1	2011	1	2011
Contract Awards: LRIP V Long Lead	1	2011	1	2011
Contract Awards: LRIP V Full Funding	4	2011	4	2011
Contract Awards: LRIP VI Long Lead	4	2011	4	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 2261: *Joint Strike Fighter EMD*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Contract Awards: LRIP VI Full Funding	1	2012	1	2012
Contract Awards: LRIP VII Long Lead	2	2012	2	2012
Contract Awards: LRIP VII Full Funding	1	2013	1	2013
Contract Awards: LRIP VIII Long Lead	2	2013	2	2013
Contract Awards: LRIP VIII Full Funding	1	2014	1	2014
Contract Awards: LRIP IX Long Lead	2	2014	2	2014
Contract Awards: LRIP IX Full Funding	1	2015	1	2015
Contract Awards: LRIP X Long Lead	2	2015	2	2015
Contract Awards: LRIP X Full Funding	1	2016	1	2016
Contract Awards: LRIP XI Long Lead	3	2016	3	2016
Contract Awards: LRIP XI Full Funding	1	2017	1	2017
Production Deliveries: LRIP I (APAF)	3	2011	3	2011
Production Deliveries: LRIP II (APAF & APN)	4	2011	4	2011
Production Deliveries: LRIP III (APAF & APN) INTL	1	2012	1	2012
Production Deliveries: LRIP IV (APAF & APN) INTL	1	2013	1	2013
Production Deliveries: LRIP V (APAF & APN) INTL	3	2013	3	2013
Production Deliveries: LRIP VI (APAF & APN) INTL	2	2014	2	2014
Production Deliveries: LRIP VII (APAF & APN) INTL	2	2012	2	2012
Production Deliveries: LRIP VIII (APAF & APN) INTL	1	2016	1	2016
Production Deliveries: LRIP IX (APAF & APN) INTL	1	2017	1	2017
Production Deliveries: Production Approach Single Lot /MYP - TBD	1	2015	2	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3194: *Joint Reprogramming Center*	38.492	26.713	19.534	-	19.534	-	-	-	-	0.000	84.739
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The United States Reprogramming Laboratory (USRL)/Capability Concept project, previously referred to as Joint Strike Fighter Joint Reprogramming Center/Capability Concept is required to adequately develop and maintain Operational Sensor Engineering F-35(V) Mission Data to support United States Navy, United States Marine Corps, and United States Air Force multi-mission objectives. USRL will allow rapid operational response to threat changes. Funding is provided for:

- Aircraft sensor function and combat identification
- Conducting Offensive Identification/Jamming of potential threats
- Providing self defense against surface threats, air, and missile threats
- Detecting and identifying targets, to include moving land, air, and missile targets
- Providing mission planning to ensure aircraft survivability
- Conducting offensive operations against surface threats
- Conducting sensor management and information processing
- Software development for this requirement is funded through the F-35 Joint Strike Fighter System Development and Demonstration (SDD) baseline

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: USRL Build Up	31.990	14.213	6.734
Articles:	0	0	0

FY 2011 Accomplishments:
Provided funds to Lockheed Martin Aero in support of reprogramming techniques, development and verification capacity required to adjust to emergent threats, and validate system effectiveness to increase survivability of the weapon system.

FY 2012 Plans:
Provide funds to Lockheed Martin Aero in support of reprogramming techniques, development and verification capacity required to adjust to emergent threats, and validate system effectiveness to increase survivability of the weapon system. Perform USRL Stand-up testing and acceptance tasks.

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Provide funds to Lockheed Martin Aero in support of reprogramming techniques, development and verification capacity required to adjust to emergent threats, and validate system effectiveness to increase survivability of the weapon system. Perform United States Reprogramming Laboratory (USRL) Stand-up testing and acceptance tasks.			
Title: Development Support	6.502	12.500	12.800
Articles:	0	0	0
FY 2011 Accomplishments: Continued System Development and Demonstration (SDD) Systems Engineeering (SE) that included systems operations requirements analysis, program integration, requirements integration, and interoperability support of the USRL.			
FY 2012 Plans: Continue SDD SE including systems operations requirements analysis, program integration, requirements integration, and interoperability support of the USRL.			
FY 2013 Plans: Continue SDD SE including systems operations requirements analysis, program integration, requirements integration, and interoperability support of the USRL.			
Accomplishments/Planned Programs Subtotals	38.492	26.713	19.534

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The Joint Reprogramming Capability (JRC) is a subset of Joint Strike Fighter (JSF) Program and falls within JSF acquisition strategy. JRC is needed to support scheduled Initial Operational Capability dates (and supporting test activity) for three JSF variants. To that end, a concept of operations is being developed for JRC to address Mission Data development, verification/validation/testing, and to merge service unique requirements into Joint processes/procedures. Previously envisioned as a single facility, JRC is now comprised of two distinct facilities under JRC concept. The USRL will support U.S. Joint Service reprogramming requirements; the Partner Reprogramming Laboratory will focus on International Partner areas of interest.

Inter-Service collaboration will eliminate duplication of effort, maximize technology to improve configuration control, employ advance networks, and ensure implementation of an enterprise (single shared database) solution. By capitalizing on legacy platform synergy, operational mission data intellect, proven processes, and existing reprogramming center resources, this approach will improve efficiencies. A Joint Command reprogramming authority will determine/manage reprogramming priorities and implementation authority.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*

The USRL Mission data development strategy is based upon an assessment of legacy systems, F-22 data, corporate expertise at Eglin Air Force Base/Naval Air Warfare Center Weapons Division, personnel, adjusted cost and schedule projections keyed to complexity of multi-variant and multi-mission aircraft; JSF-specific utilization of multiple sources of non-sustained disparate, raw, intelligence data, development of threat assessment - metrics; and build-up of real-world scenarios for systems verification and validation. These efforts support Joint Strike Fighter (JSF) operational requirements, interoperability, and fratricide mitigation.

Although the JSF Program has contracted with Lockheed Martin and Pratt & Whitney for System Development and Demonstration (SDD) of JSF, contractors do not have laboratory space available or expertise to perform operational evaluation of lab and flight test data and support field recommendations to level needed. The complexity and magnitude of JSF mission data loads drives decision to utilize government and contractor resources to design and develop a Joint-Service reprogramming facility at Eglin Air Force Base.

E. Performance Metrics

United States Reprogramming Laboratory Stand-up - 3rd Quarter FY 12

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary H/W Development	C/CPAF	Lockheed Martin:Ft. Worth, Texas	76.602	8.206	Oct 2011	-	Oct 2012	-		-	0.000	84.808	84.808
Primary H/W Development Award Fee	C/CPAF	Lockheed Martin:Ft. Worth, Texas	1.252	2.507	Oct 2011	-	Oct 2012	-		-	0.000	3.759	7.509
Lockheed Martin Various	Various	Lockheed Martin:Ft. Worth, Texas	11.828	3.500	Oct 2011	6.734	Oct 2012	-		6.734	0.000	22.062	
		Subtotal	89.682	14.213		6.734		-		6.734	0.000	110.629	

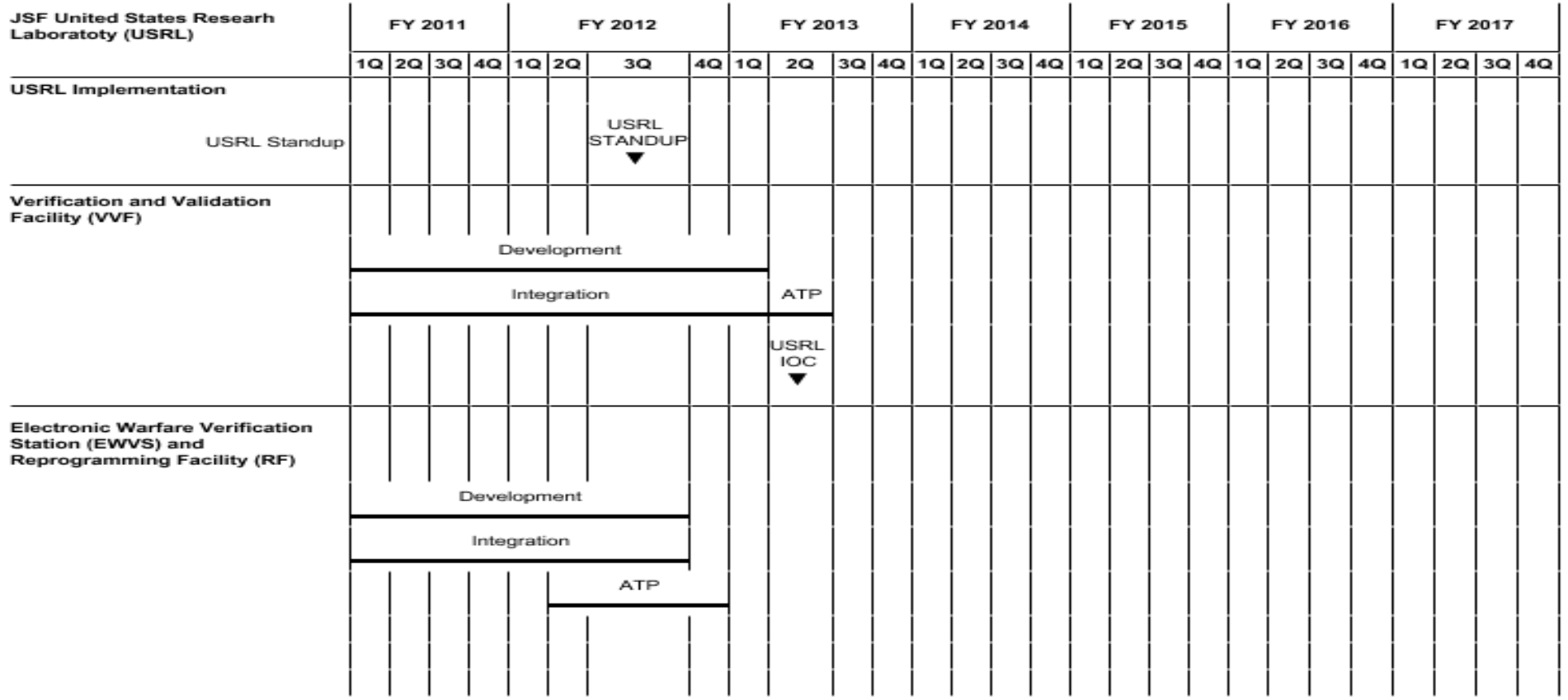
Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NAWCWD:China Lake California	14.002	12.500	Oct 2011	12.800	Oct 2012	-		12.800	0.000	39.302	
		Subtotal	14.002	12.500		12.800		-		12.800	0.000	39.302	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	103.684	26.713		19.534		-		19.534	0.000	149.931	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*



2013PB - 0604800N - 3194

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0604800N: *JT Strike Fighter (JSF) - EMD*	PROJECT 3194: *Joint Reprogramming Center*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JSF United States Researh Laboratoty (USRL)				
USRL Implementation: USRL Standup: USRL Standup	3	2012	3	2012
Verification and Validation Facility (VVF): Development	1	2011	1	2013
Verification and Validation Facility (VVF): Integration	1	2011	1	2013
Verification and Validation Facility (VVF): Acceptance Test Program (ATP)	2	2013	2	2013
Verification and Validation Facility (VVF): Initial Operational Capability	2	2013	2	2013
Electronic Warfare Verification Station (EWVS) and Reprogramming Facility (RF): Development	1	2011	3	2012
Electronic Warfare Verification Station (EWVS) and Reprogramming Facility (RF): Integration	1	2011	3	2012
Electronic Warfare Verification Station (EWVS) and Reprogramming Facility (RF): Acceptance Test Program (ATP)	2	2012	4	2012

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	22.048	19.461	12.143	-	12.143	10.893	12.381	10.216	11.545	Continuing	Continuing
2906: *Marine Corps IT*	22.048	19.461	12.143	-	12.143	10.893	12.381	10.216	11.545	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program establishes, sustains, and continuously refines computing platforms and Information Technology (IT) services as tested, certified and reusable components of a Marine Corps IT framework that spans the range of military operations.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	22.783	27.461	20.605	-	20.605
Current President's Budget	22.048	19.461	12.143	-	12.143
Total Adjustments	-0.735	-8.000	-8.462	-	-8.462
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-8.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.079	-			
• SBIR/STTR Transfer	-0.540	-			
• Program Adjustments	-	-	-8.462	-	-8.462
• Rate/Misc Adjustments	-	-	-	-	-
• Congressional General Reductions Adjustments	-0.116	-	-	-	-

Change Summary Explanation

The FY13 RDT&E decrease reflects DoD wide cost reduction efforts for IT Efficiencies while continuing critical developments with a cost effective schedule.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2906: *Marine Corps IT*	22.048	19.461	12.143	-	12.143	10.893	12.381	10.216	11.545	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

DEFENSE MESSAGE SYSTEM (DMS) and follow-on/replacement systems, as directed by the Joint Staff and HQMC Command, Control, Communications and Computers (C4), meet the organizational messaging requirement for all classification levels from GENSER through Top Secret/Sensitive Compartmented Information (TS/SCI). Telos Automated Message Handling System (AMHS) is the current implementation that provides Web-interface for system administration and for user messaging (including readers). Organizational messages are used to direct and commit resources, provide user authentication, non-repudiation, confidentiality, and integrity. It also maintains an archive and retrospective search capability to the warfighter and requires security at the Class 4 level (currently implemented with Fortezza and Certificate Authority Workstations). The Defense Information Systems Agency (DISA) is the lead agency and Global System Manager (GSM) for DMS products. The Department of Defense Intelligence Information System (DODIIS) is the Operations Manager for the Intelligence Community (IC) to support TS/SCI messaging. Within the Marine Corps, there are two distinct acquisition efforts to field DMS to strategic and tactical communication centers to all classification levels. Additionally ongoing efforts at the service and DISA level to transition from the DMS system to alternative mechanisms for the transfer of organizational information. Authorized Acquisition Objective (AAO) 100. FY12 R&D for DMS will continue research and analysis through 2012 to assist in the transition to the next generation DMS occurring between FY12-15 in order to test and certify possible organizational messaging solutions/capabilities that are DISA compliant.

MARINE CORPS TRAINING INFORMATION MANAGEMENT SYSTEM (MCTIMS) replaced the mainframe program By Name Assignment, which managed all Marine Corps school seats and interfaced with other service's school seat management programs. MCTIMS is the Marine Corps' official program of record for training and education management and is the single data source which the Training and Education Command relies on to manage training personnel, training seats, students, and other training resources. MCTIMS is the enterprise application upon which standards based instruction, education, and training is built, delivered, tracked, and evaluated. MCTIMS is establishing the unit training management module for all ground forces. This module will provide commanders an enterprise level application, which brings standardization in planning and scheduling training, recording of training against units and individual Marines, provides training assessments and reports combat readiness to Department of Defense (DOD) systems. FY13 funding is planned for development of Mass Registration capability of Marines/Students and a Prerequisite and Registration Screening Tool.

MANPOWER OPERATIONS SYSTEMS (MOS) is a portfolio of enterprise IT systems and modules that support manpower business operations for the Total Force (active and reserve). The investment in the portfolio improves dataflow and increases reliability, functionality, and accuracy of data while reducing the manpower required to operate and maintain these systems/operations. Development is partially driven by regulatory and policy changes mandated by Congress, DOD, Department of the Navy (DON), and United States Marine Corps (USMC). These systems support all five tiers of Manpower: 1) Individual Marine, 2) Small Unit Leader; 3) Unit, 4) Installation Personnel Administration Center (IPAC)/Disbursing Echelon, and 5) Headquarters Marine Corp (HQMC) Manpower and Reserve Affairs (M&RA)/ Defense Finance and Accounting Service. The MOS portfolio provides support in functional areas such as permanent change of station assignments, retention, mobilization, manpower planning, line of duty determination, personnel accountability, individual augmentation, personnel records management and maintenance, management of case incidents, civilian professional development planning, pay entitlement determinations, promotion and performance evaluations and self service/ visibility of personnel data. MOS programs interface with other systems to provide manpower data and web services functionality for pay and personnel transactions

between systems. Systems in the portfolio include Manpower Assignment Support System (MASS), Performance Evaluation System, Total Force Retention System (TFRS), Optical Digital Imaging - Records Management System, Marine Corps Medical Entitlements Data System (MCMEDS), Civilian Workforce Development Application, Manpower Mobilization Assignment System, and the Total Force Administration System (TFAS) (composed of Marine On-Line, the Secure Personnel Accountability (SPA) Module, the Drill Management Module (DMM), the Case Management Module (CMM) and Marine Reserve Order Writing System Web-enabled). FY13 R&D efforts for Manpower Operations Systems are to continue DMM Reserve Transition and Manpower Management Reserve Systems (RTAMMRS) design and development as well as Paperless Forms Services development.

MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS) will provide an overarching portfolio of capabilities to deliver ""Power to the Edge"" for the Marine Corps. Born from an effort to establish a Continuity of Operations Plan of HQMC Automated Information Systems, MCEITS will realign the existing USMC environment of applications, databases, networks, and facilities into an integrated architecture of programs to deliver new information technology capabilities based on a common infrastructure and shared services. MCEITS is a unifying framework of both the Net-Centric Enterprise Services (NCES) to be delivered, and the infrastructure and systems which must be deployed to enable delivery of those services. Initially it will encompass the Operational, Technical and Systems architectures of the garrison environment. However, ultimately it will extend to transform Command and Control (C2) both in garrison and in the deployed environment. Combined with policy, procedure and standards provided by HQMC (C4), MCEITS will allow for architectural standardization, consolidated management, and seamless interoperability of and access to the data residing in currently fielded applications (business and tactical). Testing efforts will be focused on MCEITS Portal and MCEITS provided services operating within a Service Oriented Architecture environment. MCEITS will ensure the ability to host services and applications in a Web Services enabled environment. MCEITS will also ensure NCES services are able to be federated throughout the Marine Corps to include Content Discover and Delivery, Collaboration and Text Chat, between the service consumer and provider. FY13 for MCEITS will focus on completion of Incremental II (provides high availability, disaster recovery, and operational continuity for USMC data systems) integration and testing in preparation for Full Operational Capability (FOC) in FY14 with continued Planned Product Improvements (P3I) efforts.

MANPOWER PLANNING SYSTEMS (MPS) is a portfolio consisting of three systems; the legacy Manpower Models, the Total Force Data Warehouse (TFDW), and the replacement/modernization effort of the legacy Manpower Models. This portfolio provides the tools and data to support the creation of active and reserve modeling of accession, recruiting, training, classification, retention, promotion, mobilization, distribution, and assignment plans. The funding in MPS will provide the technical solution for process improvement and will strategically align manpower systems/functional process with the C4 architecture. MPS interfaces with other systems to utilize manpower data in model analysis and future year planning efforts. No additional system development is anticipated in FY13.

MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS) is an enterprise level system to automate administrative procedures for the recruiting station operations. This customized automated System, centered on procedures in the Guidebook for Recruiters, Volume I, dramatically improves efficiency and effectiveness in Marine Corps recruiting. Furthermore, Military Entrance Processing Command requires Marine Corps recruiting to provide information in electronic format only. MCRISS is the Marine Corps Recruiting Command's program to manage applicant processing from commitment to accession/commission into the Marine Corps and Marine Corps Reserve. This enterprise approach allows for efficient sharing of information about potential recruits and recruiter screening efforts, yielding a more cost effective process. In FY13, funding supports development of the Recruiter Client Program.

TOTAL FORCE STRUCTURE MANAGEMENT SYSTEM (TFSMS) is the Marine Corps authoritative data source for force structure data and provider of the Marine Corps Tables of Organization and Equipment. TFSMS defines present and future Marine Corps force structure, establishes the Marine Corps baseline for readiness reporting, justifies resource requirements and allocation and enables Marine Corps compliance with the Joint Staff and Office of the Secretary Defense initiative

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

to standardize force structure representation by providing the Marine Corps Global Force Management (GFM) Organizational Server. Increment II development began in FY11 with the first major software release of Increment II to occur in FY12. The TFSMS Increment II Capability Development Document (CDD) defines the requirements and expectations for Initial Operational Capability (IOC) and Full Operational Capability (FOC). FOC is scheduled for FY17. FY12 R&D for TFSMS includes the first Increment II software release for the Systems Integration efforts, v3.0 (scheduled for the 4th Qtr FY12) and additional GFM capabilities. System Integration efforts will continue. There is no RDTEN funding for FY13.

SECURE INTERNET PROTOCOL ROUTER NETWORK (SIPRNET) INFRASTRUCTURE will provide critical infrastructure and operational capabilities that are secure and reliable, enabling command and control from the headquarters to the lowest tactical edge. Secure Operational Network Infrastructure and Communications (SONIC) will update the current aging classified IT infrastructure and support full Marine Corps control over its C2 operational network by providing continuity, high availability, disaster recovery, and enhanced secure access to services and data.

DEFENSE READINESS REPORTING SYSTEM (DRRS-MC) is the next generation of Marine Corps authoritative system for force registration and readiness reporting. The DRRS-MC is a web-based and net-centric system providing readiness reporting via the NetUSR-MC (input) tool, enabling units to register and report their training, equipment (including Chemical, Biological, Radiological and Nuclear [CBRN]); personnel; missions and mission essential tasks (METs) readiness status. The Marine Readiness Management Output Tool (MRMOT) allows users to view current and historical readiness information using graphical user interface screens to efficiently display information. MRMOT is an executive information system in that it begins at a summary level and allows a "drill-down" capability to access detailed readiness information. FY12 - FY13 funding will also support the GFM Data Initiative to consume Force Structure from Marine Corps Org Server (MCOS); conduct mapping, link and maintain OUID and UIC relationships.

PAPERLESS OFFICE/ACQUISITION funding supports development and enhancement of Purchas Request (PR) Builder which is the Marine Corps enterprise solution for the electronic generation of purchase requests and serves as the front-end system for feeding the DOD enterprise contracting writing system SPS. Development and enhancement of PR Builder is required to ensure financial and contracting functional requirements and Marine Corps business processes are developed, designed, tested and implemented within the system. PR Builder is also undergoing requirements definition and estimation for v4.4. Once these requirements are delivered to the Program Manager (PM) from the service integrators, modifications to the contract to support the requirements will be initiated. Future DOD, DON, and USMC initiatives that will need to be researched and developed include support or adherence to: Standard Financial Information Structure, Financial Data in Procurement, UCore, Business Enterprise Architecture, USMC Financial Improvement Initiative, Naval Facilities Engineering Command to USMC contract/obligation interface, Seaport-e to USMC contract/obligation interface.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: DEFENSE READINESS REPORTING SYSTEM-MARINE CORPS (DRRS-MC)	-	1.444	0.398
Articles:		0	0
Description:			
FY 2012 Plans: Contractor TBD (recompete) continue Phase III development and enhancements, Testing with Marine Corps Operational Test and Evaluation (MCOTEA) and Joint Interoperability Test Command (JITC).			
FY 2013 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Testing with MCOTEA and JITC.			
Title: DEFENSE MESSAGE SYSTEM (DMS)	0.462	0.523	0.663
Articles:	0	0	0
Description:			
FY 2011 Accomplishments: DMS conducted research and analysis to assist in the transition to the next generation DMS occurring between FY12-15 in order to test and certify possible organizational messaging solutions/capabilities that are DISA compliant.			
FY 2012 Plans: DMS will continue to conduct research and analysis to assist in the transition to the next generation DMS occurring between FY12-15 in order to test and certify possible organizational messaging solutions/capabilities that are DISA compliant.			
FY 2013 Plans: DMS will continue to conduct research and analysis to assist in the transition to the next generation DMS occurring between FY12-15 in order to test and certify possible organizational messaging solutions/capabilities that are DISA compliant.			
Title: MARINE CORPS TRAINING INFORMATION MANAGEMENT SYSTEM (MCTIMS)	0.746	-	0.656
Articles:	0		0
Description:			
FY 2011 Accomplishments: Interface development for MCTFF, M-Sharp, GCSS, and DRRS-MC to contingue in FY12			
FY 2013 Plans: Development of Mass Registration capability of Marines/Students and a Prerequisite and Registration Screening Tool.			
Title: MANPOWER OPERATIONS SYSTEMS (MOS)	3.619	4.537	3.900
Articles:	0	0	0
FY 2011 Accomplishments: MASS reengineering requirements analysis, design and development; DMM MCMEDS requirements analysis and design; TFRS upgrade to .net environment.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continued MASS reengineering development; DMM MCMEDS development; DMM RTAMMRS requirements analysis, design and development; Paperless Forms Services requirements and design; MOS Oracle 11g upgrade. ***FY 2013 Plans:*** Continue DMM Reserve Transition and Manpower Management Reserve Systems (RTAMMRS) design and development as well as Paperless Forms Services development.			
Title: MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS) ***Articles:*** ***Description:*** ***FY 2011 Accomplishments:*** Integration and testing of primary Enterprise Information Technology Center (EITC) for Initial Operational Capability (IOC) with continued P3I efforts. ***FY 2012 Plans:*** Integration and testing of second Enterprise Information Technology Center (EITC) to provide high availability, disaster recovery, and operational continuity for USMC data systems in preparation for Full Operational Capability (FOC) with continued P3I efforts. ***FY 2013 Plans:*** Integration and testing of second Enterprise Information Technology Center (EITC) to provide high availability, disaster recovery, and operational continuity for USMC data systems in preparation for Full Operational Capability (FOC) with continued P3I efforts for Expeditionary and Distributed Platforms development and design.	7.989 0	6.356 0	5.871 0
Title: PAPERLESS ACQUISITION (PA) ***Articles:*** ***Description:*** ***FY 2011 Accomplishments:*** Researched and development to include: Standard Financial Information Structure, Financial Data in Procurement, UCore, Business Enterprise Architecture, USMC Financial Improvement Initiative, Naval Facilities Engineering Command to USMC contract/obligation interface, Seaport-e to USMC contract/obligation interface to continue in FY12. ***FY 2013 Plans:***	0.371 0	-	0.508 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue research and development including support or adherence to: Standard Financial Information Structure, Financial Data in Procurement, Ucore, Business Enterprise Architecture, USMC Financial Improvement Initiative, Naval Facilities Engineering Command to USMC contract/obligation interface, Seaport-e to USMC contract/obligation interface.			
Title: MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS) ***Articles:*** ***Description:*** ***FY 2011 Accomplishments:*** Development of the automated Standard Form (SF) 86, Questionnaire for National Security Positions SF-86 to ensure compliance with Office of Personnel Management (OPM) mandate. ***FY 2012 Plans:*** Design and development of VIPS requirements; Implementation of MCRISS Training Site. ***FY 2013 Plans:*** Development of the Recruiter Client Program.	2.582 0	1.330 0	0.147 0
Title: TOTAL FORCE STRUCTURE MANAGEMENT SYSTEM (TFSMS) ***Articles:*** ***Description:*** ***FY 2011 Accomplishments:*** The first Increment II software release for the Systems Integration efforts, v3.0 is scheduled for the 4th Qtr FY12. System Integration efforts will continue. ***FY 2012 Plans:*** The first Increment II software release for the Systems Integration efforts, v3.0 is scheduled for the 4th Qtr FY12.	2.623 0	2.605 0	-
Title: SIPRNET INFRASTRUCTURE ***Articles:*** ***Description:*** ***FY 2011 Accomplishments:***	0.571 0	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
SONIC infrastructure is currently undergoing refresh under Statement of Need authority to establish an "as is" baseline. In FY11, SONIC builds on the baseline under anticipated ACAT designation.			
Title: MANPOWER PLANNING SYSTEM (MPS)	3.085	2.666	-
Articles:	0	0	
Description:			
FY 2011 Accomplishments: Technical engineering services and code upgrade to support Legacy Models reengineering/modernization effort.			
FY 2012 Plans: Continued Legacy Models reengineering/modernization efforts; TFDW capability enhancements to include upgrade to Oracle 11g.			
Accomplishments/Planned Programs Subtotals	22.048	19.461	12.143

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/4630001: *MC Enterprise IT Services (MCEITS)*	9.143	18.655	22.412	0.000	22.412	25.834	10.387	11.500	11.920	Continuing	Continuing
• PMC/4630002: *Marine Corps Recruiting Information Support System*	0.196	0.100	0.080	0.000	0.080	0.060	0.060	0.060	0.061	Continuing	Continuing
• PMC/4630006: *Defense Message System (DMS)*	0.697	0.769	0.629	0.000	0.629	1.373	2.313	3.436	2.334	Continuing	Continuing
• PMC/4630007: *Manpower Operations Systems*	0.000	0.183	0.000	0.000	0.000	0.000	0.000	0.186	0.000	Continuing	Continuing
• PMC/4617002: *Manpower Planning Systems*	0.280	0.289	0.295	0.000	0.295	0.295	0.312	0.317	0.215	Continuing	Continuing
• PMC/4617003: *Defense Readiness Reporting System (DRRS)*	0.000	0.120	0.053	0.000	0.053	0.153	0.000	0.040	0.041	Continuing	Continuing
• PMC/4617004: *Total Force Structure Management System (TFSMS)*	0.000	4.388	0.000	0.000	0.000	0.647	0.000	0.000	0.000	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*	

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• PMC/463500: *Defense Message System (DMS)*	0.023	2.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/700000: *MC Enterprise IT Services (MCEITS)*	1.213	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.213
• PMC/4630008: *MC Training Information Management System (MCTIMS)*	0.074	0.206	0.212	0.000	0.212	0.212	0.221	0.225	0.229	Continuing	Continuing
• PMC/4617005: *Manpower Operations Systems*	0.521	2.640	1.122	0.000	1.122	0.775	1.444	1.004	1.039	Continuing	Continuing
• PMC/4630009: *Total Force Structure Management System (TFSMS)*	0.108	0.016	0.000	0.000	0.000	0.573	0.000	3.923	0.000	Continuing	Continuing
• PMC/4630010: *SIPRNET Infrastructure*	5.881	10.817	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PMC/4630011: *SIPRNET Infrastructure*	0.000	0.000	19.229	0.000	19.229	11.165	12.472	12.364	13.103	Continuing	Continuing

D. Acquisition Strategy

DEFENSE MESSAGE SYSTEM (DMS) is a Joint Acquisition Category (ACAT) IAM program. It is Assistant Secretary Defense Command, Control, Communication and Intelligence mandated. Each year the Joint Interoperability Test Command runs Operational Test (OT) assessments on DMS software versions and maintenance releases. Marine Corps participation is vital to ensuring that the implementation of DMS is interoperable with all DOD CINCs, services, and agencies. Furthermore, as follow-on organizational messaging solutions for DMS are being identified, materiel solution analysis activities will be conducted.

MARINE CORPS TRAINING INFORMATION SYSTEM (MCTIMS) will utilize an evolutionary strategy with incremental development methodology. MCTIMS is structured in a module format that allows for phasing of development without having to reengineer the entire system to add significant new capability. MCTIMS utilizes a firm-fixed price contracting strategy to reduce risk to the government. MCTIMS is a fully integrated system, emphasizing code re-use between modules to reduce cost and improve program stability.
MANPOWER OPERATIONS SYSTEMS (MOS) within this portfolio follow an Evolutionary Acquisition (EA) approach: 1. Define, develop and deliver an initial or "core" capability based on mature technology. 2. "Core" capability will be incrementally improved over an extended period of time. Incremental Development Model: 1. Iterative cycles of requirements definition, design, build and evaluation. The contracting strategy across the portfolio is to utilize competitive firm-fixed price contracts.
MARINE CORPS ENTERPRISE INFORMATION TECHNOLOGY SERVICES (MCEITS) will be implemented using an EA strategy. Two blocks of capability will be fielded with each block providing an operationally effective and suitable capability in the shortest time possible. The program will deliver an initial capability and continue

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

integration and production of the system to provide full capability over time. The objective is to balance needs with available commercial and government solutions and resources, and to put capability into the hands of the users quickly. This strategy is supported by an Indefinite Delivery Indefinite Quantity contracting vehicle which will allow the contractor to provide the full range of capabilities, services and solutions necessary to satisfy the requirements through incremental implementation of technology, processes and capabilities. Capabilities will be incrementally provided through the use of individual task orders to ensure technology and services are inserted according to the overall program goals, user requirements and program schedule.

PAPERLESS ACQUISITION (PA) will use an incremental development methodology utilizing short development periods. The contracting strategy is to use a firm-fixed price contract to reduce risk to government, with additional capabilities defined by a Marine Corps Configuration Control Board and delivered to the service integrator as a modification to the contract. The delivery of small functional capabilities allows for measurable enhancements to the base system while keeping Post Deployment System Support costs relatively low.

MANPOWER PLANNING SYSTEMS (MPS) within this portfolio follow an Evolutionary Acquisition (EA) approach: 1. Define, develop and deliver an initial or "core" capability based on mature technology. 2. "Core" capability will be incrementally improved over an extended period of time. Incremental Development Model: 1. Iterative cycles of requirements definition, design, build and evaluation. The contracting strategy across the portfolio is to utilize competitive firm-fixed price contracts.

MARINE CORPS RECRUITING INFORMATION SUPPORT SYSTEM (MCRISS) capitalizes on centrally located data with secure web and wireless web enabled entry. MCRISS utilizes a modular/incremental development to maintain system operability while providing continued development. Contracting strategy includes competitive firm-fixed price contracts.

TOTAL FORCE STRUCTURE MANAGEMENT SYSTEMS (TFSMS) is an EA program currently comprised of two blocks/increments. TFSMS is a web-based application built upon an Oracle/Cognos infrastructure and currently residing on the G-6 Data Center in Marine Corps Base, Quantico. TFSMS currently has over 14,000 users. Block 1 is defined by a Capabilities Production Document (CPD) that was approved by the Marine Corps Requirements Oversight Council (MROC) 9 Apr 08. TFSMS Block 1 Full Operational Capability (FOC) is scheduled for FY11 and requires development, testing and fielding of a transactional user web-based training capability to replace the current interim Instructor-led training which consists of a two-day Equipment Class and a two-day Structure Class taught locally twice each month. Increment II CDD was approved by the MROC 20 Nov 2009 (DM 07-2010). Increment II capabilities include interfaces to NAVAIR to incorporate Marine Corps Air and Air Support Equipment assets providing the Marine Corps with the ability to have a consolidated force structure picture. Increment II FOC is scheduled for FY17.

SECURE INTERNET PROTOCOL ROUTER NETWORK (SIPRNET) INFRASTRUCTURE is currently undergoing refresh to establish an "as is" baseline.

DEFENSE READINESS REPORTING SYSTEM -MARINE CORPS (DRRS-MC) will use an EA strategy. DRRS-MC will consist of three phases: 1. Provide basic readiness reporting capabilities for both the input tool and output tool 2. Provide for auto-population and enhanced trending capabilities. 3. Additional system interfaces and a cross-domain solution. The DRRS-MC software architecture is based on commercial products used throughout Government and Industry. The supporting products, underlying technologies and technical skills are not unique and are readily available. There are no limitations within industry to prevent any interested sources from submitting a proposal. Many of the corporations providing enterprise solutions to the USMC, DON and DoD are potential sources as the DRRS-MC Systems Integrator.

E. Performance Metrics

Milestone Reviews

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*	

Product Development ($ in Millions)

				FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MCEITS PM TASK	C/IDIQ	GD:Needham, MA	10.700	-		-		-		-	0.000	10.700	
TFSMS -Dev	C/FP	SAIC:McLean, VA	15.357	1.270	Feb 2012	-		-		-	0.000	16.627	
TFSMS-Dev -recompete	C/FFP	TBD:Reston, VA	1.745	0.755	Jan 2012	-		-		-	Continuing	Continuing	Continuing
DRRS - recompete	C/FPIF	TBD:TBD	-	1.219	May 2012	-		-		-	Continuing	Continuing	Continuing
MCRISS Dev Task	C/FP	CGI:Arlington, VA	2.666	-		-		-		-	Continuing	Continuing	Continuing
MOS App Dev Efforts	C/FP	Various:Various	3.736	-		-		-		-	Continuing	Continuing	Continuing
MCEITS Portal Dev	C/IDIQ	GD:Needham, MA	0.843	-		-		-		-	0.000	0.843	
MCEITS P3I Task	C/IDIQ	TBD:TBD	-	2.819	Jun 2012	3.399	Jun 2013	-		3.399	Continuing	Continuing	Continuing
MCEITS Portal Dev	C/IDIQ	TBD:TBD	-	2.037	Jun 2012	0.972	Mar 2013	-		0.972	Continuing	Continuing	Continuing
Paperless Office Acquisition	C/FFP	TBD:TBD	-	-		0.508	Jun 2013	-		0.508	Continuing	Continuing	Continuing
SIPRNET/SONIC TBD	C/FP	TBD:TBD	0.587	-		-		-		-	0.000	0.587	
MCTIMS Mass REgistration of Marines/Students	C/FP	TBD:TBD	-	-		0.656	Feb 2013	-		0.656	0.000	0.656	
MOS MASS REengineering	C/FP	InfoReliance:Fairfax VA	1.929	0.303	Jul 2012	-		-		-	0.000	2.232	
MOS DMM MCMEDS Development	C/FP	InfoReliance:Fairfax VA	0.536	0.047	Feb 2012	-		-		-	0.000	0.583	
MOS DMM RTAMMRS Development	C/FP	InfoReliance:Fairfax VA	-	0.873	Apr 2012	0.945	Apr 2013	-		0.945	0.000	1.818	
MOS Paperless Forms Services Development	C/FP	TBD:TBD	-	2.360	Mar 2012	2.955	Mar 2013	-		2.955	0.000	5.315	
MOS SPA enhancementd	C/FP	InfoReliance:Fairfax VA	-	0.954	Apr 2012	-		-		-	0.000	0.954	
MPS TFDW Upgrade	C/FP	TBD:TBD	-	1.100	Aug 2012	-		-		-	0.000	1.100	
MPS Legacy Models Modernization	C/FP	TBD:TBD	-	1.566	Apr 2012	-		-		-	0.000	1.566	
MCRISS Training Site Development	C/FP	TBD:TBD	-	0.433	Jul 2012	-		-		-	0.000	0.433	
MCRISS Recruiter Client Development	C/FP	TBD:TBD	-	-		0.147	Apr 2013	-		0.147	0.000	0.147	
DMS	C/FFP	TBD:TBD	-	0.333	Jul 2012	-		-		-	0.000	0.333	
MCRISS VIPS Development	C/FP	TBD:TBD	0.140	0.897	Jul 2012	-		-		-	0.000	1.037	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	38.239	16.966		9.582		-		9.582			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MCEITS RDT&E Management	C/FP	Jacobs:Dumfries, VA	6.474	-		-		-		-	0.000	6.474	
Various	Various	Various:Various	10.239	-		-		-		-	0.000	10.239	
MPS	C/FP	SPAWAR:Charleston SC	0.200	-		-		-		-	0.000	0.200	
DMS Materiel Decision Development Support	C/FFP	CASK:Stafford VA	-	0.188	Dec 2011	0.660	Dec 2012	-		0.660	0.000	0.848	
TFSMS support	WR	NSWC:Dahlgren VA	-	0.250	Feb 2012	-		-		-	0.000	0.250	
DRRS GFM-DI Support	C/FP	TBD:TBD	-	-		0.325	Feb 2013	-		0.325	Continuing	Continuing	Continuing
		Subtotal	16.913	0.438		0.985		-		0.985			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
MCEITS	Various	Various:Not Specified	7.915	1.500	Feb 2012	1.500	Feb 2013	-		1.500	Continuing	Continuing	Continuing
DMS JITC PRT Dues	C/FFP	DISA:Baltimore MD	-	0.002	Dec 2011	0.003	Dec 2012	-		0.003	Continuing	Continuing	Continuing
DRRS-MC MCOTEA/JITC IV&V testing	MIPR	MCOTEA/ JITC:Quantico VA/ Baltimore MD	-	0.225	Jan 2012	0.073	Jan 2013	-		0.073	Continuing	Continuing	Continuing
TFSMS MCOTEA/JITC IV&V testing	MIPR	MCOTEA/ JITC:Quantico VA/ Baltimore MD	-	0.330	Oct 2011	-		-		-	0.000	0.330	
		Subtotal	7.915	2.057		1.576		-		1.576			

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	63.067	19.461		12.143		-		12.143			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013M: *Marine Corps IT Dev/Mod*	PROJECT 2906: *Marine Corps IT*

MCEITS Program Schedule

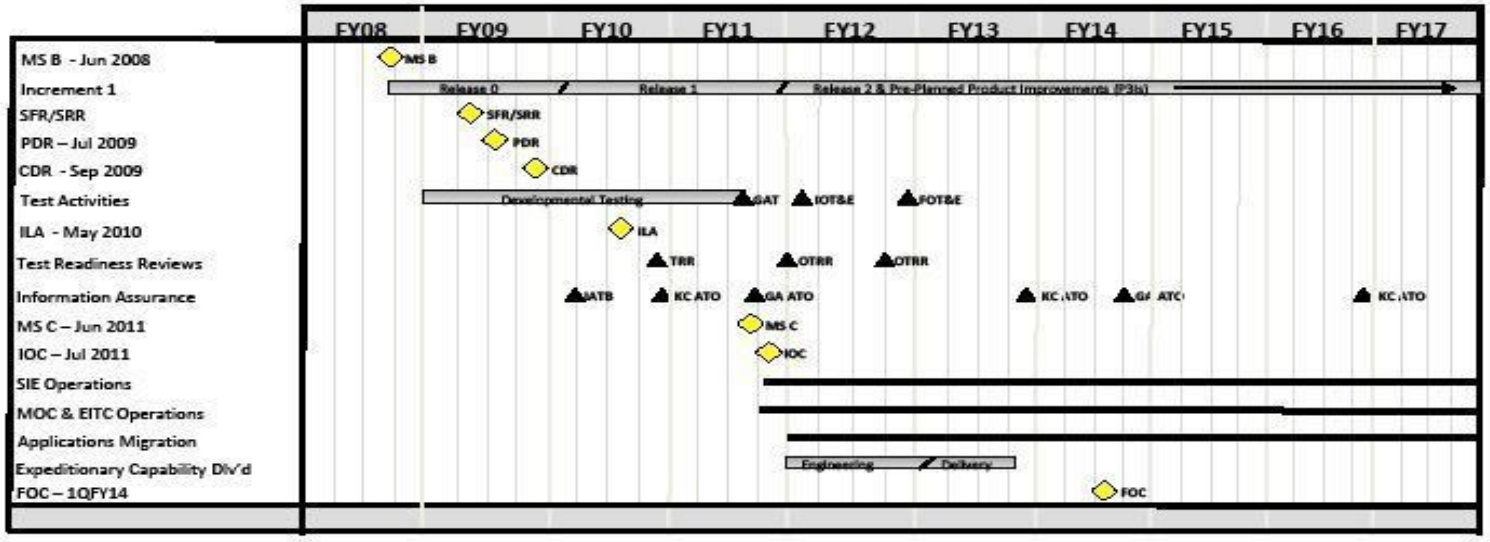


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013M: *Marine Corps IT Dev/Mod*	**PROJECT** 2906: *Marine Corps IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2906				
Increment 1 Milestone C (MCEITS)	3	2011	3	2011
Increment 1 Initial Operational Capability (IOC) (MCEITS)	4	2011	4	2011
Increment 1 Full Operational Capability (FOC) (MCEITS)	3	2014	3	2014

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	27.976	29.760	72.209	-	72.209	69.923	63.679	70.597	59.805	Continuing	Continuing
2901.: *AAUSN IT*	2.733	3.624	10.315	-	10.315	2.952	1.147	1.170	1.190	Continuing	Continuing
2903: *NAVAIR IT*	0.707	0.723	0.717	-	0.717	0.688	0.702	0.709	0.723	Continuing	Continuing
2904: *NAVSEA IT*	22.340	2.969	18.047	-	18.047	22.369	27.163	25.322	25.675	Continuing	Continuing
2905: *BUPERS IT*	-	12.530	31.743	-	31.743	35.360	26.357	35.363	23.851	Continuing	Continuing
3167: *Joint Technical Data Integration (JTDI)*	1.835	4.328	8.524	-	8.524	5.714	5.410	5.099	5.381	Continuing	Continuing
3185: *Joint Airlift Information System (JALIS)*	0.361	0.419	0.377	-	0.377	0.370	0.379	0.386	0.392	Continuing	Continuing
9406: *Maintenance Data Warehouse*	-	5.167	2.486	-	2.486	2.470	2.521	2.548	2.593	Continuing	Continuing

A. Mission Description and Budget Item Justification

2901 AAUSN IT - The NCIS Modernization Initiative includes multiple projects with RDT&E requirements: Multiple Threat Alert Center (MTAC), Data Modernization & Analytical Tools, Knowledge Network (K-Net), Consolidated Law Enforcement Operations Center (CLEOC), Enterprise Procurement System (EPS), and Department of the Navy Criminal Justice Information System (DONCJIS).

Multiple Threat Alert Center (MTAC): The Post-Cole Secretary of the Navy Anti-terrorism/Force Protection Task Force identified the need for NCIS to enhance the Multiple Threat Alert Center (MTAC). The MTAC provides key anti-terrorism/force protection products in response to Fleet tasking and is critical to Fleet protection during current Overseas Contingency Operations (OCO). This project provides funding for the development of an IT system to track the movement of NCIS special agents deployed in advance of DoN in-transit units. The ability to track and communicate with these agents is necessary in order to forward threat data to those forward deployed agents and to task them to respond to emerging threats. Funding is required for equipment and contractor support to modify COTS software.

Data Modernization & Analytical Tools: NCIS data collection, filtering, and analysis infrastructure is unable to handle the increased flow of terrorism investigative and threat reporting of the Post 9/11 era. NCIS must revitalize its infrastructure and its data and investigation management capabilities to effectively counter current terrorist threats. The three main components of this portfolio investment are data modernization, knowledge management, and investigation management.

Knowledge Network (K-Net): K-Net is a Data Modernization & analytical tool being developed and soon deployed that greatly enhances NCIS's technological arsenal. K-Net implements an integrated NCIS approach for identifying, capturing, evaluating, retrieving, and sharing all of NCIS's knowledge and expertise. To that end, K-Net is a knowledge management system that improves NCIS's ability to search, analyze, fuse, and distribute both national intelligence and law enforcement information.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*

The envisioned end state for K-Net is a secure, intuitive, web environment that is the one stop shop where applications, data, and tools are easily accessible to all of NCIS users to effectively and securely fulfill their mission regardless of when and where they operate.

Consolidated Law Enforcement Operations Center (CLEOC): The Naval Criminal Investigative Service (NCIS) enhancement of CLEOC will enable meeting Law Enforcement (LE) reporting requirements, satisfy Congressional mandates for the Defense Incident-Based Reporting System (DIBRS) and improve functionality across the Naval criminal justice community.

Enterprise Procurement System (EPS): EPS will replace the Standard Procurement System (SPS). Program Executive Office/Enterprise Information Systems (PEO/EIS) will act as the Program Manager. EPS will be modular, web based and built in a Service Oriented Architecture.

Department of the Navy Criminal Justice Information System (DONCJIS): The Naval Criminal Investigative Service (NCIS) is the Executive Agent (EA) for the Department of the Navy Criminal Justice Information System (DONCJIS). This system provides a cradle to grave criminal justice and law enforcement information system. The system enables multiple communities within the DON to share criminal justice and law enforcement information. Funding is required for contractor support to develop, test, train, deploy and implement this application.

2903 NAVAIR IT - CMIS: The Configuration Management Information System (CMIS) Program is DoD's standard software system for complete and integrated configuration management (CM) of weapon systems from acquisition to disposal. CMIS efficiently manages all product structure data, including complex interrelationship between assemblies and subassemblies, technical documentation and the parts that comprise the item. CMIS is designed to manage and control configuration data to support the DoD business processes. Accurate, complete and accessible configuration data is critical to the successful operations of DoD weapon systems or tracked assets. Mission readiness and operational capabilities are enhanced by CMIS, as instant consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. This system is a CM tool available DoD wide to support all potential customers. CMIS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of CM processes and provides configuration managers and analysts the validated CM information necessary for accurate maintenance, spare procurements, reliability and safety analysis, and mission readiness. Funding is budgeted to support the services of rehosting and testing of COTS upgrades to ensure objective performance of CMIS is achieved.

2904 NAVSEA IT - This program includes the funding for Information Technology (IT) support at NAVSEA, managed by the SEA 04 Ship Maintenance and Logistics Information Systems (SMLIS) Program Management Office (PMO-IT), for the support of maritime maintenance and includes multiple modernization efforts to insure effectiveness of Fleet maintenance systems. These efforts include retirement and/or replacement of costly legacy systems, transition planning and systems engineering for integration with national and enterprise interim and future solutions. It includes the technical refresh of Naval Shipyard maintenance, repair and overhaul (MRO) production tools. This includes modifications/enhancements to Shipyard IT systems, such as Advanced Industrial Management (AIM); AIM Express (Xp); Project Scheduling and Sequencing (PSS); Performance Measurement & Control (PMC); and Navy Workload and Performance System (NWPS). This program also supports development and modernization of Shipyard HQ tools and other new start technologies/systems. The goal of this program is to provide modernization, migration, and consolidation of obsolete legacy systems to the next generation of centrally hosted tools supporting MRO of the Fleet force assets and national systems. This funding also supports development and modification to existing software, hardware, contractual program management and technical support to modify/enhance the NAVSEA HQ systems and infrastructure.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*

2905 BUPERS IT - The Navy has developed a new strategy on the modernization of integrated personnel and pay systems. This transfer realigns the funds to the responsible organization required to execute the strategy approved by the DON Executive Advisory Board (EAB) in July, 2011. This strategy includes Business Process Re-engineering (BPR) defined requirements, modernization/risk reduction of current personnel/pay systems centered around the Navy's Standard Integrated Personnel System (NSIPS), and development of a future pay engine.

3167 Joint Technical Data Integration (JTDI) Program - Funding supports the evaluation, testing and integration to develop a JTDI Commercial-Off-The-Shelf (COTS) solution for installation on a Carrier (CV) and Amphibious Assault (L) class ships and up to 104 Navy/Marine Corp aviation activities. JTDI is a digital technical data access, delivery and local O&I level library management toolset and telemaintenance collaboration process enabler. It improves accuracy and timeliness of technical manual and other technical data delivery and minimizes the Fleet's library management burden. JTDI reduces maintenance work hours with saving Return on Investment (ROI) of 2.5:1. It facilitates the transition of the Joint Distance Support and Response (JDSR) Advanced Concept Technology Demonstration (ACTD) for telemaintenance and provides for process efficiencies to support ongoing Aviation Fleet Technical Representative reductions. Portable Electronic Maintenance Aids (PEMA): Funding supports the evaluation, testing and integration to develop PEMA Commercial Off The Shelf (COTS) solution for portable device deployments across the Naval Aviation Enterprise (NAE). PEMA is a portable device utilized by maintainers with the implementation of digital maintenance capabilities (digital publications, Integrated Electronic Technical Manuals(IETMs), Internet Protocol (IP) based data uploads, BInary digiT (BIT) data downloads, automated diagnostics, and planeside NALCOMIS). PEMAs are a mandatory display device supporting modern day Automated Maintenance Environment (AME) implemented for weapon systems. Marine Aviation Logistics Support Program II (MALSP II) Expeditionary Pack up Kit (EPUK): Funding supports the evaluation, development, testing and integration of software and hardware solutions for expeditionary requisitioning and supply chain management across all US Marine Corp Aviation activities. Marine Aviation Logistics is changing to MALSP II to meet current and future operational requirements - in support of the NAE Strategic Plan, Marine Corps Vision & Strategy 2025, and the USMC Long War Concept. MALSP II will allow aviation logisticians to decrease total infrastructure and resource inventories forward by moving the preponderance of the Maintenance and Supply workload to the CONUS Parent MALS, and reducing the total forward Aviation Logistics footprint (personnel, equipment, facilities and spares). EPUK, as part of Marine Aviation Logistics Enterprise IT (MAL-EIT) system, is an automated wireless hardware / software solution that is a key enabler in integrating US Marine Corp Aviation Combat Element (ACE) and Logistics Combat Element (LCE) logistics systems to make the Marine Air Ground Task Force (MAGTF) more responsive, agile, flexible and lethal with the ability to support and sustain operations in austere expeditionary environments and across the Range of Military Operations (ROMO).

3185 Joint Air Logistics Information System (JALIS) - A critical element of the DoD CONUS and OCONUS Air Logistics assets. JALIS is an operational scheduling, aircraft management, and data analysis system that allows DoD organizations to submit airlift requirements for passengers and cargo; air logistics flying units to communicate their aircraft availability in a real time graphic display; and designated scheduling organizations to compare airlift requirements to available aircraft and create mission assignments.

9406 Maintenance Data Warehouse/NAVAIR DECKPLATE - The development of the Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) program is the next generation data warehouse for aircraft maintenance, flight and usage data. It provides a web-based interface to a single source of information currently being stored in multiple Naval Aviation Logistics Data Analysis (NALDA) systems. Through the use of analysis, query and reporting tools the user has the capabilities to effectively obtain readiness data in a near real-time environment, as well as historical data for trend analysis and records

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*

reconstruction. DECKPLATE supports the mission of the warfighter who requires a single source of near real-time aviation data in which to base critical readiness decisions. This requires collecting data from authoritative sources into a data warehouse. Because the warfighter only needs to access one database, the time consuming task of collecting various pieces of data form various sources will be reduced and ultimately eliminated. This improves data quality because it reduces the possibility of two systems providing identical data elements, but slightly different data. Data availability is improved through continuous near real-time feeds from the data sources, giving the warfighter the most current information to base decisions. In addition, this also accomplishes a reduction in legacy systems mandated by OPNAV.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	28.280	58.764	39.414	-	39.414
Current President's Budget	27.976	29.760	72.209	-	72.209
Total Adjustments	-0.304	-29.004	32.795	-	32.795
• Congressional General Reductions	-	-0.004			
• Congressional Directed Reductions	-	-29.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.156	-			
• Program Adjustments	-	-	32.798	-	32.798
• Rate/Misc Adjustments	-	-	-0.003	-	-0.003
• Congressional General Reductions Adjustments	-0.148	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule Changes: 3167, Joint Technical Data Integration:
Due to Information Assurance (IA) requirements, Release Titles for JTDI have been changed on the R-4 and R-4a.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2901.: *AAUSN IT*	2.733	3.624	10.315	-	10.315	2.952	1.147	1.170	1.190	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

DATA MODERNIZATION & ANALYTICAL TOOLS: NCIS data collection, filtering, and analysis infrastructure is unable to handle the increased flow of terrorism investigative and threat reporting of the Post 9/11-Global War on Terrorism era. NCIS must revitalize its infrastructure and its data and investigation management capabilities to effectively counter current terrorist threats. This program provides modernization funding for Enterprise Networks and Desktops/Laptops, data modernization and analytical tools, Local Area Network (LAN) specific connectivity and contract support on data collections and analytical integration. The three main components of this portfolio investment are data modernization, knowledge management, and investigation management.

DEPARTMENT OF THE NAVY CRIMINAL JUSTICE INFORMATION SYSTEM (DONCJIS): The Naval Criminal Investigative Service (NCIS) is the Executive Agent (EA) for the Department of the Navy Criminal Justice Information System (DONCJIS). This system provides a cradle to grave criminal justice and law enforcement information system. The system enables multiple communities within the DON to share criminal justice and law enforcement information. Funding is required for contractor support to develop, test, train, deploy and implement this application.

CONSOLIDATED LAW ENFORCEMENT OPERATIONS CENTER (CLEOC): The Naval Criminal Investigative Service (NCIS) enhancement of CLEOC will enable meeting Law Enforcement (LE) reporting requirements, satisfy Congressional mandates for the Defense Incident-Based Reporting System (DIBRS) and improve functionality across the Naval criminal justice community.

ENTERPRISE PROCUREMENT SYSTEM (EPS): EPS will replace the Standard Procurement System (SPS). Program Executive Office/Enterprise Information Systems (PEO/EIS) will act as the Program Manager. EPS will be modular, web based and built in a Service Oriented Architecture.
NAVAL JUSTICE INFORMATION SYSTEM (NJIS): This system provides a cradle to grave criminal justice and law enforcement information system for the Department of the Navy (DON). The system enables multiple criminal justice communities within the DON to share criminal justice and law enforcement information. Funding is required for contractor support to develop, test, train, deploy and implement this application.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Modernization	2.433	2.541	0.110
Articles:	0	0	0
Description: Prototype Phase completed. The initial development of "Threat Planner" (original Modernization portfolio) as well as subsequent spirals of K-Net capabilities, to include centralized database checks on individuals; and MTAC-related production and synthesis capabilities in support of Maritime Domain Awareness.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Funded the developmental efforts directed at emerging technologies in Data Collection and Knowledge Management with an emphasis on integrating them into the law enforcement and counter intelligence mission area of NCIS. ***FY 2012 Plans:*** Continue in FY-2012 with the developmental efforts directed at emerging technologies in Data Collection and Knowledge Management with an emphasis on integrating them into the law enforcement and counter intelligence mission area of NCIS. ***FY 2013 Plans:*** N/A			
Title: DONCJIS ***Articles:*** ***Description:*** This system provides a cradle to grave criminal justice and law enforcement information system. The system enables multiple communities within the DON to share criminal justice and law enforcement information. Funding is required for contractor support to develop, test, train, deploy and implement this application. The program is being restructured and renamed to NJIS. FY 2013 efforts are described below under NJIS. ***FY 2011 Accomplishments:*** N/A	0.300 0	-	-
Title: Modernization - Secretariat ***Articles:*** ***Description:*** The Secretariat has numerous requirements to modernize several systems including financial management, naval records management, and portal applications. These systems will be updated from older technologies to include ADA programming language to Java and Oracle Client-Server to web based. These upgrades are necessary to continue functionality of systems which ensure timely, accurate and efficient operation of the Secretariat's mission. ***FY 2012 Plans:*** Development will include the redesign of several systems utilizing the latest technology while incorporating user requirements, functionality, and a product that meets the need of the end user. ADA language conversion to allow interface with existing Department of the Navy (DON) electronic records management systems. ***FY 2013 Plans:***	-	1.083 0	1.089 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Continue with the development efforts from FY-2012.			
Title: Consolidated Law Enforcement Center (CLEOC) ***Articles:*** ***FY 2013 Plans:*** N/A	- 	- 	0.500 0
Title: Enterprise Procurement System (EPS) ***Articles:*** ***FY 2013 Plans:*** N/A	- 	- 	6.650 0
Title: Naval Justice Information System (NJIS) ***Articles:*** ***FY 2013 Plans:*** The $1966K of RDT&E is in support of the Naval Justice Information System (NJIS). In 4th quarter FY12, SPAWAR plans to release a Request For Proposal for the development of NJIS. FY13 RDT&E funding is required in order to award a contract and commence development of the New Start system. Development will include the redesign of several criminal justice systems, utilizing the latest technology while incorporating user requirements, functionality, and a product that meets the needs of the end user. ADA language conversion to allow interface with existing Department of the Navy (DON) electronic records management systems.	- 	- 	1.966 0
Accomplishments/Planned Programs Subtotals	2.733	3.624	10.315

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• 00208547N: *OMN / 4A6M*	0.000	0.000	3.395	0.000	3.395	3.474	5.805	5.755	5.827	0.000	24.256
• 0901212N: *OPN / 8106*	0.000	0.000	0.000	0.000	0.000	16.345	0.000	0.000	0.000	0.000	16.345

D. Acquisition Strategy

MODERNIZATION - Contract will be awarded under a competitive, all source, RFP. NO ACAT

DONCJIS has a requirement for a contractor to provide full life-cycle software development services (requirements analysis, project management and planning, design, development, testing, documentation, training, implementation, and post-implementation support). The selected contractor must have knowledge of the existing DoD

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*

Law Enforcement information systems pertinent to the task. They must also have the corporate experience and a staff of knowledgeable personnel to provide the required services. The task will be monitored by the Contracting Officer Representative (COR), who reviews technical data submissions, system deliverables, and invoices to ensure acceptable contractor performance and scheduled deliveries.

NJIS - Contract will be awarded under a competitive, all source RFP. ACAT III. NJIS has a requirement for a contractor to provide full life-cycle software development services (requirements analysis, project management and planning, design, development, testing, documentation, training, implementation, and post-implementation support). The selected contractor must have knowledge of the existing DoD Law Enforcement information systems pertinent to the task. They must also have the corporate experience and a staff of knowledgeable personnel to provide the required services. The task will be monitored by the Contracting Officer Representative (COR), who reviews technical data submissions, system deliverables, and invoices to ensure acceptable contractor performance and scheduled deliveries.

E. Performance Metrics

"Program cost, schedule and performance are measured using a systematic approach with approved programs and methods. The results of these measurements are presented to NCIS management through a governance review board process on a regular basis to determine program effectiveness and to provide new direction as needed to ensure the efficient use of
resources. To monitor and manage the execution of projects in addition to other IT investments, management and governance boards review metrics and key performance indicators that are outlined in various plans. Some of the plans that expound on the data captured to attribute to performance measures include: Project Management Plan, Risk Mitigation Plan, Communication Plan, Procurement Plan, and a Certification & Accreditation Plan.

Other specific performance measurements include:

1. Actual versus planned project scope
2. Actual versus planned time schedule
3. Actual versus planned costs
4. Actual versus planned risks and the mitigation of those risks

Program cost, schedule and performance will be measured using a systematic approach with approved programs and methods. The results of these measurements are presented to PEO EIS / SPAWAR management through a governance review board process on a regular basis to determine program effectiveness and to provide new direction as needed to ensure the efficient use of resources. To monitor and manage the execution of projects in addition to other IT investments, management and governance boards review metrics and key performance indicators that are outlined in various plans. Some of the plans that expound on the data captured to attribute to performance measures include: Project Management Plan, Risk Mitigation Plan, Communication Plan, Procurement Plan, and a Certification & Accreditation Plan. Other specific performance measurements include:

1. Actual versus planned project scope
2. Actual versus planned time schedule
3. Actual versus planned costs
4. Actual versus planned risks

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development (Modernization)	C/FP	Northrop Grumman:Not Specified	2.500	2.541	Oct 2011	0.110	Oct 2012	-		0.110	2.546	7.697	
Contractor Engineering Support (DONCJIS)	SS/T&M	Interimage Inc.:Manassas, VA	1.272	-		-		-		-	0.000	1.272	
Software Development	C/FP	TBD:TBD	-	1.083	Oct 2011	1.089	Oct 2012	-		1.089	0.000	2.172	
Software Development (CLEOC)	C/FP	TBD:TBD	-	-		0.500	Oct 2012	-		0.500	0.000	0.500	
Software Development (EPS)	TBD	TBD:TBD	-	-		6.650	Oct 2012	-		6.650	0.000	6.650	
Software Developments	C/BA	TBD:TBD	-	-		1.966	Oct 2012	-		1.966	0.000	1.966	
		Subtotal	3.772	3.624		10.315		-		10.315	2.546	20.257	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.772	3.624		10.315		-		10.315	2.546	20.257	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2901.: *AAUSN IT*

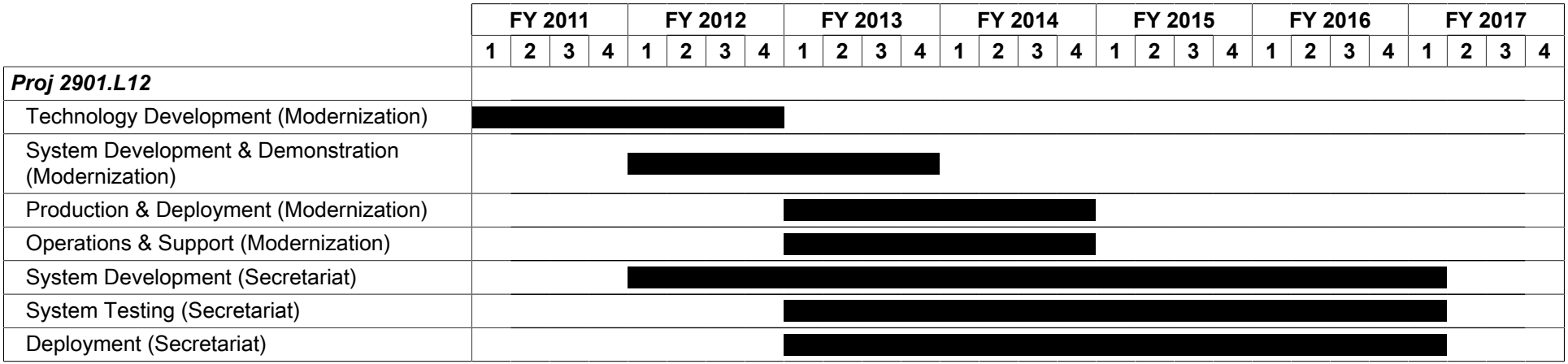


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 2901.: *AAUSN IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2901.L12				
Technology Development (Modernization)	1	2011	4	2012
System Development & Demonstration (Modernization)	1	2012	4	2013
Production & Deployment (Modernization)	1	2013	4	2014
Operations & Support (Modernization)	1	2013	4	2014
System Development (Secretariat)	1	2012	1	2017
System Testing (Secretariat)	1	2013	1	2017
Deployment (Secretariat)	1	2013	1	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2903: *NAVAIR IT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2903: *NAVAIR IT*	0.707	0.723	0.717	-	0.717	0.688	0.702	0.709	0.723	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Configuration Management Information System (CMIS) Program is DoD's standard software system for complete and integrated Configuration Management (CM) of weapon systems from acquisition to disposal. CMIS efficiently manages all product structure data, including complex interrelationship between assemblies and subassemblies, technical documentation and the parts that comprise the item. CMIS is designed to manage and control configuration data to support the DoD business processes. Accurate, complete and accessible configuration data is critical to the successful operations of DoD weapon systems or tracked assets. Mission readiness and operational capabilities are enhanced by CMIS, as instant consistent integrated configuration data is readily available to operators, maintainers and logistics personnel. This system is a CM tool available DoD wide to support all potential customers. CMIS provides users with a common database infrastructure to ensure compatibility, quality, and consistency of CM processes and provides configuration managers and analysts the validated CM information necessary for accurate maintenance, spare procurements, reliability and safety analysis, and mission readiness. Funding is budgeted to support the services of rehosting and testing of Commercial off-the-shelf (COTS) upgrades to ensure objective performance of CMIS is achieved.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: CMIS Annual Software Release	0.707	0.723	0.717
Articles:	0	0	0
FY 2011 Accomplishments: Re-baseline CMIS Software to upgrade to latest version of Oracle, incorporate development efforts associated with COTS obsolescence and evolve an open standard interface to other systems.			
FY 2012 Plans: Re-baseline CMIS Software to upgrade to latest version of Oracle, incorporate development efforts associated with COTS obsolescence and evolve an open standard interface to other systems.			
FY 2013 Plans: Re-baseline CMIS Software to upgrade to latest version of Oracle, incorporate development efforts associated with COTS obsolescence and evolve an open standard interface to other systems.			
Accomplishments/Planned Programs Subtotals	0.707	0.723	0.717

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2903: *NAVAIR IT*

D. Acquisition Strategy

The Configuration Management Information System (CMIS) Program used Joint Logistics Systems Center (JLSC) funds to evolve CMIS to Software Release 5.0. In June 1998 CMIS was transferred to the Navy as executive agent and NAVAIR as program manager. Program Budget Decision 401 transferred joint funding from JLSC to NAVAIR to continue evolving CMIS. The CMIS Program Manager continues to evolve the program to keep pace with cost, Military Standards, and evolving commercial standards. Various contractors using competitively awarded contracts have supported the program. Currently, Intergraph Corporation is the CMIS integration contractor selected through a GSA contract.

E. Performance Metrics

CMIS - Milestone C Spiral Development:

1. During the life of the contract verify conformance with agency specific information processing standards and functional requirements. Prior to delivery of enhanced software, demonstrate the operational capability of the system software. Functionality of the software must meet required systems architecture and processing capabilities. All requirements mandated by law or regulation must be 100% compliant. Independent Verification and Validation will be used for testing new releases of software to determine that previous functionality is maintained. Customer satisfaction will be measured through limited validated customer complaints, feedback, and surveys.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2904: *NAVSEA IT*	22.340	2.969	18.047	-	18.047	22.369	27.163	25.322	25.675	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program includes the funding for Information Technology (IT) support at NAVSEA managed by the NAVSEA 04 Ship Maintenance and Logistics Information Systems (SMLIS) Program Management Office (PMO-IT) for the support of maritime maintenance and includes multiple modernization efforts to insure effectiveness of Fleet maintenance systems. These efforts include retirement and/or replacement of costly legacy systems, transition planning and systems engineering for integration with national and enterprise interim and future solutions. These efforts align with direction to insure that proposed interim solutions support a planned single maintenance solution end state, as well as direction to align with data center consolidation plans proposed across the FYDP. It includes the technical refresh of Naval Shipyard maintenance, repair and overhaul (MRO) production tools. This includes modifications/enhancements to Shipyard IT systems, such as Advanced Industrial Management (AIM); AIM Express (Xp), Project Scheduling and Sequencing (PSS), Performance Measurement & Control (PMC), Navy Workload and Performance System (NWPS); and other new start technologies/systems such as Electronic Technical Working Document (eTWD), Ships-3M Integration, and the Industrial Schedule Workload Integrated Forecasting Tool (SWIFT) Initiative. The goal of PMO-IT is to provide modernization, migration, and consolidation of obsolete legacy systems to the next generation of centrally hosted tools supporting Fleet maintenance and national systems for the Navy.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: NAVSEA IT	22.340	2.969	18.047
Articles:	0	0	0

Description: This program includes the funding for Ship Maintenance Information Technology modernization at NAVSEA managed by the NAVSEA 04 Program Management Office (PMO-IT) for the support of maritime maintenance and includes multiple modernization efforts to insure effectiveness of Fleet maintenance systems. It includes the technical refresh of Naval Shipyard and Regional Maintenance Center (RMC) maintenance, repair and overhaul (MRO) production tools. This project will allow Navy to realign functionality, consolidate systems and applications, and re-platform operations to facilitate a centrally hosted, net-centric maintenance solution suite.

FY 2011 Accomplishments:
September 2011 deployment of maintenance systems planned in FY10 to facilitate retirement of legacy maintenance system.

FY 2012 Plans:
The major accomplishments are the retirement of NEMAIS, establishment of a wireless infrastructure in the Naval Shipyards.

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Complete development of Electronic Technical Working Document (eTWD) Advanced Work Packages project.			
Accomplishments/Planned Programs Subtotals	22.340	2.969	18.047

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Navy information technology (IT) products have been supported by a variety of activities and have been developed and deployed and maintained using numerous tools and techniques. This "stovepipe" approach to development has made integration difficult and as a result, has reduced the functional benefits and cost savings that could be realized from common system standards; common processes; shared resources and infrastructure. Furthermore, the lack of standard development methodology and tool sets has increased the corporate support costs of automated solutions. Consolidation of the management of the NAVSEA 04 IT operations at a corporate level is expected to hasten IT system consolidation and support the further reduction in information technology toolsets as identified within the Navy Functional Area Manager (FAM) endeavors. Two key aspects of such a consolidation would be improved system performance at less cost and consistent formal processes. NAVSEA 04 has established the Program Management Office for Information Technology (PMO-IT) to oversee all IT development efforts and to acquire and manage IT resources.

E. Performance Metrics

FY11 - Complete unit and integrated testing for AIM Suite for Navy RMCs and SRF to support approximately 2200 users.
FY12 - Complete initial establishment of Corporate Data Warehouse.
FY13 - Continue development of electronic Technical Working Document (eTWD) project.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/CPFF	NAVSEA:WNY, D.C.	75.441	-		16.072	Oct 2012	-		16.072	Continuing	Continuing	Continuing
Software Development	WR	NSLC:Mechanicsburg, PA	6.000	2.969	Jan 2012	1.975	Oct 2012	-		1.975	Continuing	Continuing	Continuing
		Subtotal	81.441	2.969		18.047		-		18.047			

Remarks

The NAVSEA 04 Program Office for Information Technology plans to execute all contract awards for software development of shipyard and national systems through the NAVSEA SEAPORT vehicle and other competitively awarded contracts.

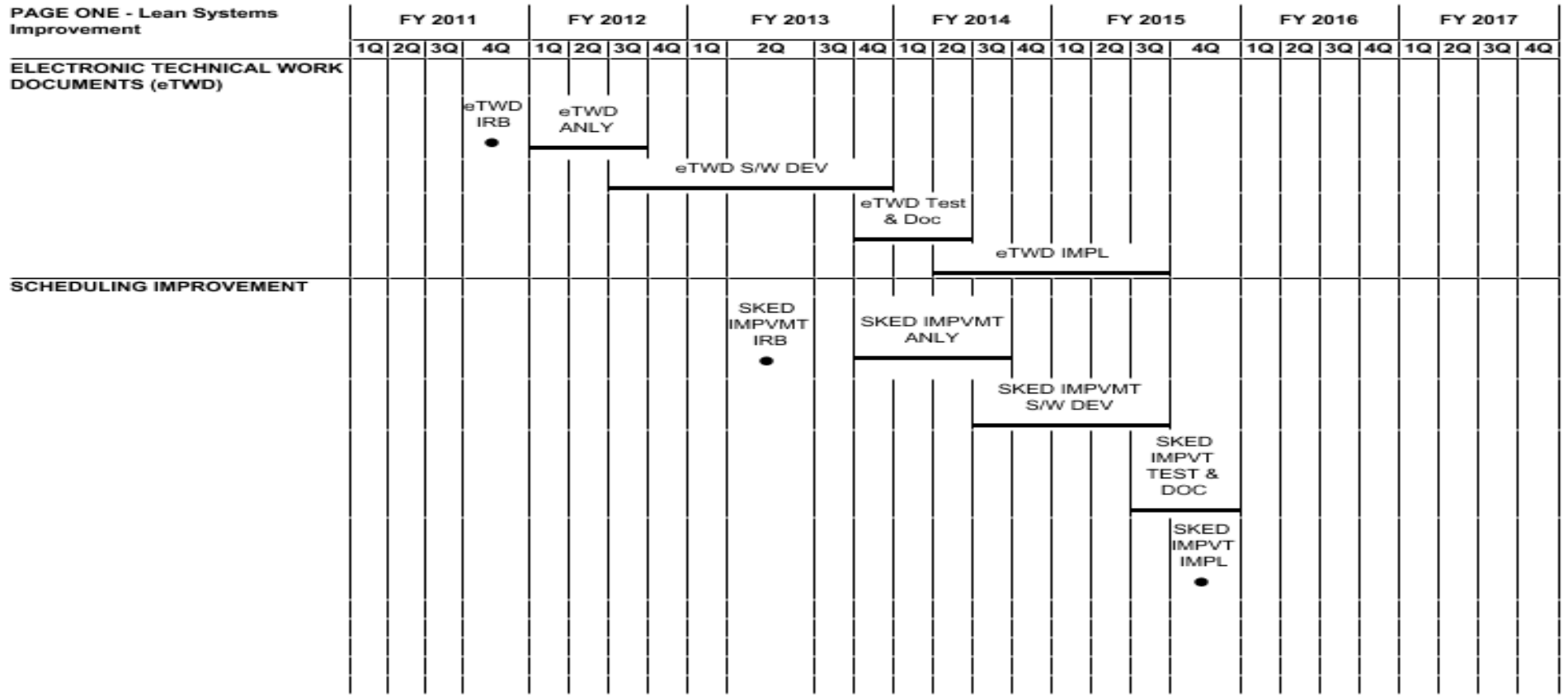
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DAWDF	Various	Not Specified:Not Specified	0.112	-		-		-		-	0.000	0.112	0.112
		Subtotal	0.112	-		-		-		-	0.000	0.112	0.112

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	81.553	2.969		18.047		-		18.047			

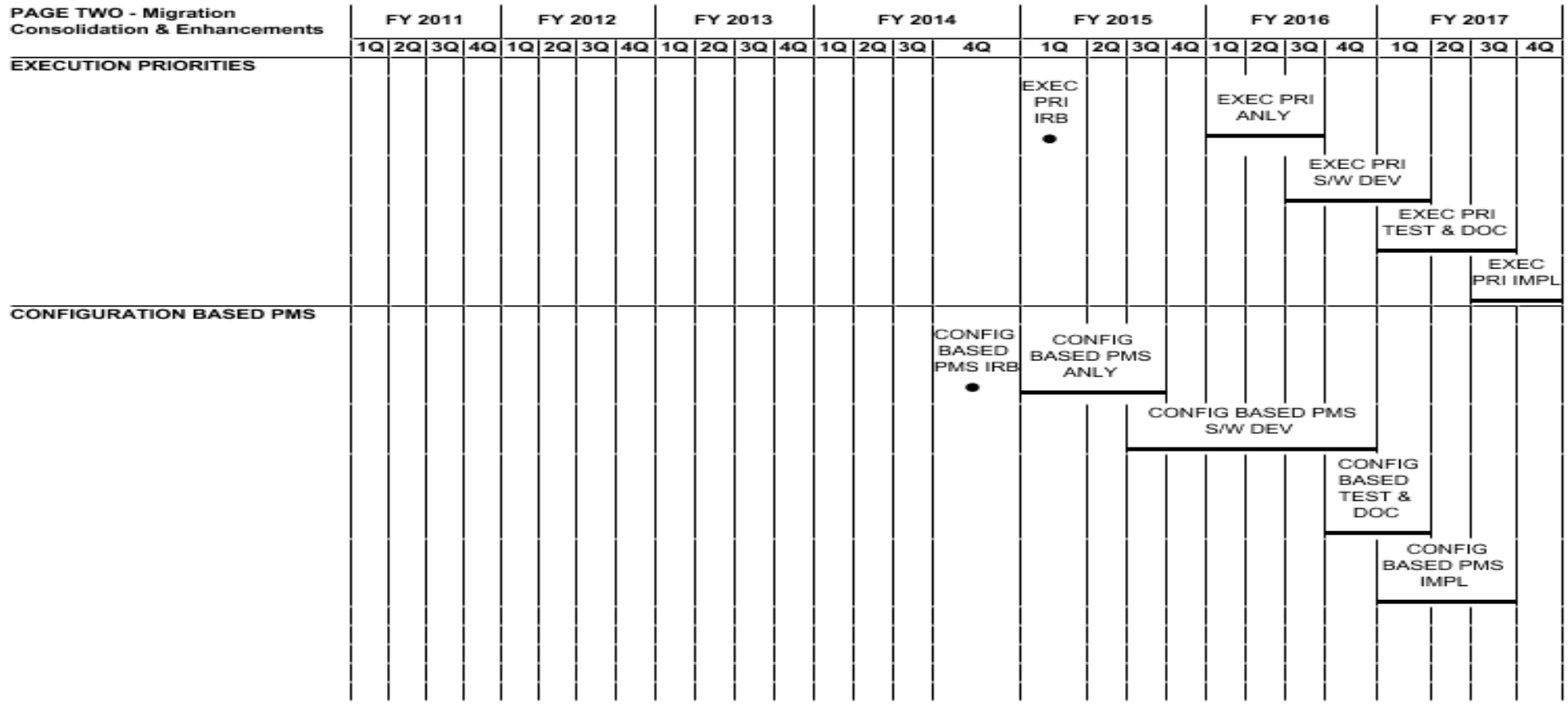
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



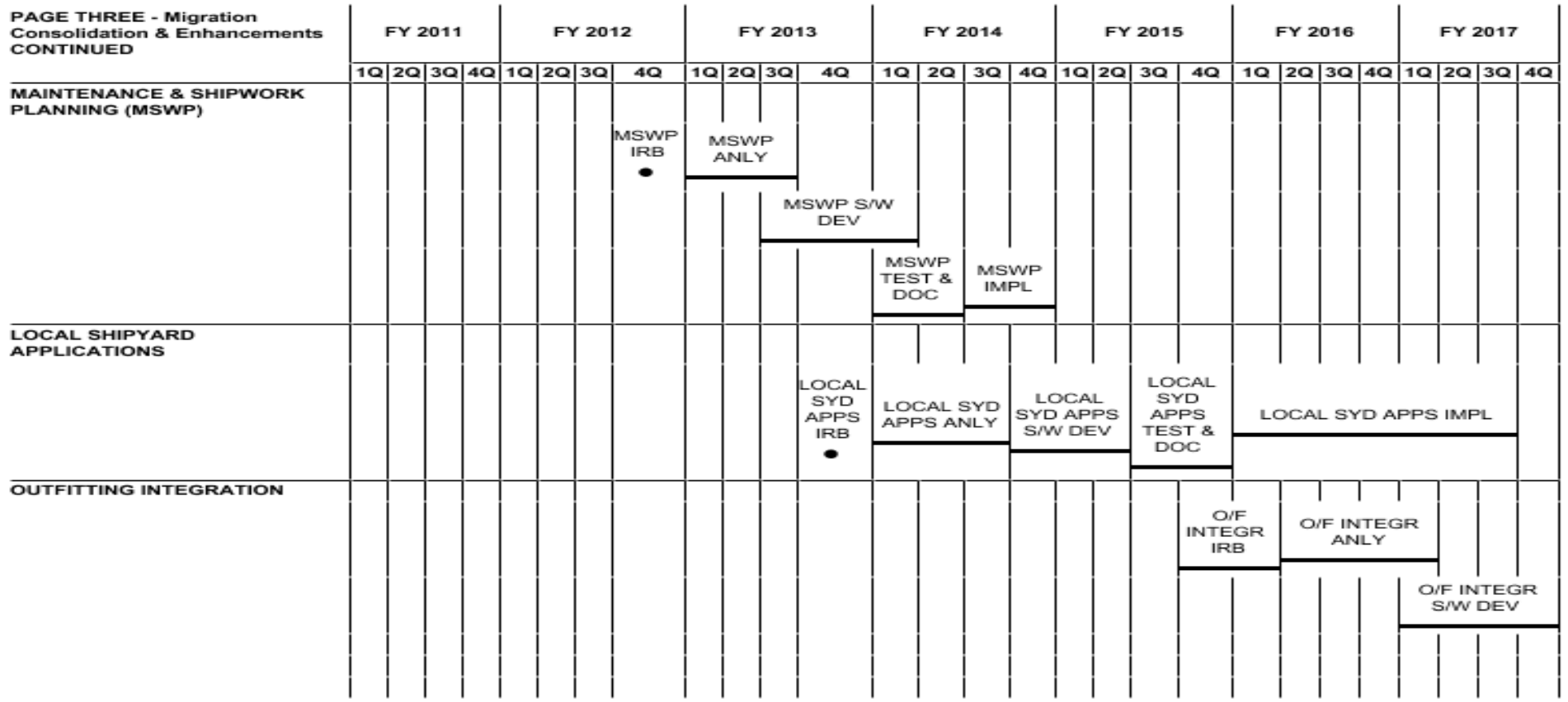
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



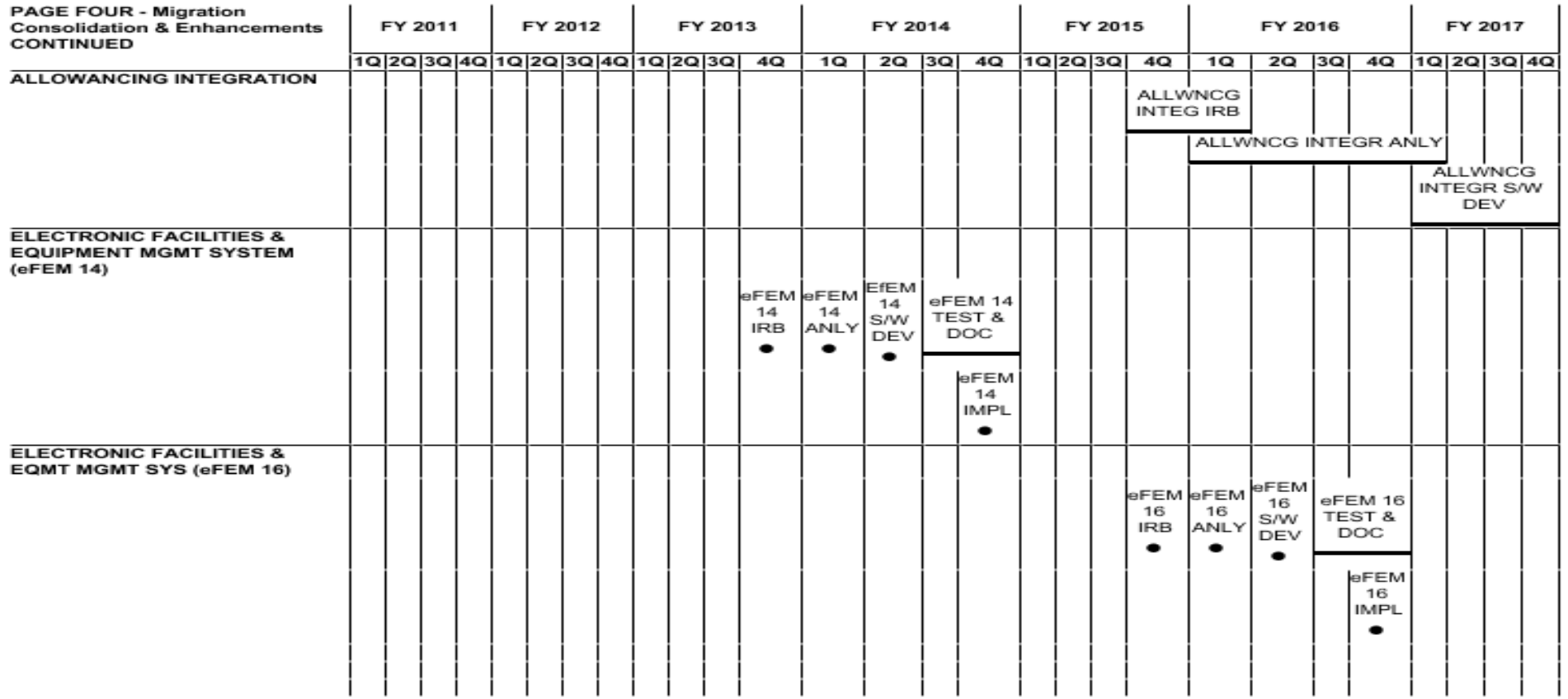
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



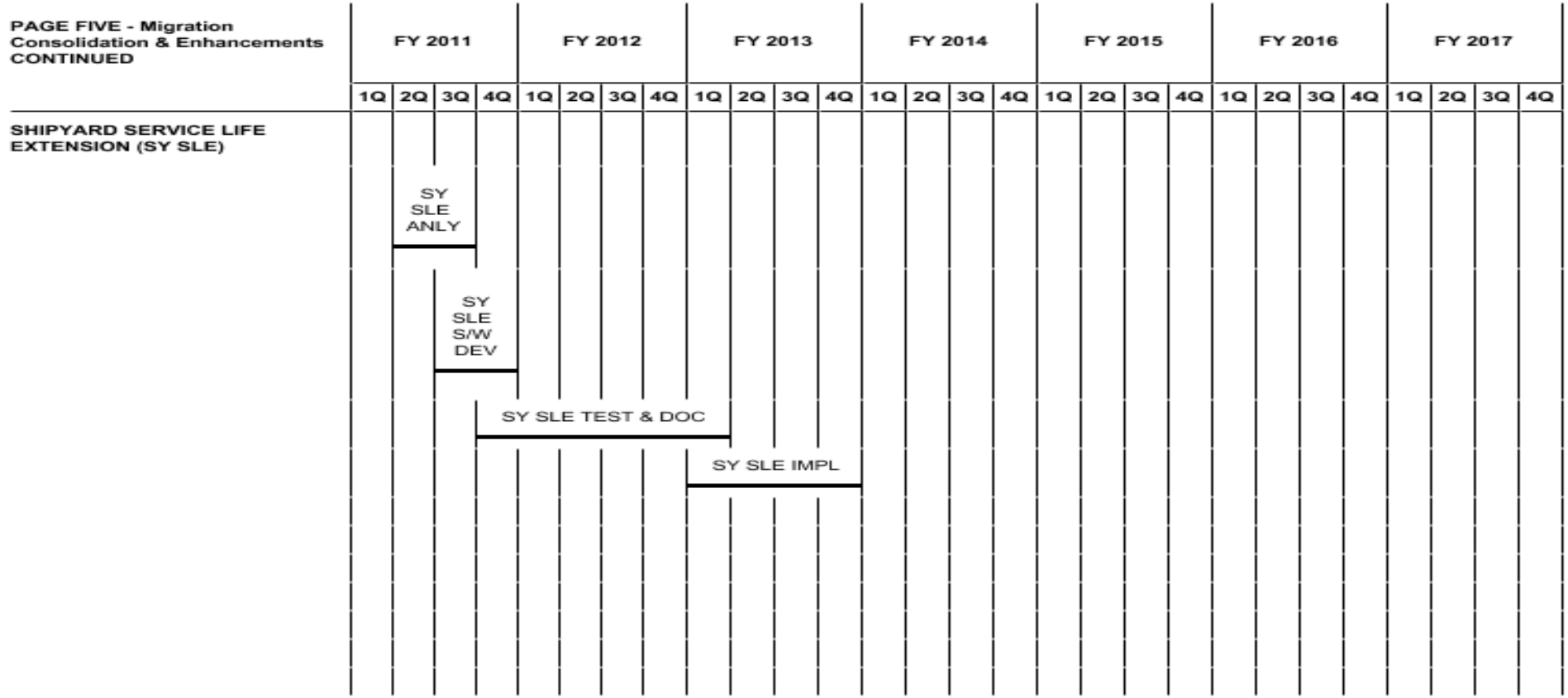
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



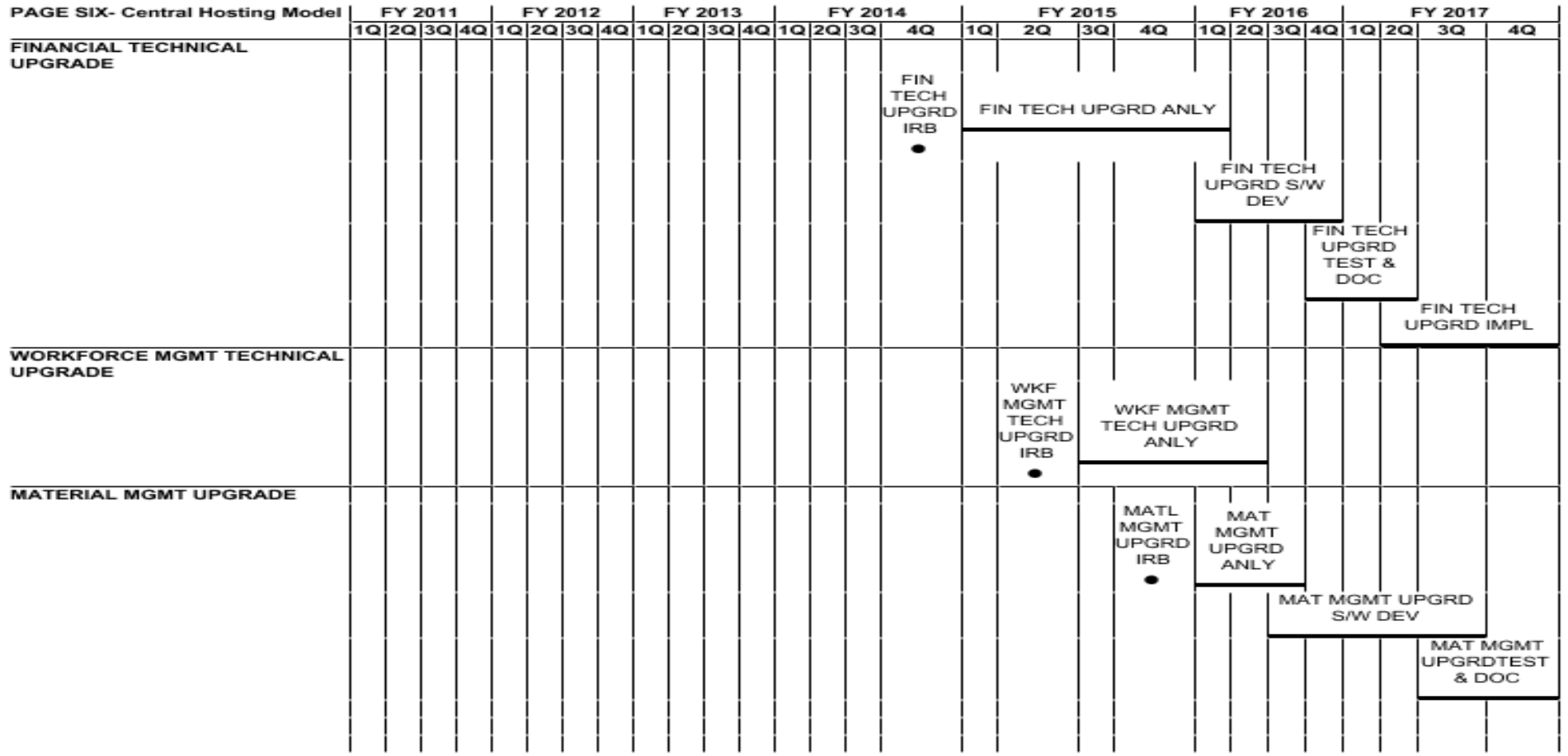
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



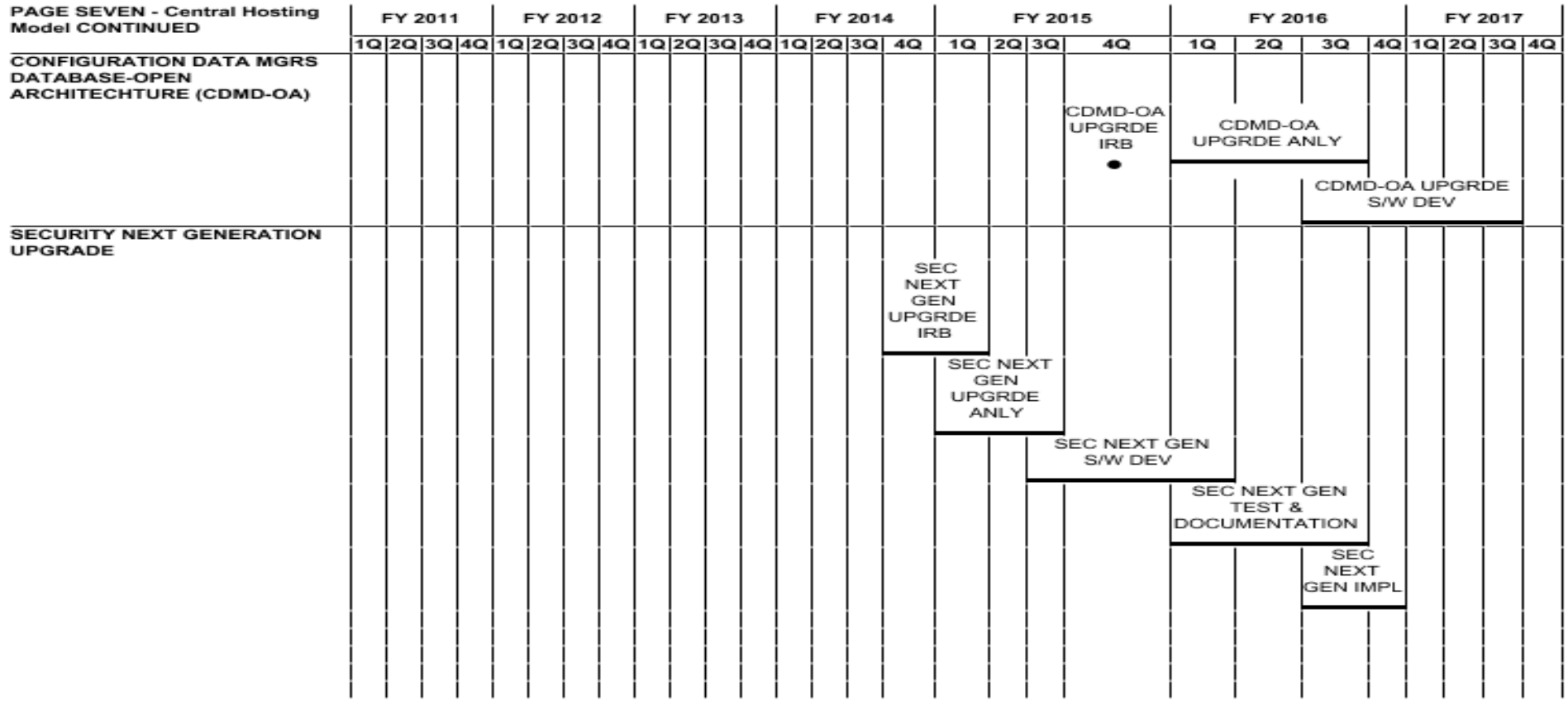
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



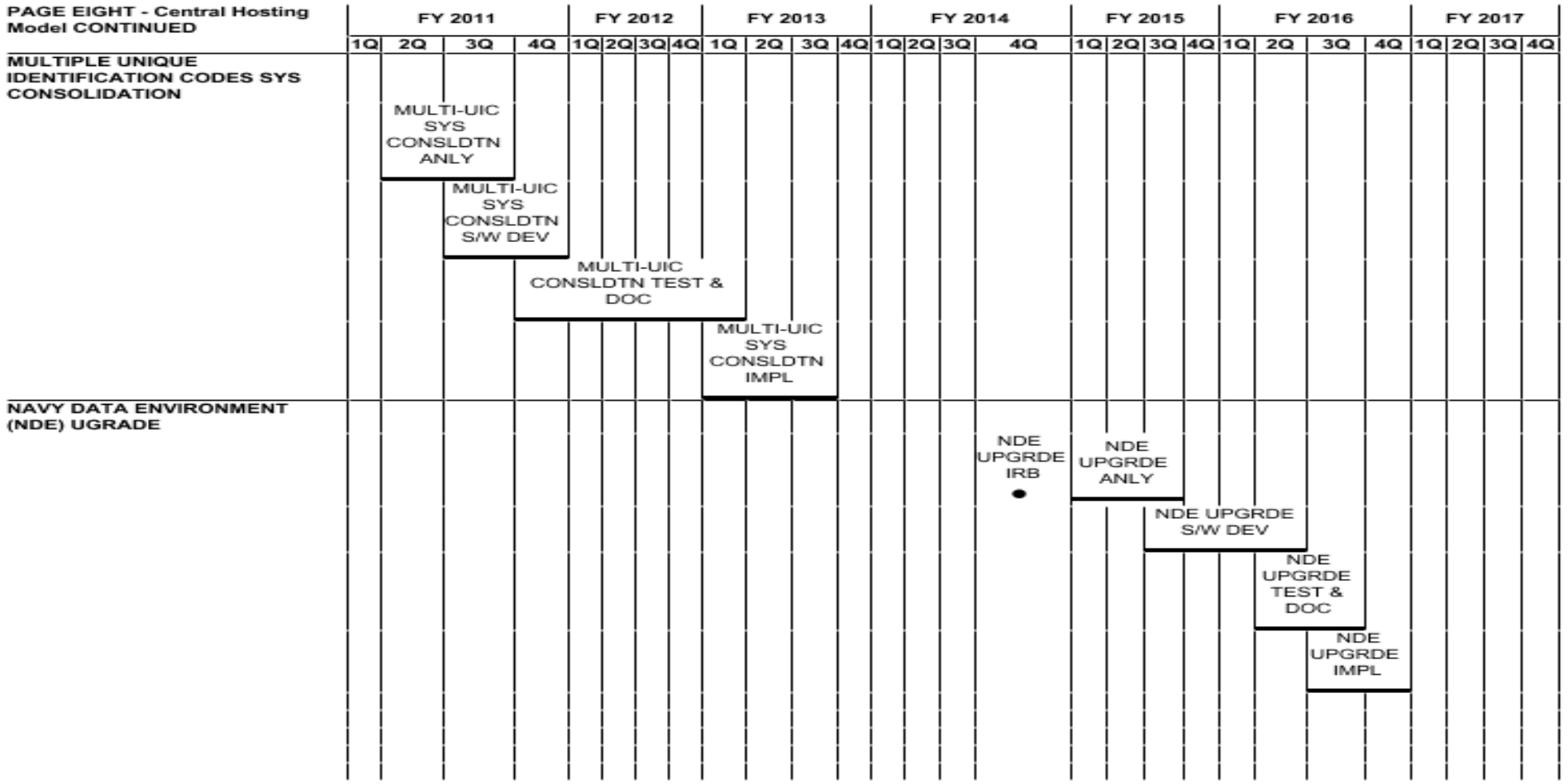
2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



2013PB - 0605013N - 2904

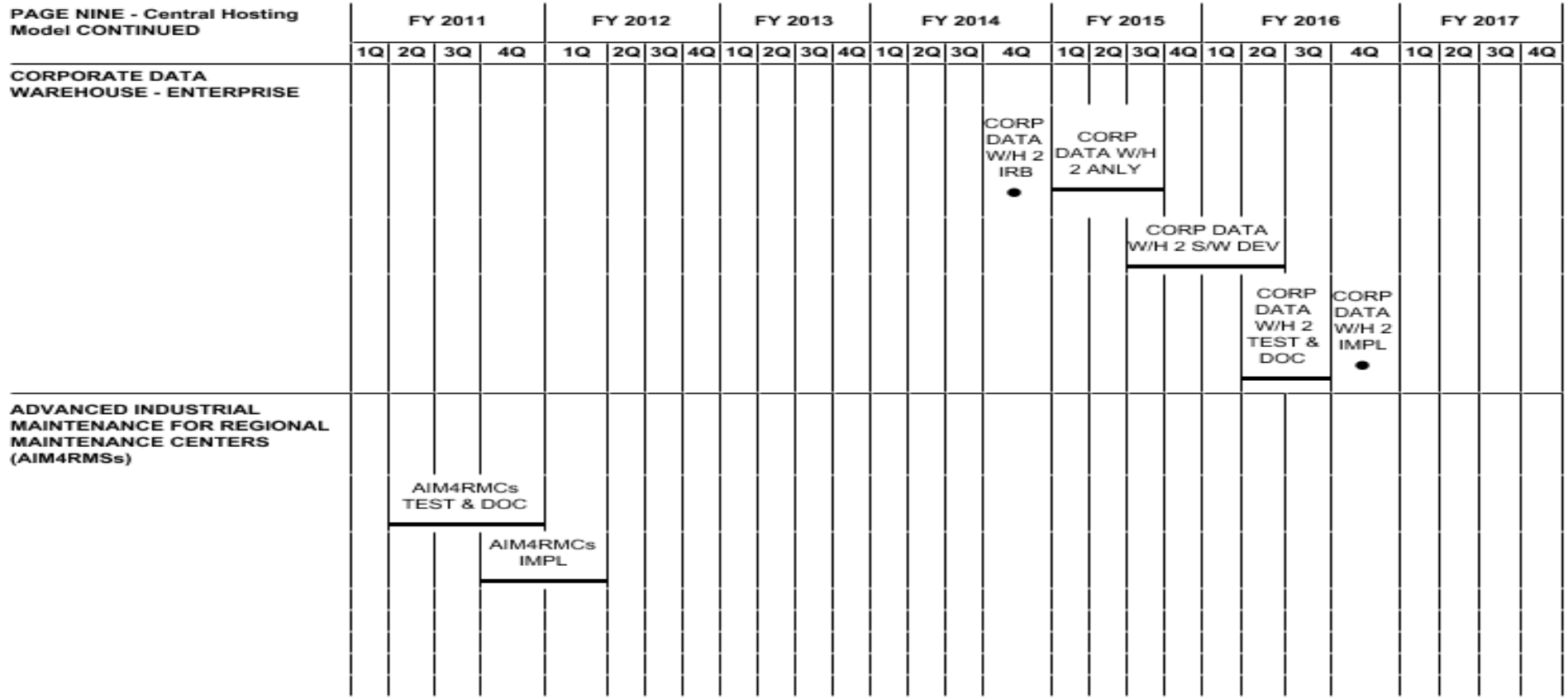
Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



2013PB - 0605013N - 2904

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*



2013PB - 0605013N - 2904

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 2904: *NAVSEA IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
PAGE ONE - Lean Systems Improvement				
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD IRB Approval	4	2011	4	2011
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Analysis	1	2012	3	2012
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Software Development	3	2012	4	2013
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Testing & Documentation	4	2013	2	2014
ELECTRONIC TECHNICAL WORK DOCUMENTS (eTWD): eTWD Implementation	2	2014	3	2015
SCHEDULING IMPROVEMENT: Scheduling Improvement IRB Approval	2	2013	2	2013
SCHEDULING IMPROVEMENT: Scheduling Improvement Analysis	4	2013	3	2014
SCHEDULING IMPROVEMENT: Scheduling Improvement Software Development	3	2014	3	2015
SCHEDULING IMPROVEMENT: Scheduling Improvement Testing & Documentation	3	2015	4	2015
SCHEDULING IMPROVEMENT: Scheduling Improvement Implementation	4	2015	4	2015
PAGE TWO - Migration Consolidation & Enhancements				
EXECUTION PRIORITIES: Execution Priorities IRB Approval	1	2015	1	2015
EXECUTION PRIORITIES: Execution Priorities Analysis	1	2016	3	2016
EXECUTION PRIORITIES: Execution Priorities Software Development	3	2016	1	2017
EXECUTION PRIORITIES: Execution Priorities Testing & Documentation	1	2017	3	2017
EXECUTION PRIORITIES: Execution Priorities Implementation	3	2017	4	2017
CONFIGURATION BASED PMS: Configuration Based PMS IRB Approval	4	2014	4	2014
CONFIGURATION BASED PMS: Configuration Based PMS Analysis	1	2015	3	2015
CONFIGURATION BASED PMS: Configuration Based PMS Software Development	3	2015	4	2016
CONFIGURATION BASED PMS: Configuration Based PMS Testing & Documentation	4	2016	1	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
CONFIGURATION BASED PMS: Configuration Based PMS Implementation	1	2017	3	2017
PAGE THREE - Migration Consolidation & Enhancements CONTINUED				
MAINTENANCE & SHIPWORK PLANNING (MSWP): MSWP IRB Approval	4	2012	4	2012
MAINTENANCE & SHIPWORK PLANNING (MSWP): MSWP Analysis	1	2013	3	2013
MAINTENANCE & SHIPWORK PLANNING (MSWP): MSWP Software Development	3	2013	1	2014
MAINTENANCE & SHIPWORK PLANNING (MSWP): MSWP Testing & Documentation	1	2014	2	2014
MAINTENANCE & SHIPWORK PLANNING (MSWP): MSWP Implementation	3	2014	4	2014
LOCAL SHIPYARD APPLICATIONS: Local Shipyard Apps IRB Approval	4	2013	4	2013
LOCAL SHIPYARD APPLICATIONS: Local Shipyard Apps Analysis	1	2014	3	2014
LOCAL SHIPYARD APPLICATIONS: Local Shipyard Apps Software Development	4	2014	2	2015
LOCAL SHIPYARD APPLICATIONS: Local Shipyard Apps Testing & Documentation	3	2015	4	2015
LOCAL SHIPYARD APPLICATIONS: Local Shipyard Apps Implementation	1	2016	3	2017
OUTFITTING INTEGRATION: Outfitting Integration IRB Approval	4	2015	1	2016
OUTFITTING INTEGRATION: Outfitting Integration Analysis	2	2016	1	2017
OUTFITTING INTEGRATION: Outfitting Integration Software Development	1	2017	4	2017
PAGE FOUR - Migration Consolidation & Enhancements CONTINUED				
ALLOWANCING INTEGRATION: Allowancing Integration IRB Approval	4	2015	1	2016
ALLOWANCING INTEGRATION: Allowancing Integration Analysis	1	2016	1	2017
ALLOWANCING INTEGRATION: Allowancing Integration Software Development	1	2017	4	2017
ELECTRONIC FACILITIES & EQUIPMENT MGMT SYSTEM (eFEM 14): eFEM14 IRB Approval	4	2013	4	2013
ELECTRONIC FACILITIES & EQUIPMENT MGMT SYSTEM (eFEM 14): eFEM14 Analysis	1	2014	1	2014
ELECTRONIC FACILITIES & EQUIPMENT MGMT SYSTEM (eFEM 14): eFEM14 Software Development	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ELECTRONIC FACILITIES & EQUIPMENT MGMT SYSTEM (eFEM 14): eFEM14 Testing & Documentation	3	2014	4	2014
ELECTRONIC FACILITIES & EQUIPMENT MGMT SYSTEM (eFEM 14): eFEM14 Implementation	4	2014	4	2014
ELECTRONIC FACILITIES & EQMT MGMT SYS (eFEM 16): eFEM16 IRB Approval	4	2015	4	2015
ELECTRONIC FACILITIES & EQMT MGMT SYS (eFEM 16): eFEM16 Analysis	1	2016	1	2016
ELECTRONIC FACILITIES & EQMT MGMT SYS (eFEM 16): eFEM16 Software Development	2	2016	2	2016
ELECTRONIC FACILITIES & EQMT MGMT SYS (eFEM 16): eFEM16 Testing & Documentation	3	2016	4	2016
ELECTRONIC FACILITIES & EQMT MGMT SYS (eFEM 16): eFEM16 Implementation	4	2016	4	2016
PAGE FIVE - Migration Consolidation & Enhancements CONTINUED				
SHIPYARD SERVICE LIFE EXTENSION (SY SLE): SY SLE Analysis	2	2011	3	2011
SHIPYARD SERVICE LIFE EXTENSION (SY SLE): SY SLE Software Development	3	2011	4	2011
SHIPYARD SERVICE LIFE EXTENSION (SY SLE): SY SLE Testing & Documentation	4	2011	1	2013
SHIPYARD SERVICE LIFE EXTENSION (SY SLE): SY SLE Implementation	1	2013	4	2013
PAGE SIX- Central Hosting Model				
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade IRB Approval	4	2014	4	2014
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Analysis	1	2015	1	2016
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Software Development	1	2016	4	2016
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Testing & Development	4	2016	2	2017
FINANCIAL TECHNICAL UPGRADE: Financial Tech Upgrade Implementation	2	2017	4	2017
WORKFORCE MGMT TECHNICAL UPGRADE: Workforce Mgmt Tech Upgrade IRB Approval	2	2015	2	2015
WORKFORCE MGMT TECHNICAL UPGRADE: Workforce Mgmt Tech Upgrade Analysis	3	2015	2	2016
MATERIAL MGMT UPGRADE: Material Mgmt Upgrade IRB Approval	4	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MATERIAL MGMT UPGRADE: Material Mgmt Upgrade Analysis	1	2016	3	2016
MATERIAL MGMT UPGRADE: Material Mgmt Upgrade Software Development	3	2016	3	2017
MATERIAL MGMT UPGRADE: Material Mgmt Upgrade Testing & Documentation	3	2017	4	2017
PAGE SEVEN - Central Hosting Model CONTINUED				
CONFIGURATION DATA MGRS DATABASE-OPEN ARCHITECHTURE (CDMD-OA): CDMD-OA Upgrade IRB Approval	4	2015	4	2015
CONFIGURATION DATA MGRS DATABASE-OPEN ARCHITECHTURE (CDMD-OA): CDMD-OA Upgrade Analysis	1	2016	3	2016
CONFIGURATION DATA MGRS DATABASE-OPEN ARCHITECHTURE (CDMD-OA): CDMD-OA Upgrade Software Development	3	2016	3	2017
SECURITY NEXT GENERATION UPGRADE: Security Next Generation Upgrade IRB Approval	4	2014	1	2015
SECURITY NEXT GENERATION UPGRADE: Security Next Genereation Upgrade Analysis	1	2015	3	2015
SECURITY NEXT GENERATION UPGRADE: Security Next Generation Upgrade Software Development	3	2015	1	2016
SECURITY NEXT GENERATION UPGRADE: Security Next Generation Testing & Documentation	1	2016	3	2016
SECURITY NEXT GENERATION UPGRADE: Security Next Generation Implementation	3	2016	4	2016
PAGE EIGHT - Central Hosting Model CONTINUED				
MULTIPLE UNIQUE IDENTIFICATION CODES SYS CONSOLIDATION: Multi-UIC Systems Consolidation Analysis	2	2011	3	2011
MULTIPLE UNIQUE IDENTIFICATION CODES SYS CONSOLIDATION: Multi-UIC Systems Consolidation Software Development	3	2011	4	2011
MULTIPLE UNIQUE IDENTIFICATION CODES SYS CONSOLIDATION: Multi-UIC Systems Consolidation Testing & Documentation	4	2011	1	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2904: *NAVSEA IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
MULTIPLE UNIQUE IDENTIFICATION CODES SYS CONSOLIDATION: Multi-UIC Systems Consolidation Implementation	1	2013	3	2013
NAVY DATA ENVIRONMENT (NDE) UGRADE: NDE Upgrade IRB Approval	4	2014	4	2014
NAVY DATA ENVIRONMENT (NDE) UGRADE: NDE Upgrade Analysis	1	2015	3	2015
NAVY DATA ENVIRONMENT (NDE) UGRADE: NDE Upgrade Software Development	3	2015	2	2016
NAVY DATA ENVIRONMENT (NDE) UGRADE: NDE Upgrade Testing & Documentation	2	2016	3	2016
NAVY DATA ENVIRONMENT (NDE) UGRADE: NDE Upgrade Implementation	3	2016	4	2016
PAGE NINE - Central Hosting Model CONTINUED				
CORPORATE DATA WAREHOUSE - ENTERPRISE: Corporate Data Warehouse 2 IRB Approval	4	2014	4	2014
CORPORATE DATA WAREHOUSE - ENTERPRISE: Corporate Data Warehouse 2 Analysis	1	2015	3	2015
CORPORATE DATA WAREHOUSE - ENTERPRISE: Corporate Data Warehouse 2 Software Development	3	2015	2	2016
CORPORATE DATA WAREHOUSE - ENTERPRISE: Corporate Data Warehouse 2 Testing & Documentation	2	2016	3	2016
CORPORATE DATA WAREHOUSE - ENTERPRISE: Corporate Data Warehouse 2 Implementation	4	2016	4	2016
ADVANCED INDUSTRIAL MAINTENANCE FOR REGIONAL MAINTENANCE CENTERS (AIM4RMSs): AIM4RMCs Testing & Documentation	2	2011	4	2011
ADVANCED INDUSTRIAL MAINTENANCE FOR REGIONAL MAINTENANCE CENTERS (AIM4RMSs): AIM4RMCs Implementation	4	2011	1	2012

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2905: *BUPERS IT*	-	12.530	31.743	-	31.743	35.360	26.357	35.363	23.851	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Funding associated with the Future Personnel and Pay Solution (FPPS) program for Project 2905 has transferred from PE 0605018N Project 3034 to 0605013N 2905 beginning in FY13. This transfer realigns the funds to the responsible organization required to execute the strategy approved by the DoN Executive Advisory Board (EAB) in July, 2011. This strategy consists of Business Process Re-engineering (BPR) defined requirements, modernization/risk reduction of current personnel/pay systems centered around the Navy's Standard Integrated Personnel System (NSIPS), and development of a future pay engine.

A. Mission Description and Budget Item Justification

BILLET BASE DISTRIBUTION (BBD): Due to the changing needs of the Navy, transformation of the requisition generation and assignment processes is necessary. Current requisition generation and distribution processes utilize an inventory-based system that does not fully reflect the actual needs of Navy commands or accurately identify the Sailor's currently assigned position. This methodology hinders the ability to accurately measure or ensure personnel readiness, leaving gaps in skills-to-position requirements. Commands, Immediate Superior in Chain , Type Commanders, Major Manpower Claimant, United States Fleet Forces, Manning Control Authorities, and Distribution and Placement personnel currently lack the capabilities necessary to align and sustain sailors in discrete positions. Furthermore, a command's manning cannot be analyzed and the actual knowledge, skills and abilities critical to a command's mission execution cannot be determined. The objective of BBD is to replace the current inventory-based requisition generation process with automated functionality, which is requirements driven, inventory-balanced, and position-based. This methodology will increase personnel readiness, improve fit, and provide clear visibility to the impact on mission readiness at the billet level. BBD will facilitate maximizing the contributions of every member of the Navy workforce by delivering competency-based career paths. BBD will be accomplished in three phases: Phase I (Initial Alignment), Phase II (Sustainment Alignment), and Phase III (Optimized Assignments).

PERSONALIZED RECRUITING FOR IMMEDIATE AND DELAYED ENLISTMENTS (PRIDE) MODERNIZATION (MOD) II: PRIDE Modernization II is the center-piece of Naval Recruiting Command (NRC) Information Technology Roadmap and provides a way forward for NRC's Agenda for Change. Release II will consolidate Reserve Component, Active Component, Officer and processing into a single, integrated recruiting processing system. Release II will retire Command Integrated Recruiting Information Management System, Navy Accessions Security Information System Web Based Officer Tools, and Military Incentive Tracking, Accounting and Payment System. It will incorporate a "turbo-tax" type forms solution and incorporate biometric personal identification, eliminating the requirement for a "wet" signature. In addition, Release II will include functionality not executed under Release I due to funding constraints.
As highlighted during NRC's Paperless briefing to Navy Total Force (NTF) Flag and Working Groups in November, PRIDE Modernization Release II will continue to modernize N1's accession business processes and data flows. The system moves the organization from antiquated business processes (hardcopies, fax, manual data exchange) into a real-time, end-to-end connectivity across the enterprise. It also sets the groundwork for the "mobile recruiter" initiative outlined in the Recruiter of the Future 2020 initiative as well as the NTF Authoritative Data Environment. Both, the NTF Flag and Working Groups, recognized the vast significance this initiative will have on the N1 Enterprise and signified the need to keep the project on track.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*

INTEGRATED PERSONNEL AND PAY SYSTEMS - NAVY (IPPS-N): Beginning in FY13 efforts previously identified for the Future Personnel and Pay Solution (FPPS) program have been moved under BUPERS IT modernization. Funding supports design, development and modernization efforts. The integrated personnel and pay system mission is to develop economical and efficient solutions allowing the Navy to respond rapidly to warfighter personnel and pay information needs.

The following programmed activities support the integrated personnel/pay system mission:
a. Analyze and develop risk reduction activities
b. Analyze interfaces, data, and reports between current core Human Resources Personnel functions, Navy Standard Integrated Personnel System, and other Government-Off-the-Shelf solutions
c. Continue data structure mapping and management activities for Authoritative Data Warehouse to eventually warehouse Navy authoritative data
d. Develop architecture that aligns with OSD Business Enterprise Architecture and the Navy Department of Defense Architectural Framework
e. Continue development and management of prototype lab environment for system

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Billet Based Distribution (BBD) ***Articles:*** ***FY 2012 Plans:*** Plans are to perform a detailed requirements analysis, system engineering reviews, and begin software development.	-	6.830 0	-
Title: Personalized Recruiting for Immediate and Delayed Enlistment Modernization (PRIDE MOD) II ***Articles:*** ***FY 2012 Plans:*** Perform a review of system requirement of PRIDE, conduct a critical design review, perform software development, and complete testing.	-	5.700 0	-
Title: Integrated Personnel and Pay Systems - Navy (IPPS-N) ***Articles:*** ***FY 2013 Plans:*** IPPS-N: Continue detailed analysis of interfaces, data structure mapping, and reports between Reserve Headquarters System (RHS) and Navy Standard Integrated personnel System (NSIPS). This effort is the second phase of analysis of the legacy systems functionality to the proposed OSD driven Data structure mapping effort and enterprise alignment. - Initiate phase one analysis (interfaces, data, and reports) between Officer Personnel Information System (OPINS) and NSIPS. This effort will analyze the data structures and functionality of OPINS and the DoD OSD driven Data mapping effort and enterprise alignment. The goal of this effort is better reports management and increased interoperability between corporate Navy Human Resources systems and OSD systems within the lab environment.	-	-	31.743 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Conduct software testing activities on the lab activities in support of developing test scripts and plans with the expectation of providing this information to the Navy Systems Engineering Technical Review (SETR) process. Testing teams will be composed of support contractors and Government subject matter experts (SME) from multiple commands. - Initiate modeling and simulation efforts to effectively forecast software requirements and technical specification in the Statement of Work development effort. - Initiate development of Navy required SETR documentation, such as Alternative Software Review artifacts, Preliminary Design Review artifacts, Initial Technical Review artifacts, Technical Readiness Review artifacts, and Critical Design Review artifacts.			
Accomplishments/Planned Programs Subtotals	-	12.530	31.743

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

BBD: Acquisition will be through contract technical services. The required services will be procured through a competitive performance-based service acquisition. Acquisition will be primarily through SPAWAR Systems Center Atlantic, New Orleans. An incremental development approach will be used.

PRIDE MOD II: Acquisition will be through contract technical services contract award. The required services will be procured through a competitive performance-based service acquisition using Cost Plus Fixed Fee (CPFF) and Firm Fixed Price (FFP) contracts.

IPPS-N: Navy began the transition to the development and modification of new Personnel and Pay System in FY 2010. The current strategy consists of an incremental migration of Reserve Headquarters System (RHS), Officer Personnel Information Systems (OPINS), Navy Enlisted System (NES) and Inactive Manpower and Personnel Management Information System (IMAPMIS) into Navy Standard Integrated Personnel System (NSIPS). This strategy also includes development of an Authoritative Data Warehouse which occurs concurrently with the migration of legacy systems. In addition, in FY14 initiate the acquisition tasks for the pay engine.

E. Performance Metrics

BBD: Meet program, system engineering and technical review milestones for development of BBD Phase I.

PRIDE MOD II: Meet program and systems engineering and technical review milestones for deployment of a PRIDE MOD PHASE II, with no outstanding severity 1-3 defects for production release.

IPPS-N:
1. Demonstrate the feasibility of at least one technical architecture approach for IPPS-N.
2. A 20% reduction in the number of redundant transactional systems for personnel and pay.
3. A 15% reduction in system interfaces.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 2905: *BUPERS IT*

4. Documented plan and preliminary design for the consolidation of legacy personnel systems.
5. Develop a Navy Authoritative Data Warehouse for data standardization.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
BBD Requirement Analysis	C/FP	Unknown:Unknown	-	0.504	Mar 2012	-		-		-	0.000	0.504	0.504
BBD System Engineering	C/FP	Unknown:Unknown	-	6.326	Mar 2012	-		-		-	0.000	6.326	6.326
PRIDE MOD II System Design and Development	C/FP	Unknown:Unknown	-	3.300	Mar 2012	-		-		-	0.000	3.300	3.300
IPPS-N System Design & Development	C/BA	Unknown:Unknown	-	-		20.395	Mar 2013	-		20.395	0.000	20.395	20.395
IPPS-N System Engineering	C/BA	Unknown:Unknown	-	-		2.300	Mar 2013	-		2.300	0.000	2.300	2.300
		Subtotal	-	10.130		22.695		-		22.695	0.000	32.825	32.825

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRIDE MOD II Interface Development	C/FP	Unknown:Unknown	-	1.200	Mar 2012	-		-		-	0.000	1.200	1.200
PRIDE MOD II Government Data Center	C/FP	Unknown:Unknown	-	0.600	Mar 2012	-		-		-	0.000	0.600	0.600
IPPS-N Prototyping	C/BA	Unknown:Unknown	-	-		0.500	Mar 2013	-		0.500	0.000	0.500	0.500
IPPS-N License Tools	C/BA	Unknown:Unknown	-	-		4.400	Mar 2013	-		4.400	0.000	4.400	4.400
IPPS-N Enterprise Data Environment	C/BA	Unknown:Unknown	-	-		4.148	Mar 2013	-		4.148	0.000	4.148	4.148
		Subtotal	-	1.800		9.048		-		9.048	0.000	10.848	10.848

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRIDE MOD II Test and Evaluation	C/FP	Unknown:Unknown	-	0.200	Mar 2012	-		-		-	0.000	0.200	0.200
		Subtotal	-	0.200		-		-		-	0.000	0.200	0.200

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
PRIDE MOD II Management	C/BA	Unknown:Unknown	-	0.400	Mar 2012	-		-		-	0.000	0.400	0.400
		Subtotal	-	0.400		-		-		-	0.000	0.400	0.400

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	12.530		31.743		-		31.743	0.000	44.273	44.273

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*

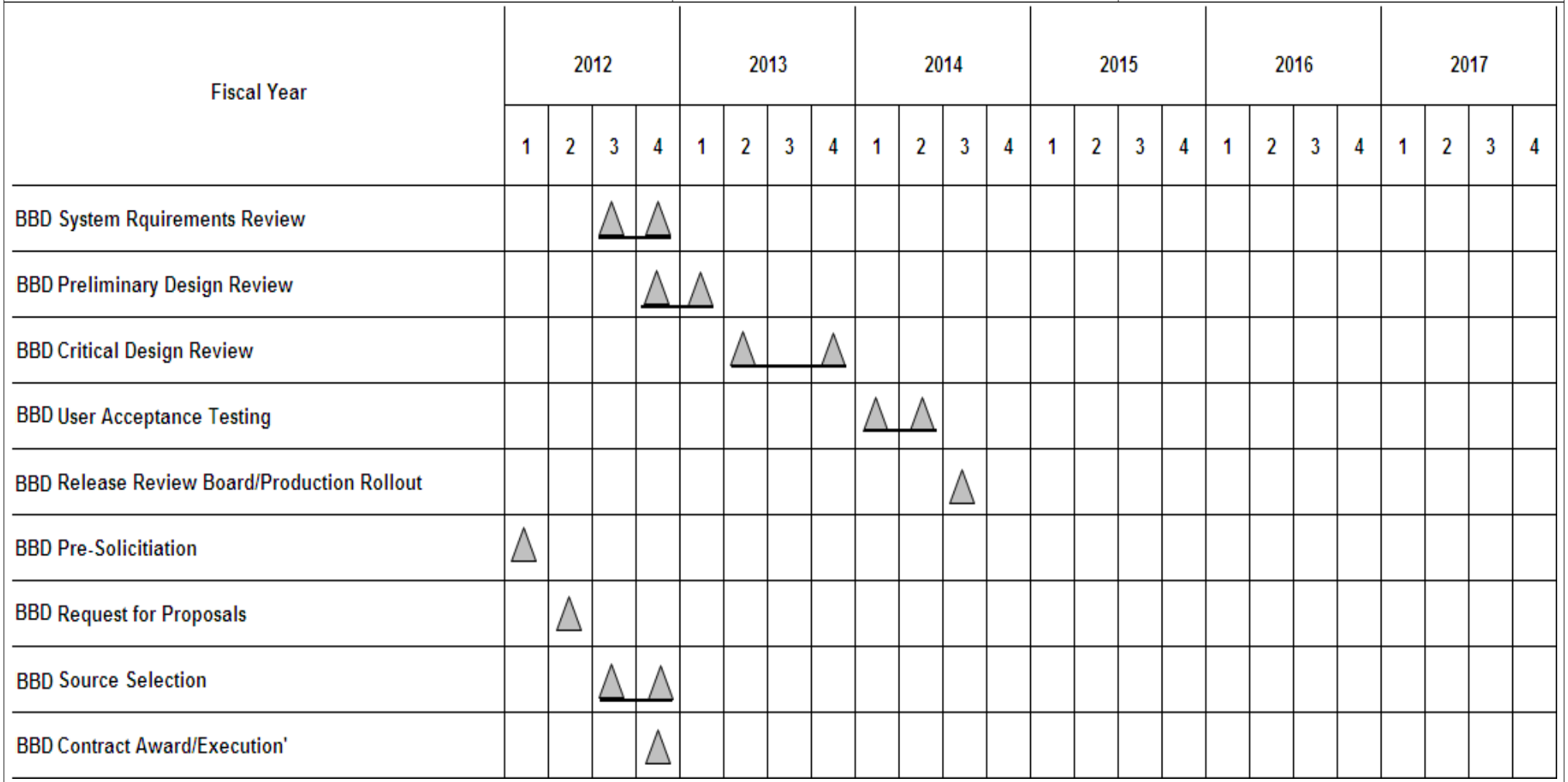


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*	

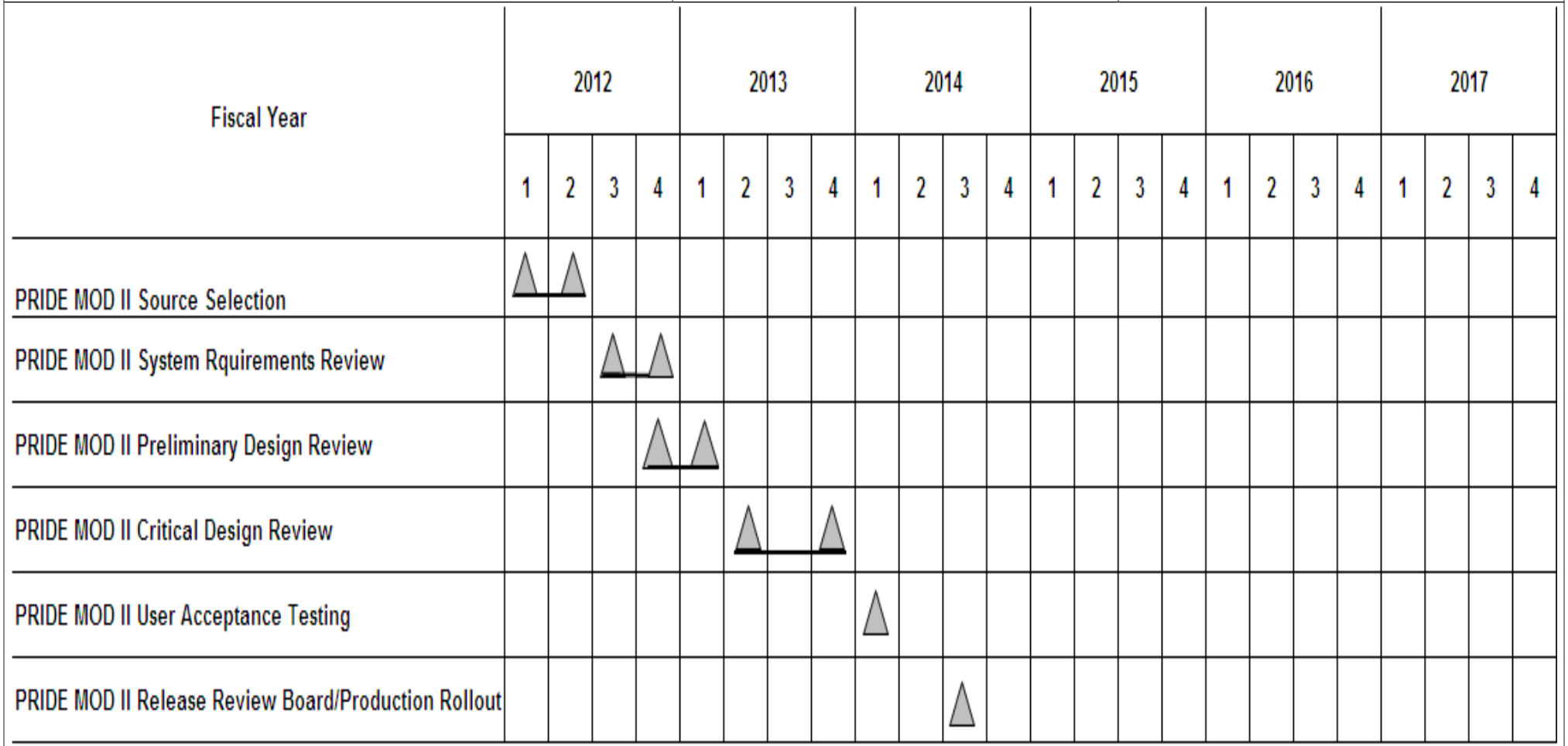


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*

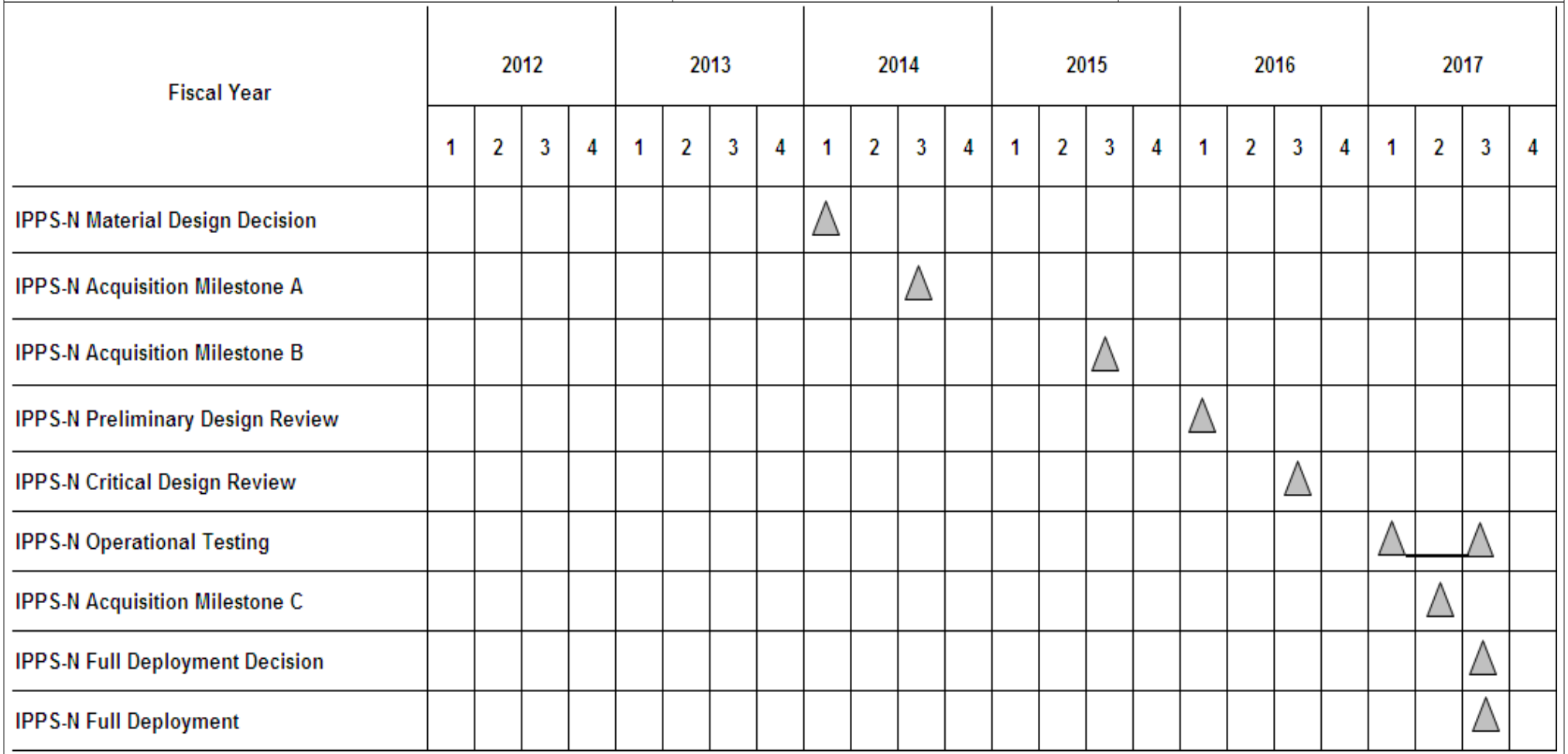


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 2905: *BUPERS IT*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2905				
BBD System Requirements Review	3	2012	4	2012
BBD Preliminary Design Review	4	2012	1	2013
BBD Critical Design Review	2	2013	4	2013
BBD User Acceptance Testing	1	2014	2	2014
BBD Release Review Board/Production Rollout	3	2014	3	2014
BBD Pre-Solicitation	1	2012	1	2012
BBD Request for Proposals	2	2012	2	2012
BBD Source Selection	3	2012	4	2012
BBD Contract Award/Execution	4	2012	4	2012
PRIDE MOD II Source Selection	1	2012	2	2012
PRIDE MOD II System Requirements Review	3	2012	4	2012
PRIDE MOD II Preliminary Design Review	4	2012	1	2013
PRIDE MOD II Critical Design Review	2	2013	4	2013
PRIDE MOD II User Acceptance Testing	1	2014	1	2014
PRIDE MOD II Release Review Board/Production rollout	3	2014	3	2014
IPPS-N Material Design Decision	1	2014	1	2014
IPPS-N Milestone A	3	2014	3	2014
IPPS-N Milestone B	3	2015	3	2015
IPPS-N Preliminary Design Review	1	2016	1	2016
IPPS-N Critical Design Review	3	2016	3	2016
IPPS-N Operational Testing	1	2017	3	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 2905: *BUPERS IT*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
IPPS-N Milestone C	2	2017	2	2017
IPPS-N Full Deployment Decision	3	2017	3	2017
IPPS-N Full Deployment	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3167: *Joint Technical Data Integration (JTDI)*	1.835	4.328	8.524	-	8.524	5.714	5.410	5.099	5.381	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Marine Aviation Logistics Support Program (MALSP) II Expeditionary Pack Up Kit (EPUK) is a new start beginning in FY12.

A. Mission Description and Budget Item Justification

JTDI Program - Funding supports the evaluation, testing and integration to develop a JTDI Commercial Off-The-Shelf (COTS) solution for installation on Carrier and Amphibious Assault class ships and up to 104 Navy/Marine Corp aviation activities. JTDI is a digital technical data access, delivery and local Organizational & Intermediate level library management toolset and telemaintenance collaboration process enabler. It improves accuracy and timeliness of technical manual and other technical data delivery and minimizes the Fleet's library management burden. JTDI reduces maintenance work hours with a savings Return on Investment of 2.5:1. It facilitates the transition of the Joint Distance Support and Response Advanced Concept Technology Demonstration for telemaintenance and provides for process efficiencies to support ongoing Aviation Fleet Technical Representative reductions.

MALSP II EPUK: Funding supports the evaluation, development, testing and integration of software and hardware solutions for expeditionary requisitioning and supply chain management across all US Marine Corp Aviation activities. Marine Aviation Logistics is changing to MALSP II to meet current and future operational requirements - in support of the NAE Strategic Plan, Marine Corps Vision & Strategy 2025, and the USMC Long War Concept. MALSP II will allow aviation logisticians to decrease total infrastructure and resource inventories forward by moving the preponderance of the Maintenance and Supply workload to the CONUS Parent MALS, and reducing the total forward Aviation Logistics footprint (personnel, equipment, facilities and spares). EPUK, as part of Marine Aviation Logistics-Enterprise IT system, is an automated wireless hardware / software solution that is a key enabler in integrating US Marine Corp Aviation Combat Element and Logistics Combat Element logistics systems to make the Marine Air Ground Task Force more responsive, agile, flexible and lethal with the ability to support and sustain operations in austere expeditionary environments and across the Range of Military Operations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: JTDI	1.400	1.534	2.183
Articles:	0	0	0
FY 2011 Accomplishments: Conduct development efforts associated with a major release of fully deployed COTS intensive JTDI system. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Conduct technology insertion of the JTDI system.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 3167: *Joint Technical Data Integration (JTDI)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct development efforts associated with a major release of fully deployed Commercial Off-The-Shelf (COTS) intensive JTDI system. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Conduct technology insertion of the JTDI system. ***FY 2013 Plans:*** Conduct development efforts associated with a major release of fully deployed COTS intensive JTDI system. Conduct COTS requirements definition, evaluation, integration, and testing of annual baseline releases. Conduct technology insertion of the JTDI system.			
Title: Portable Electronic Maintenance Aid ***Articles:*** ***FY 2011 Accomplishments:*** Evaluate, test and integrate evolving COTS solutions. Conduct test & evaluation of Type/Model/Series peculiar software/hardware requirements and network connectivity compliance across the GIG prior to deployment to the fleet by a yearly release cycle.	0.435 0	-	-
Title: MALSP II EPUK ***Articles:*** ***FY 2012 Plans:*** Conduct development efforts with a major release of Expeditionary Pack-Up Kit. Conduct requirements definition, evaluation, integration, and testing of planned software capabilities. Conduct test and evaluation of hardware requirements and network connectivity via satellite communication prior to deployment to the fleet based on a yearly release/maintenance cycle. ***FY 2013 Plans:*** Conduct development efforts with a major release of Next Generation Buffer Management System. Conduct analysis of alternatives, evaluation, integration, and testing of planned software capabilities. Conduct test and evaluation of hardware requirements and network connectivity via satellite communication prior to deployment to the fleet based on a yearly release/ maintenance cycle.	-	2.794 0	6.341 0
Accomplishments/Planned Programs Subtotals	1.835	4.328	8.524

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4265/JTDI: *JTDI Other Aviation Support Equipment*	1.128	21.530	4.207	0.000	4.207	4.435	1.594	1.511	1.531	Continuing	Continuing

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/4265/MALSP II: *Marine Aviation Logistics Support Program (MALSP II) Other Aviation Support Equipment*	0.000	0.353	0.913	0.000	0.913	0.291	0.486	0.289	2.194	Continuing	Continuing

D. Acquisition Strategy

JTDI Program - The management approach includes the Program Management Office residing in the Naval Air Systems Command (NAVAIR) with Milestone Decision Authority (MDA) delegated to the NAVAIR Command Information Officer (CIO). The evolutionary development approach will be used to execute requirements. Contracting for the prime integrator will be via competitively awarded Indefinite Delivery - Indefinite Quantity (IDIQ) contracts.

MALSP II Expeditionary Pack up Kit (EPUK) Program - The management approach includes the Program Management Office residing in the NAVAIR with MDA delegated to the NAVAIR CIO. The evolutionary development approach will be used to execute requirements. Contracting for the prime integrator will be via competitively awarded IDIQ contracts.

E. Performance Metrics

JTDI and MALSP II EPUK Program - Successfully achieve government testing of annual software release.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/FFP	ARANEA:Huntsville, AL	2.718	1.534	Nov 2011	2.183	Nov 2012	-		2.183	Continuing	Continuing	Continuing
Software Development	C/FFP	Various:Various	3.958	-		-		-		-	Continuing	Continuing	Continuing
Software Development/HW Integration	C/CPFF	Spalding Consulting:Lexington Park, MD	-	2.206	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Engineering Tech. Sppt	TBD	TBD:TBD	0.055	-		-		-		-	0.000	0.055	
Software Dev/HW Integration	TBD	TBD:TBD	-	-		5.650	Nov 2012	-		5.650	0.000	5.650	
		Subtotal	6.731	3.740		7.833		-		7.833			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	C/FFP	Various:Various	0.474	0.182	Nov 2011	0.280	Nov 2012	-		0.280	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	NAWCAD:Patuxent River, MD	0.435	-		-		-		-	0.000	0.435	
		Subtotal	0.909	0.182		0.280		-		0.280			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	NAWCAD:Patuxent River, MD	0.116	0.231	Oct 2011	0.233	Nov 2012	-		0.233	0.000	0.580	
Program Management Support	WR	DTIC:Fort Belvior, VA	0.010	-		-		-		-	0.000	0.010	
Contractor Engineering Support	C/FFP	NAWCAD:Patuxent River, MD	-	0.175	Nov 2011	0.178	Nov 2012	-		0.178	Continuing	Continuing	Continuing
Travel	Various	Various:Various	0.015	-		-		-		-	0.000	0.015	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	WR	DCATS:Fort Monmouth, VA	0.015	-		-		-		-	0.000	0.015	
		Subtotal	0.156	0.406		0.411		-		0.411			

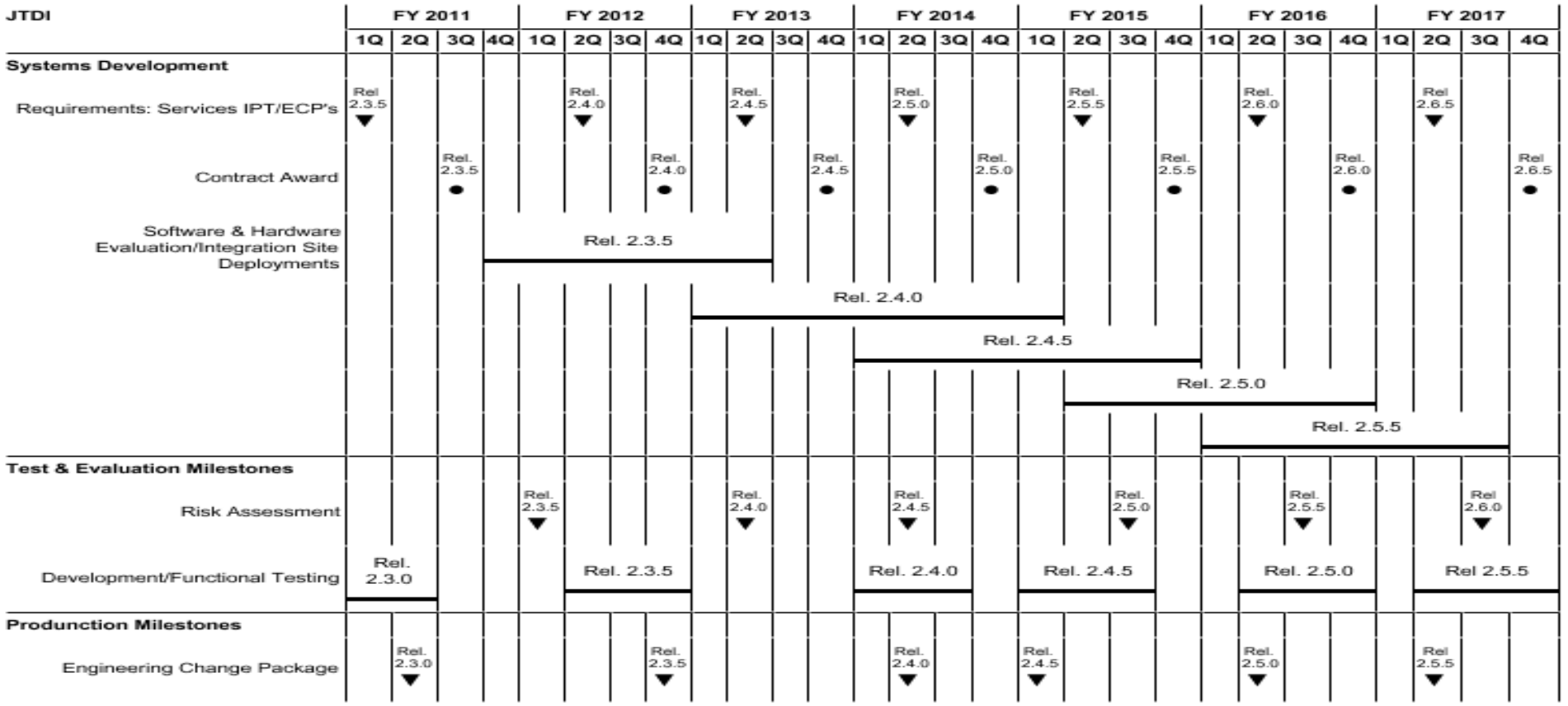
Remarks

At the DON-13 budget JTDI had funds for Systems Engineering NAWCAD labor under Program Management Support and in the middle of FY11 the person was changed to an EOB employee.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	7.796	4.328		8.524		-		8.524			

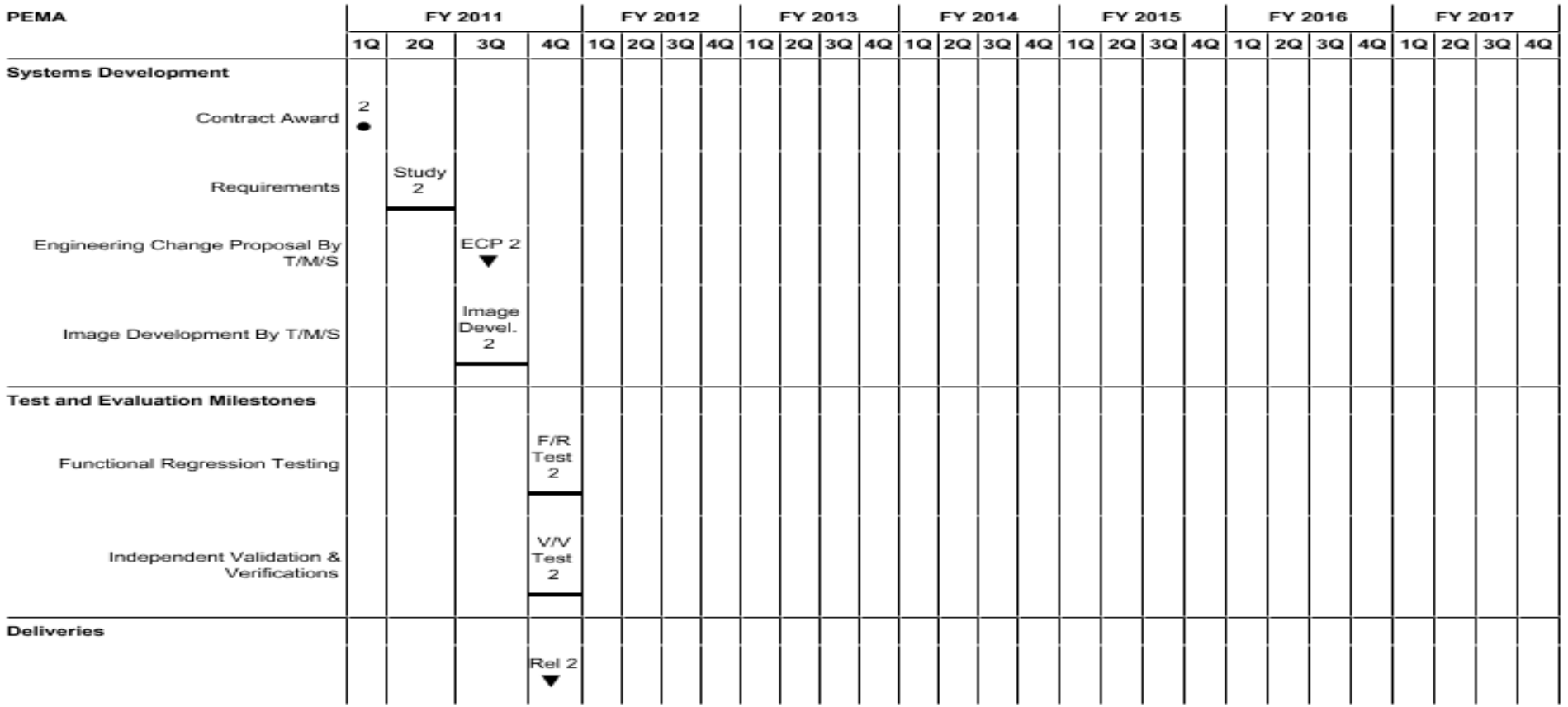
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*



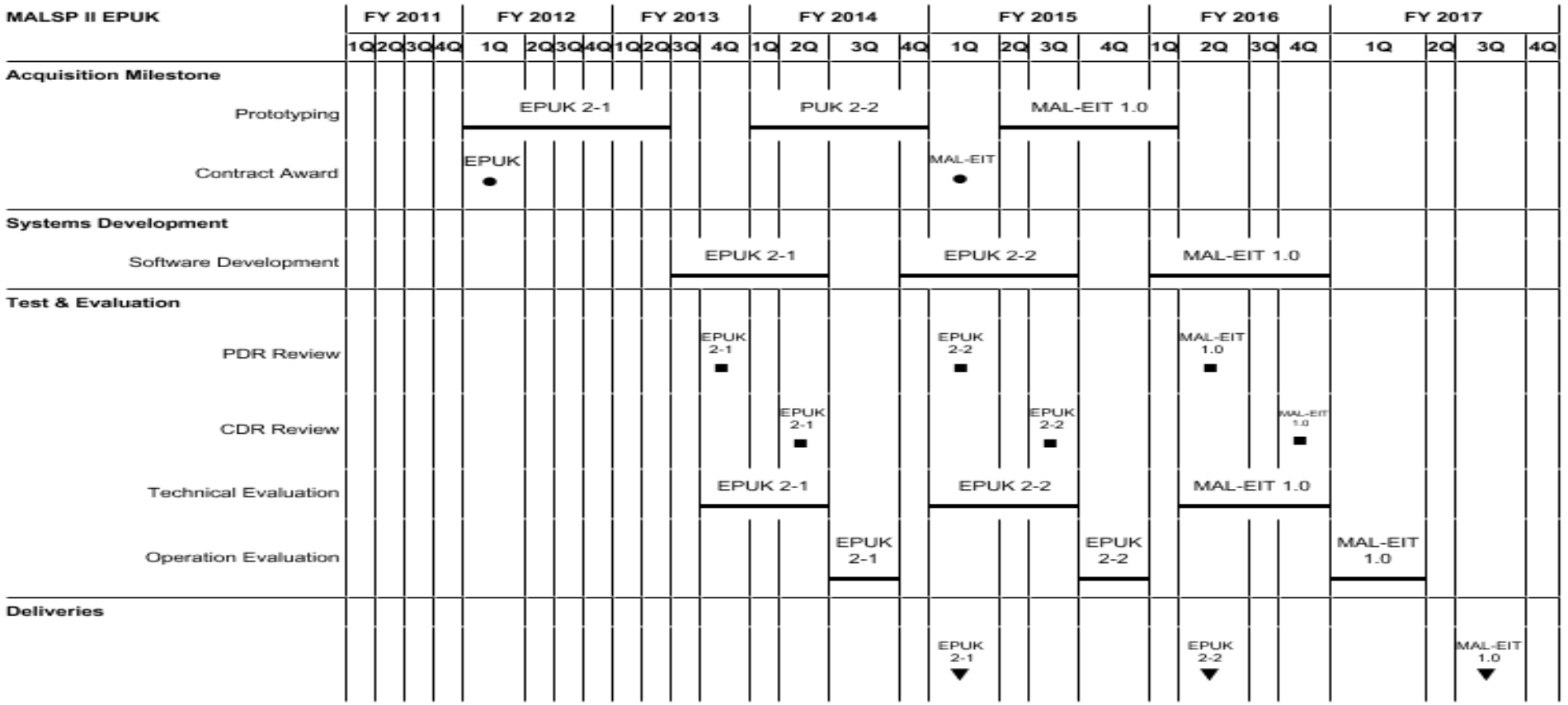
2013DON - 0605013N - 3167

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*



2013DON - 0605013N - 3167

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*



2013DON - 0605013N - 3167

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 3167: *Joint Technical Data Integration (JTDI)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
JTDI				
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.3.5	1	2011	1	2011
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.4.0	2	2012	2	2012
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.4.5	2	2013	2	2013
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.5.0	2	2014	2	2014
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.5.5	2	2015	2	2015
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.6.0	2	2016	2	2016
Systems Development: Requirements: Services IPT/ECP's: Service IPT/ECPs, Release 2.6.5	2	2017	2	2017
Systems Development: Contract Award: Contract Award, Release 2.3.5	3	2011	3	2011
Systems Development: Contract Award: Contract Award, Release 2.4.0	4	2012	4	2012
Systems Development: Contract Award: Contract Award, Release 2.4.5	4	2013	4	2013
Systems Development: Contract Award: Contract Award, Release 2.5.0	4	2014	4	2014
Systems Development: Contract Award: Contract Award, Release 2.5.5	4	2015	4	2015
Systems Development: Contract Award: Contract Award, Release 2.6.0	4	2016	4	2016
Systems Development: Contract Award: Contract Award, Release 2.6.5	4	2017	4	2017
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.2.6	1	2011	1	2011

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.3.0	1	2011	3	2012
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.3.5	4	2011	2	2013
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.4.0	1	2013	1	2015
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.4.5	1	2014	4	2015
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.5.0	2	2015	4	2016
Systems Development: Software & Hardware Evaluation/Integration Site Deployments: Software Hardware Int, Release 2.5.5	1	2016	3	2017
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.3.5	1	2012	1	2012
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.4.0	2	2013	2	2013
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.4.5	2	2014	2	2014
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.5.0	3	2015	3	2015
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.5.5	3	2016	3	2016
Test & Evaluation Milestones: Risk Assessment: Risk Assessment, Release 2.6.0	3	2017	3	2017
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.3.0	1	2011	2	2011
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.3.5	2	2012	4	2012
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.4.0	1	2014	3	2014
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.4.5	1	2015	3	2015
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.5.0	2	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation Milestones: Development/Functional Testing: Development/ Functional Testing, Release 2.5.5	2	2017	4	2017
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.3.0	2	2011	2	2011
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.3.5	4	2012	4	2012
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.4.0	2	2014	2	2014
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.4.5	1	2015	1	2015
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.5.0	2	2016	2	2016
Produnction Milestones: Engineering Change Package: Engineering Change Package, Release 2.5.5	2	2017	2	2017
PEMA				
Systems Development: Contract Award: PEMA - Contract Award (2)	1	2011	1	2011
Systems Development: Requirements: Requirements Study (2)	2	2011	2	2011
Systems Development: Engineering Change Proposal By T/M/S: Engineering Change Proposal By T/M/S ECP 2	3	2011	3	2011
Systems Development: Image Development By T/M/S: Image Development By T/M/S (2)	3	2011	3	2011
Test and Evaluation Milestones: Functional Regression Testing: Functional/Regression Testing (2)	4	2011	4	2011
Test and Evaluation Milestones: Independent Validation & Verifications: Independent Validation & Verification Testing (2)	4	2011	4	2011
Deliveries: Delivery, Release 2	4	2011	4	2011
MALSP II EPUK				
Acquisition Milestone: Prototyping: EPUK 2-1 Prototyping	1	2012	2	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3167: *Joint Technical Data Integration (JTDI)*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Acquisition Milestone: Prototyping: EPUK 2-2 Prototyping	1	2014	4	2014
Acquisition Milestone: Prototyping: MAL-EIT 1.0 Prototyping	2	2015	1	2016
Acquisition Milestone: Contract Award: EPUK Contract Award	1	2012	1	2012
Acquisition Milestone: Contract Award: MAL-EIT Contract Award	1	2015	1	2015
Systems Development: Software Development: EPUK 2-1 Software Development	3	2013	2	2014
Systems Development: Software Development: EPUK 2-2 Software Development	4	2014	3	2015
Systems Development: Software Development: MAL-EIT 1.0 Software Development	1	2016	4	2016
Test & Evaluation: PDR Review: EPUK 2-1 PDR	4	2013	4	2013
Test & Evaluation: PDR Review: EPUK 2-2 PDR	1	2015	1	2015
Test & Evaluation: PDR Review: MAL-EIT 1.0 PDR	2	2016	2	2016
Test & Evaluation: CDR Review: EPUK 2-1 CDR	2	2014	2	2014
Test & Evaluation: CDR Review: EPUK 2-2 CDR	3	2015	3	2015
Test & Evaluation: CDR Review: MAL-EIT 1.0 CDR	4	2016	4	2016
Test & Evaluation: Technical Evaluation: EPUK 2-1 DT&E/OT&E	4	2013	2	2014
Test & Evaluation: Technical Evaluation: EPUK 2-2 DT&E/OT&E	1	2015	3	2015
Test & Evaluation: Technical Evaluation: MAL-EIT 1.0 DT&E/OT&E	2	2016	4	2016
Test & Evaluation: Operation Evaluation: EPUK 2-1 IOT&E	3	2014	3	2014
Test & Evaluation: Operation Evaluation: EPUK 2-2 IOT&E	4	2015	4	2015
Test & Evaluation: Operation Evaluation: MAL-EIT 1.0	1	2017	1	2017
Deliveries: EPUK 2-1 Delivery	1	2015	1	2015
Deliveries: EPUK 2-2 Delivery	2	2016	2	2016
Deliveries: MAL-EIT 1.0 Delivery	3	2017	3	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3185: *Joint Airlift Information System (JALIS)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3185: *Joint Airlift Information System (JALIS)*	0.361	0.419	0.377	-	0.377	0.370	0.379	0.386	0.392	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Joint Air Logistics Information System (JALIS) is a critical element of the DoD CONUS and OCONUS Air Logistics assets. JALIS is an operational scheduling, aircraft management, and data analysis system that allows DoD organizations to submit airlift requirements for passengers and cargo; air logistics flying units to communicate their aircraft availability in a real time graphic display; and designated scheduling organizations to compare airlift requirements to available aircraft and create mission assignments. Using a combination of system displays and email updates, JALIS informs applicable users of mission details and modifications. After mission completion, flying units enter post-mission reporting data critical for the analysis of airlift/aircraft management.

Geographically distributed, JALIS has a user base in excess of 4000 members, and moves thousands of passengers and tons of cargo annually in support of Navy Unique Fleet Essential Airlift, Army's Operational Support Aircraft Agency (OSAA), United States Transportation Command (USTRANSCOM), and United States Marine Corps (USMC).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Joint Air Logistics Information System (JALIS)	0.361	0.419	0.377
Articles:	0	0	0
FY 2011 Accomplishments: - Upgraded configuration to baseline 2.12 using Common Movement Management System requirements documentation. - Worked with Joint Services to prioritize enhancements to field 2 additional versions upgrading the design and code of the JALIS system software			
FY 2012 Plans: Develop additional system capabilities to increase its usability, data accuracy, metrics reporting, and a more robust dashboard tool. Conduct research and development of an interface with USTRANSCOM's program, Global Decision Support System 2, and provide enhancements as required by the Joint Community.			
FY 2013 Plans: Develop additional system capabilities to increase its usability, data accuracy, metrics reporting, and a more robust dashboard tool. Conduct research and development of an interface with the OSAA and provide enhancements as required by the Joint Community.			
Accomplishments/Planned Programs Subtotals	0.361	0.419	0.377

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3185: *Joint Airlift Information System (JALIS)*

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

FY13 contract activities will focus on developing the following capabilities:

1. Provide executive management with a more centralized view of Operational Support Aircraft (OSA) aircraft and missions.
2. Design and code more intuitive displays to increase efficiencies and streamline the training of new users.
3. Provide United States Transportation Command (USTRANSCOM) global visibility of OSA assets and maximize aircraft utilization by increasing the efficiency of inter-service scheduling of DoD passengers and cargo worldwide.

E. Performance Metrics

Performance metrics for JALIS include:

1. Increase aircraft utilization by 30%
2. Increase the efficiency of modifying aircraft status by 60%
3. Decrease training requirements for Schedulers by 20%
4. Increase the accuracy of flown flight time data by 90%

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 3185: *Joint Airlift Information System (JALIS)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development, Analysis and QA support	C/CPFF	TSM Corp:Bartlett, TN	-	0.419	Oct 2011	0.377	Oct 2012	-		0.377	0.000	0.796	
		Subtotal	-	0.419		0.377		-		0.377	0.000	0.796	

Remarks

Includes Development, Analysis, and Quality Assurance efforts.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	0.419		0.377		-		0.377	0.000	0.796	

Remarks

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9406: *Maintenance Data Warehouse*	-	5.167	2.486	-	2.486	2.470	2.521	2.548	2.593	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Maintenance Data Warehouse is a new start beginning in FY12.

A. Mission Description and Budget Item Justification

Maintenance Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) - The development of the DECKPLATE program is the next generation data warehouse for aircraft maintenance, flight, and usage data. It provides a web-based interface to a single source of information currently being stored in multiple Naval Aviation Logistics Data Analysis systems. Through the use of analysis, query, and reporting tools the user has the capabilities to effectively obtain readiness data in a near real-time environment, as well as historical data for trend analysis and records reconstruction. DECKPLATE supports the mission of the warfighter who requires a single source of near real-time aviation data in which to base critical readiness decisions. This requires collecting data from authoritative sources into a data warehouse. Because the warfighter only needs to access one database, the time consuming task of collecting various pieces of data from various sources will be reduced and ultimately eliminated. This improves data quality because it reduces the possibility of two systems providing identical data elements, but slightly different data. Data availability is improved through continuous near real-time feeds from the data sources, giving the warfighter the most current information to base decisions. In addition, this also accomplishes a reduction in legacy systems mandated by Office of the Chief of Naval Operations.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Maintenance Data Warehouse/NAVAIR DECKPLATE	-	5.167	2.486
Articles:		0	0
FY 2012 Plans: Begin transition of Aircraft Inventory Readiness and Reporting System (AIRRS) and Logistics Management Decision Support System (LMDSS) functionality into DECKPLATE.			
FY 2013 Plans: Continue transition of AIRRS and LMDSS functionality into DECKPLATE and begin transition of Auto Log Set functionality into DECKPLATE.			
Accomplishments/Planned Programs Subtotals	-	5.167	2.486

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN, 4265: *Other Aviation Support Equipment*	2.749	0.445	0.494	0.000	0.494	2.875	2.927	2.957	3.008	Continuing	Continuing

D. Acquisition Strategy

Maintenance Data Warehouse/NAVAIR Decision Knowledge Programming for Logistics Analysis and Technical Evaluation (DECKPLATE) - RDT&E funding to begin in FY12. Development services will be awarded using a competitively awarded contract under the Seaport Contract System containing a matrix of tasks and required levels of performance. Follow on Contract will utilize the same competitive system. The Services provided under the contract support acquisition will not encompass tasks inherently Governmental in nature. The Statement of Work will include a matrix that establishes the minimum acceptable performance standards.

E. Performance Metrics

Maintenance Data Warehouse/NAVAIR DECKPLATE

1. Metric - During the life of the contract verify conformance with agency specific information processing standards and functional requirements. Prior to delivery of enhanced software, demonstrate the operational capability of the system software. Standard - Functionality of the software to meet required systems architecture and processing capabilities. Max Deviation Allowed - All requirements mandated by law or regulation must be 100% compliant. Quality Assurance - Independent Verification and Validation (IV&V) for testing new releases of software to determine that previous functionality is maintained. Customer satisfaction as measured through limited validated customer complaints, feedback, and surveys.
2. Metric - Interfaces must maintain compatibility among system components in the operational environment. Standard - Service Levels for software: Throughput in terms of processing response time, number of transactions processed per second; volume of data processed over time. Compatibility with particular hardware and software within the existing processing environment. Functionality of software to meet required systems architecture and processing capabilities. Max Deviation Allowed - None. Quality Assurance - Customer satisfaction as measured through limited validated customer complaints, feedback and surveys. Operational monitoring by use of system statistics and logs. IV&V for testing new software, including verifying results to determine that requirements and specifications are met.
3. Metric - Documentation for deliverables must match the agency specific system processing and operational procedures. Standard - Documentation meets agency specific formats for accuracy and completeness. Max Deviation Allowed - None. Quality Assurance - IV&V for determining that documentation delivered by the contractor matches the system processing and operational procedures.
4. Metric - Meet delivery dates/milestones. Period of Performance will be 12 months from the date of award. Standard - Delivery dates are met, or exceeded. Max Deviation Allowed - None. Quality Assurance - 100% inspection.
5. Metric - Security. Standard - Meet all Government and agency specific requirements. Max Deviation Allowed - None. Quality Assurance - 100% inspection to ensure that all Government and Agency specific requirements have been met. Independent verification of security procedures defined by agency (could be performed by a third party, or another agency according to current security regulations and measures).
6. Metric - Enhancement to software shall not adversely affect system performance. Standard - Standards affecting system performance include but are not limited to: response time for resolving problems; CPU busy; response time; memory utilization; storage utilization. Max Deviation Allowed - Base line functionality is met at 100%. Non critical functionality is met at 95%. Quality Assurance - Operational monitoring by use of system statistics and logs.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*

7. Metric - New releases of software must maintain previously provided functionality, while providing enhanced capabilities, or systems corrections. Standard - Software adds value and improves existing functionality without negatively impacting the existing operational environment. Max Deviation Allowed - Base line functionality is met at 100%. Non critical functionality is met at 95%. Quality Assurance - Independent Verification and Validation for testing new releases of software to determine that previous functionality is improved. Customer satisfaction is measured through validated customer complaints and surveys.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	C/CPFF	Wyle:Lexington Park, MD	-	4.616	Nov 2011	1.931	Nov 2012	-		1.931	Continuing	Continuing	Continuing
		Subtotal	-	4.616		1.931		-		1.931			

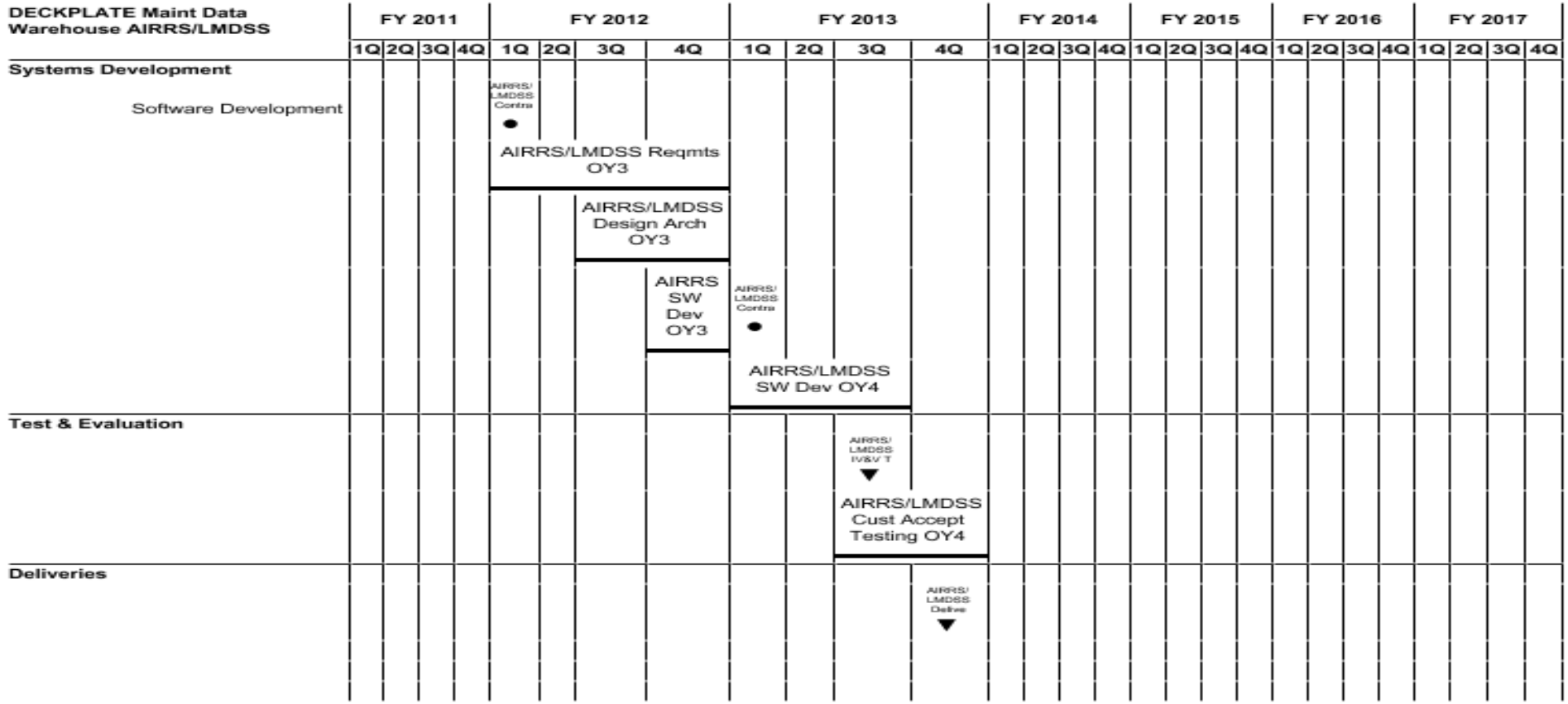
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Supt	WR	NAWCAD:Patuxent River, MD	-	0.551	Oct 2011	0.555	Oct 2012	-		0.555	Continuing	Continuing	Continuing
		Subtotal	-	0.551		0.555		-		0.555			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	5.167		2.486		-		2.486			

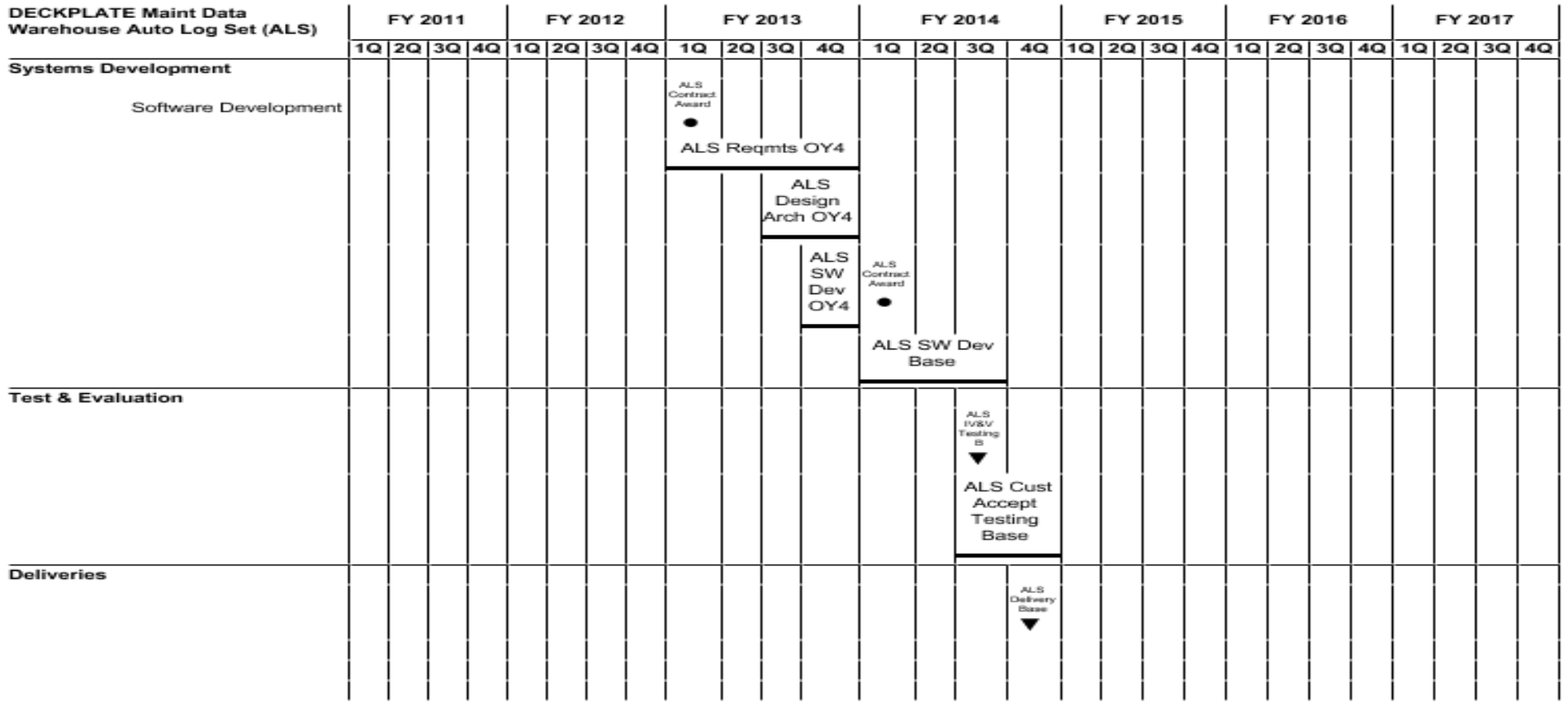
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*



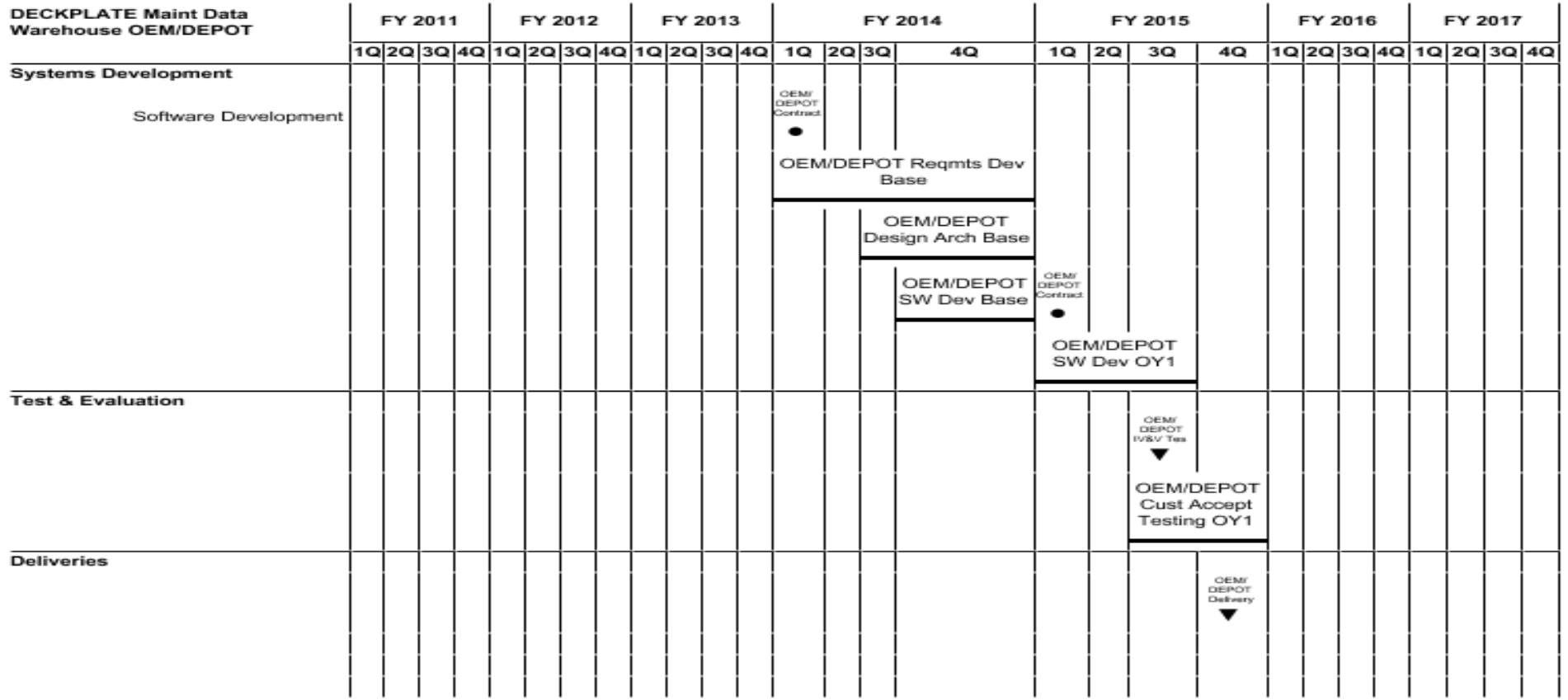
2013DON - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 9406: *Maintenance Data Warehouse*



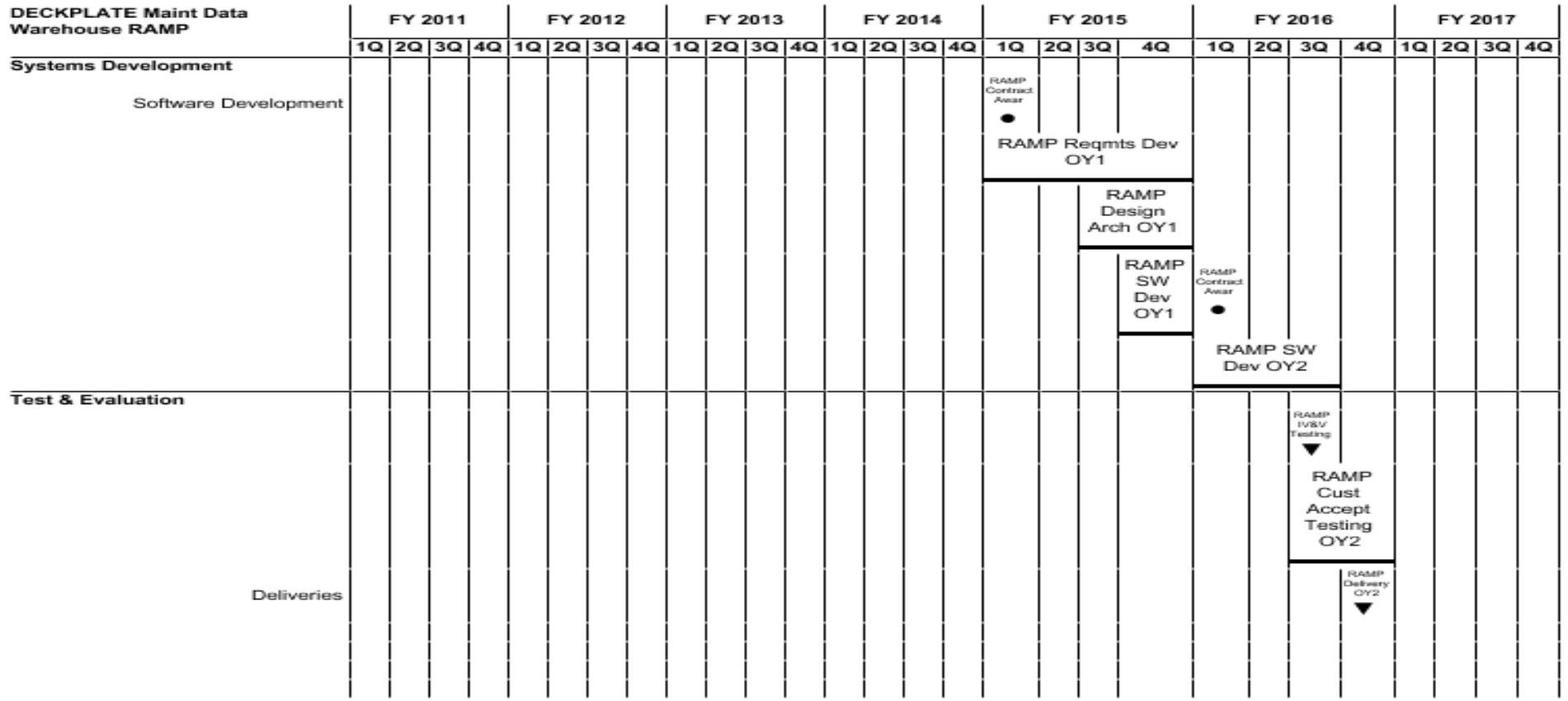
2013DON - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*



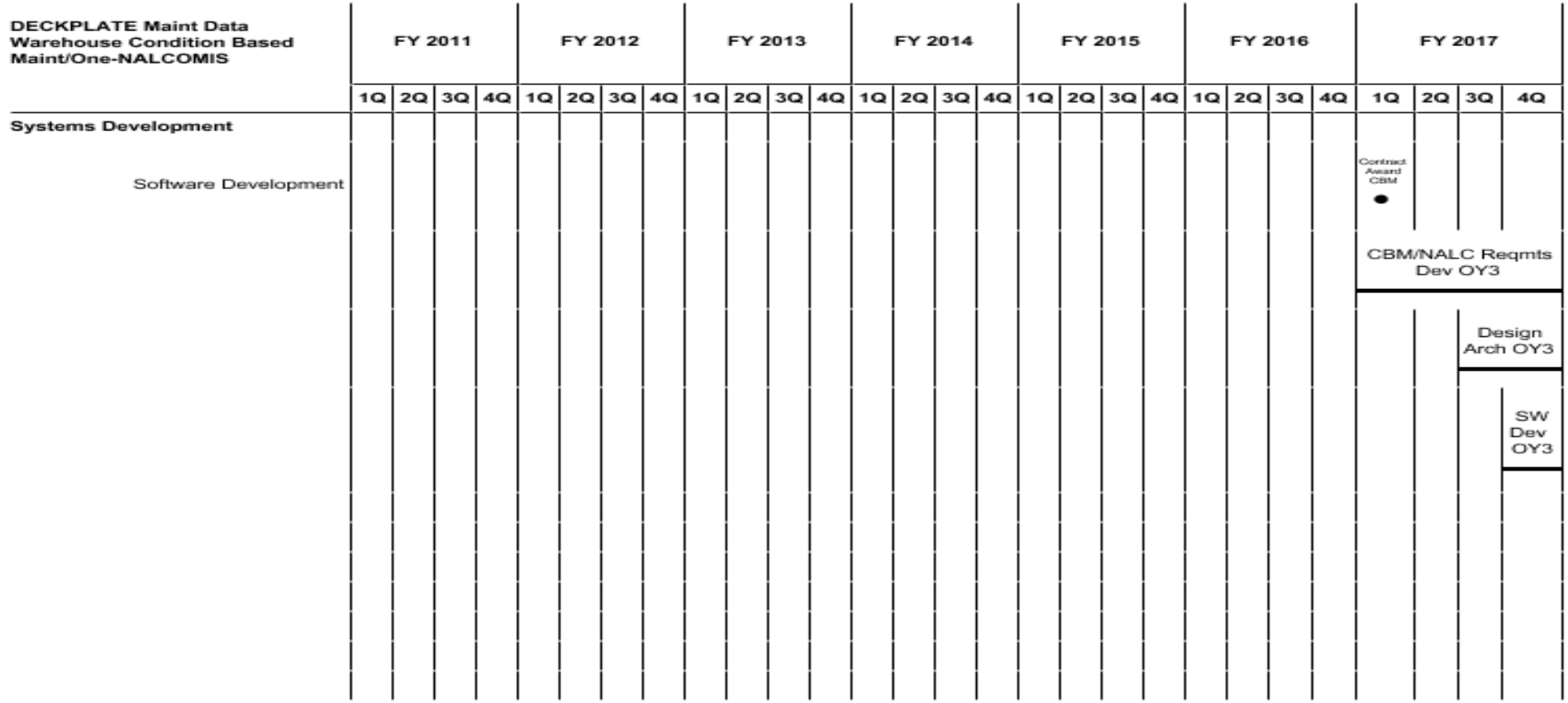
2013DON - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 9406: *Maintenance Data Warehouse*



2013DON - 0605013N - 9406

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*



2013DON - 0605013N - 9406

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605013N: *Information Technology Development*	**PROJECT** 9406: *Maintenance Data Warehouse*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DECKPLATE Maint Data Warehouse AIRRS/LMDSS				
Systems Development: Software Development: Contract Award AIRRS/LMDSS Functionality into DECKPLATE OY3	1	2012	1	2012
Systems Development: Software Development: AIRRS/LMDSS Requirements Development OY3	1	2012	4	2012
Systems Development: Software Development: AIRRS/LMDSS Design & Schema Architecture OY3	3	2012	4	2012
Systems Development: Software Development: AIRRS/LMDSS Software Development OY3	4	2012	4	2012
Systems Development: Software Development: Contract Award AIRRS/LMDSS Functionality into DECKPLATE OY4	1	2013	1	2013
Systems Development: Software Development: AIRRS/LMDSS Software Development OY4	1	2013	3	2013
Test & Evaluation: AIRRS/LMDSS IV&V Testing OY4	3	2013	3	2013
Test & Evaluation: AIRRS/LMDSS Customer Acceptance Testing OY4	3	2013	4	2013
Deliveries: AIRRS/LMDSS Production Release Delivery OY4	4	2013	4	2013
DECKPLATE Maint Data Warehouse Auto Log Set (ALS)				
Systems Development: Software Development: Contract Award ALS Functionality & Reporting into Deckplate OY4	1	2013	1	2013
Systems Development: Software Development: ALS Requirements Development OY4	1	2013	4	2013
Systems Development: Software Development: ALS Design & Schema Architecture OY4	3	2013	4	2013
Systems Development: Software Development: ALS Software Development OY4	4	2013	4	2013

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software Development: Contract Award ALS Functionality & Reporting into DECKPLATE Base	1	2014	1	2014
Systems Development: Software Development: ALS Software Development Base	1	2014	3	2014
Test & Evaluation: ALS IV&V Testing Base	3	2014	3	2014
Test & Evaluation: ALS Customer Acceptance Testing Base	3	2014	4	2014
Deliveries: ALS Production Release Delivery Base	4	2014	4	2014
DECKPLATE Maint Data Warehouse OEM/DEPOT				
Systems Development: Software Development: Contract Award OEM/DEPOT Reporting into Deckplate Base	1	2014	1	2014
Systems Development: Software Development: OEM/DEPOT Reporting Requirements Development Base	1	2014	4	2014
Systems Development: Software Development: OEM/DEPOT Design & Schema Architecture Base	3	2014	4	2014
Systems Development: Software Development: OEM/DEPOT Software Development Base	4	2014	4	2014
Systems Development: Software Development: Contract Award OEM/DEPOT Reporting into DECKPLATE OY1	1	2015	1	2015
Systems Development: Software Development: OEM/DEPOT Software Development OY1	1	2015	3	2015
Test & Evaluation: OEM/DEPOT IV&V Testing OY1	3	2015	3	2015
Test & Evaluation: OEM/DEPOT Customer Acceptance Testing OY1	3	2015	4	2015
Deliveries: OEM/DEPOT Production Release Delivery OY1	4	2015	4	2015
DECKPLATE Maint Data Warehouse RAMP				
Systems Development: Software Development: Contract Award RAMP Functionality into Deckplate OY1	1	2015	1	2015
Systems Development: Software Development: RAMP Requirements Development OY1	1	2015	4	2015

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605013N: *Information Technology Development*	PROJECT 9406: *Maintenance Data Warehouse*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Systems Development: Software Development: RAMP Design & Schema Architecture OY1	3	2015	4	2015
Systems Development: Software Development: RAMP Software Development OY1	4	2015	4	2015
Systems Development: Software Development: Contract Award RAMP Functionality into DECKPLATE OY2	1	2016	1	2016
Systems Development: Software Development: RAMP Software Development OY2	1	2016	3	2016
Test & Evaluation: RAMP IV&V Testing OY2	3	2016	3	2016
Test & Evaluation: RAMP Customer Acceptance Testing OY2	3	2016	4	2016
Test & Evaluation: Deliveries: RAMP Production Release Delivery OY2	4	2016	4	2016
DECKPLATE Maint Data Warehouse Condition Based Maint/One-NALCOMIS				
Systems Development: Software Development: Contract Award CBM/One-NALCOMIS Functionality into Deckplate OY3	1	2017	1	2017
Systems Development: Software Development: CBM/One-NALCOMIS Requirements Development OY3	1	2017	4	2017
Systems Development: Software Development: CBM/One-NALCOMIS Design & Schema Architecture OY3	3	2017	4	2017
Systems Development: Software Development: CBM/One-NALCOMIS Software Development OY3	4	2017	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605018N: *(U)Navy Integrated Mil Human Res Sys(N-IMHRS)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	14.965	55.017	-	-	-	-	-	-	-	0.000	69.982
3034: *Future Personnel and Pay Solution*	14.965	55.017	-	-	-	-	-	-	-	0.000	69.982

Note

The correct title for the Program is Future Personnel and Pay Solution (FPPS) vice Navy Integrated Military Human Resource System (N-IMHRS).

The FPPS program has been restructured beginning in FY13. Funding for Project 3034 has been transferred from PE 0605018N 3034 to PE 0605013N Project 2905 (BUPERS IT Modernization) beginning in FY13 to reflect the Navy's new strategy on the modernization of integrated personnel and pay systems. This transfer realigns the funds to the responsible organization required to execute the strategy approved by the DON Executive Advisory Board (EAB) in July, 2011. This strategy includes Business Process Re-engineering (BPR) defined requirements, modernization/risk reduction of current personnel/pay systems centered around the Navy's Standard Integrated Personnel System (NSIPS), and development of a future pay engine. The effort will now be known as Integrated Personnel and Pay Systems - Navy (IPPS-N).

A. Mission Description and Budget Item Justification

Funding supports design, development and modernization efforts. The mission is to develop economical and efficient solutions allowing the Navy to respond rapidly to warfighter personnel and pay information needs.

The following programmed activities support the mission:

a. Analyze and develop risk reduction activities

b. Analyze interfaces, data, and reports between current core Human Resources Personnel functions, Navy Standard Integrated Personnel System, and other Government Off the Shelf solutions

c. Continue data structure mapping and management activities for Authoritative Data Warehouse to eventually warehouse Navy authoritative data

d. Develop architecture that aligns with OSD Business Enterprise Architecture and the Navy Department of Defense Architectural Framework

e. Continue development and management of prototype lab environment for system blueprinting activities

f. Conduct functionality analysis of legacy systems to deploy into prototype lab

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0605018N: *(U)Navy Integrated Mil Human Res Sys(N-IMHRS)*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	27.444	55.050	76.912	-	76.912
Current President's Budget	14.965	55.017	-	-	-
Total Adjustments	-12.479	-0.033	-76.912	-	-76.912
• Congressional General Reductions	-	-0.033			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.400	-			
• Program Adjustments	-	-	-76.912	-	-76.912
• Congressional General Reductions Adjustments	-0.079	-	-	-	-
• Congressional Directed Reductions Adjustments	-12.000	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605018N: *(U)Navy Integrated Mil Human Res Sys(N-IMHRS)*	PROJECT 3034: *Future Personnel and Pay Solution*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3034: *Future Personnel and Pay Solution*	14.965	55.017	-	-	-	-	-	-	-	0.000	69.982
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The correct name of the program is Future Personnel and Pay Solution (FPPS).

The FPPS program has been restructured beginning in FY13. Funding for Project 3034 has been transferred from PE 0605018N 3034 to PE 0605013N Project 2905 (BUPERS IT Modernization) beginning in FY13 to reflect the Navy's new strategy on the modernization of integrated personnel and pay systems. This transfer realigns the funds to the responsible organization required to execute the strategy approved by the DON Executive Advisory Board (EAB) in July, 2011. This strategy includes Business Process Re-engineering (BPR) defined requirements, modernization/risk reduction of current personnel/pay systems centered around the Navy's Standard Integrated Personnel System (NSIPS), and development of a future pay engine.

A. Mission Description and Budget Item Justification

Funding supports design, development and modernization efforts. The mission provides development, integration, engineering, and test support of future personnel and pay system capabilities, including the modernization and consolidation of existing pay and personnel systems re-using the Defense Integrated Military Human Resources System (DIMHRS) core software to the maximum extent practical. Specific goals include: (1) development of specifications and design of solutions to consolidate Navy legacy personnel systems, (i.e. development of a single operational data store of personnel data and development and modernization of legacy interfaces that must remain beyond the consolidation effort); (2) replacement of the pay capability provided by the Defense Joint Military Pay System (DJMS), providing for Navy specific requirements for pay and personnel management and develop external interfaces as required to support pay management for the Navy; (3) development and modernization support from the functional organization; and (4) operational test and evaluation support for the selected future personnel and pay solution.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Future Personnel and Pay Solution	14.965	55.017	-
Articles:	0	0	
FY 2011 Accomplishments:			
- Conducted analysis of the software maturity and capabilities provided in the DIMHRS core software baseline.			
- Conducted Navy Performance Appraisal Reporting System (NPARS) Analysis of Alternatives (AoA), made recommendations, and began implementation of identified solution.			
- Developed Integrated Personnel & Pay Systems- Navy Concept of Operations (IPPS-N CONOPS).			
- Conducted analysis to identify risk reduction activities.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605018N: *(U)Navy Integrated Mil Human Res Sys(N-IMHRS)*	**PROJECT** 3034: *Future Personnel and Pay Solution*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
- Continue to analyze and develop risk reduction activities. - Perform analysis of interfaces, data, and reports between Reserve Headquarters System (RHS) and Navy Standard Integrated Personnel System (NSIPS). - Conduct data structure mapping and management activities for Authoritative Data Warehouse (ADW) to eventually warehouse RHS authoritative data. - Develop architecture that aligns with Office of Secretary (OSD) Business Enterprise Architechture (BEA) and the Navy Department of Defense Architecture Framework (DoDAF). - Create a prototype lab environment for system blueprinting activities. - Conduct migration and integration of legacy functionality into lab test systems (prototype). This will support risk reduction activities by providing analysis of legacy functionality with respect to data structure mapping and design. The lab environment will also support OSD Authoritative Data Warehouse(ADW) activities by providing a testing environment for interfacing the OSD Enterprise Information Warehouse (EIW) to the Navy ADW. - Conduct development of lab test systems to support multiple versions of target software environment (PeopleSoft, SAP, SAS).			
Accomplishments/Planned Programs Subtotals	14.965	55.017	-

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Navy began the transition to the development and modification of Future Personnel and Pay System (FPPS) in FY 2010. The acquisition strategy consists of an incremental migration of Reserve Headquarters System (RHS), Officer Personnel Information Systems (OPINS), Navy Enlisted System (NES) and Inactive Manpower and Personnel Management Information System (IMAPMIS) into Navy Standard Integrated Personnel System (NSIPS). This strategy also includes development of an Authoritative Data Warehouse which occurs concurrently with the migration of legacy systems.

E. Performance Metrics

1. Demonstrate the feasibility of at least one technical architecture approach for FPPS.
2. A 20% reduction in the number of redundant transactional systems for personnel and pay.
3. A 15% reduction in system interfaces.
4. Documented plan and preliminary design for the consolidation of legacy personnel systems.
5. Develop a Navy Authoritative Data Warehouse for data standardization.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605018N: *(U)Navy Integrated Mil Human Res Sys(N-IMHRS)*	PROJECT 3034: *Future Personnel and Pay Solution*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development and Integration	C/FP	Unknown:Unknown	9.200	42.000	Mar 2012	-		-		-	0.000	51.200	51.200
Enterprise Architechture	C/FP	SSC NOLA:New Orleans, LA	1.000	-		-		-		-	0.000	1.000	1.000
		Subtotal	10.200	42.000		-		-		-	0.000	52.200	52.200

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Tools and License	C/FP	Unknown:Unknown	3.400	3.800	Mar 2012	-		-		-	0.000	7.200	7.200
System Engineering Management	C/FP	Unknown:Unknown	-	9.217	Mar 2012	-		-		-	0.000	9.217	9.217
Authoritative Data	C/FP	SSC NOLA:New Orleans, LA	1.365	-		-		-		-	0.000	1.365	1.365
		Subtotal	4.765	13.017		-		-		-	0.000	17.782	17.782

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.965	55.017		-		-		-	0.000	69.982	69.982

Remarks

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	558.152	624.461	606.204	-	606.204	534.767	531.141	480.278	369.209	340.250	4,044.462
3059: *CH-53K Development*	558.152	624.461	606.204	-	606.204	534.767	531.141	480.278	369.209	340.250	4,044.462

A. Mission Description and Budget Item Justification

The CH-53 is the only marinized heavy-lift helicopter in the world and is the Marine Corps only heavy-lift helicopter. The CH-53 mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. An improved CH-53 is needed to support Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53K will provide improvements in range and payload, performance, cargo handling, turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53K program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC).

Total aircraft quantities for the CH-53K program are 205 helicopters. This includes one Ground Test Vehicle (GTV) and four Engineering Development Models (EDMs) for System Development and Demonstration (SDD), to be purchased with RDT&E funds. Of the remaining 200 aircraft, four System Demonstration Test Articles (SDTA's) will be RDT&E funded and the remaining will be Aircraft Procurement, Navy (APN) funded. The SDTA's will be incrementally funded beginning in FY13. The SDTA's will be used to prove out production and integration processes for airworthy helicopters on a pilot production line, and to provide aircraft for Initial Operational Test and Evaluation. In FY16, a Low Rate Initial Production 1 (LRIP 1) contract will be awarded to procure two APN Articles with an Advanced Acquisition Contract award in FY15.

FY13 RDT&E efforts focus on CH-53K SDD activities that includes GTV and EDM fabrication and assembly, ground testing, flight test preparation, and initial funding for SDTA's.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	577.435	629.461	609.796	-	609.796
Current President's Budget	558.152	624.461	606.204	-	606.204
Total Adjustments	-19.283	-5.000	-3.592	-	-3.592
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-5.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-16.346	-			
• Program Adjustments	-	-	-3.535	-	-3.535
• Rate/Misc Adjustments	-	-	-0.057	-	-0.057
• Congressional General Reductions Adjustments	-2.937	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Delays in design maturity, aircraft fuselage skin qualification, and production issues caused Engineering Development Models (EDMs) to move to FY14. Production Review Readiness (PRR) moved from 3Q14 to 1Q15.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3059: *CH-53K Development*	558.152	624.461	606.204	-	606.204	534.767	531.141	480.278	369.209	340.250	4,044.462
Quantity of RDT&E Articles	0	0	0	0	0	0	0	4	0		

A. Mission Description and Budget Item Justification

The CH-53 is the only marinized heavy-lift helicopter in the world and is the Marine Corps only heavy-lift helicopter. The CH-53 mission is the conduct of expeditionary heavy-lift assault transport of armored vehicles, equipment and personnel to support distributed operations deep inland from a sea-based center of operations. The CH-53E "Super Stallion" was introduced into operations in 1980 as an upgrade version of the CH-53D. The CH-53E has developed performance degradation, fatigue life, interoperability, maintenance supportability, and other operational concerns. An improved CH-53 is needed to support Marine Air-Ground Task Force heavy-lift requirements in the 21st century joint environment. The CH-53K will provide improvements in range and payload, performance, cargo handling, turn-around times, reliability and maintainability, interoperability, and survivability. The CH-53K program is required to provide full system capability, including shipboard compatibilities, at Initial Operational Capability (IOC).

Total aircraft quantities for the CH-53K program are 205 helicopters. This includes one Ground Test Vehicle (GTV) and four Engineering Development Models (EDMs) for System Development and Demonstration (SDD), to be purchased with RDT&E funds. Of the remaining 200 aircraft, four System Demonstration Test Articles (SDTA's) will be RDT&E funded and the remaining will be Aircraft Procurement, Navy (APN) funded. The SDTA's will be incrementally funded beginning in FY13. The SDTA's will be used to prove out production and integration processes for airworthy helicopters on a pilot production line, and to provide aircraft for Initial Operational Test and Evaluation. In FY16, a Low Rate Initial Production 1 (LRIP 1) contract will be awarded to procure two APN Articles with an Advanced Acquisition Contract award in FY15.

FY13 RDT&E efforts focus on CH-53K SDD activities that includes GTV and EDM fabrication and assembly, ground testing, flight test preparation, and initial funding for SDTA's.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Air Vehicle Development	493.926	543.721	500.964
Articles:	0	0	0
FY 2011 Accomplishments: Perform SDD fabrication and assembly activities for the CH-53K EDM air vehicles and its associated subsystems and components, Government Furnished Equipment (GFE) and CH-53K ancillary systems.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Perform SDD fabrication and assembly activities for the CH-53K air vehicles and its associated subsystems and components, GFE and CH-53K ancillary systems. ***FY 2013 Plans:*** Perform Systems Design and Development fabrication and assembly activities for the CH-53K EDM air vehicles and its associated subsystems and components, GFE and CH-53K ancillary systems. Initiate System Demonstration Test Articles procurement and start aircraft systems ground testing and flight test preparation.			
Title: Integrated Logistics Support and Test & Evaluation ***Articles:*** ***FY 2011 Accomplishments:*** Perform in-house, field activity, and contractor support of Integrated Logistic support and Test & Evaluation (T&E) activities, including but not limited to planning, preparations, and management of data, support equipment, Studies & Analysis, training elements of CH-53K development, and program T&E efforts. ***FY 2012 Plans:*** Perform in-house, field activity, and contractor support of Integrated Logistic support and T&E activities, including but not limited to planning, preparations, and management of data, support equipment, Studies & Analysis, training elements of CH-53K development, and program T&E efforts. ***FY 2013 Plans:*** Perform in-house, field activity, and contractor support of Integrated Logistic support. T&E activities include further component qualifications and inital Ground Test Vehicle testing. Continue to increase staffing of Integrated Test Team in preparation for flight test.	10.635 0	24.167 0	39.265 0
Title: Systems Engineering & Project Management ***Articles:*** ***FY 2011 Accomplishments:*** In-house, field activitiy, and contractor support of Integrated Product Teams (IPTs) to allow for the preparation of acquisition strategy, examination of equipment and avionics for the CH-53K, and development of acquisition documentation. Efforts include, but are not limited to, government development support, engineering support, program management support, systems engineering support, and travel for the CH-53K program. ***FY 2012 Plans:*** In-house, field activitiy, and contractor support of IPTs to allow for the preparation of acquisition strategy, examination of equipment and avionics for the CH-53K, and development of acquisition documentation. Efforts include, but are not limited to,	53.591 0	56.573 0	65.975 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
government development support, engineering support, program management support, systems engineering support, and travel for the CH-53K program. ***FY 2013 Plans:*** In-house, field activitiy, and contractor support of IPTs to allow for the examination and certification of equipment and avionics for the CH-53K. Efforts include continued component qualification, preparation for Engineering Development Model flight certification, government development support, engineering support, program management support, systems engineering support, and travel for the CH-53K program.			
Accomplishments/Planned Programs Subtotals	558.152	624.461	606.204

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN/0158: *CH-53K (Heavy Lift)*	0.000	0.000	0.000	0.000	0.000	0.000	47.253	410.267	417.184	18,176.010	19,050.714
• APN/0605: *CH-53K Initial Spares*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	30.853	74.290	1,298.067	1,403.210

D. Acquisition Strategy

On 31 October 2005, the Defense Acquisition Board reviewed the CH-53K program for a Milestone (MS) B decision on entry to Systems Design and Development (SDD). The Under Secretary of the Defense (Acquisition, Technology and Logistics) signed the Acquisition Decision Memorandum allowing the program to proceed with SDD on 22 December 2005. The CH-53K program was initiated as an Acquisition Category ID program, based on total estimated costs for Research, Development, Test and Evaluation and Aircraft Procurement Navy. The SDD prime contract was awarded sole-source contract to Sikorsky Aircraft Corporation on 5 April, 2006, following the MS B decision. SDD efforts will develop and document technology maturations, selections, and integration into CH-53E design modifications for a new CH-53K variant; produce one CH-53K Ground Test Vehicle and four CH-53K Engineering Developmental Models; and conduct and support T&E activities fulfilling milestone exit criteria. In FY13, the SDD contract will be modified to include four System Demonstration Test Articles.

E. Performance Metrics

Since MS B, the program team has followed a disciplined, event-driven, design and development process. The program completed Preliminary Design Review in September 2008 and conducted Critical Design Review in July 2010. System meets or exceeds all Key Performance Parameters.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	SS/CPIF	Sikorsky:Stratford, CT	2,231.295	517.401	Dec 2011	452.860	Dec 2012	-		452.860	1,504.228	4,705.784	4,705.784
GFE	Various	Various:Various	30.878	5.306	Dec 2011	30.000	Dec 2012	-		30.000	80.737	146.921	
Award Fees	SS/CPAF	Sikorsky:Stratford, CT	73.400	-		-		-		-	0.000	73.400	73.400
Incentive Fees	SS/CPIF	Sikorsky:Stratford, CT	9.550	21.014	Sep 2012	18.164	Sep 2013	-		18.164	51.284	100.012	100.012
		Subtotal	2,345.123	543.721		501.024		-		501.024	1,636.249	5,026.117	

Remarks

Award Fee earned prior to contract conversion was fifty-five percent of the available award fee pool.
CPAF to CPIF contract conversion awarded 31 Mar 11.
Primary Hardware Development Target Value of Contract includes System Demonstration Test Articles (SDTA's).

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	Various	NAWCAD:Lakehurst, NJ	-	-		4.552	Dec 2012	-		4.552	27.121	31.673	
Integrated Logistics Support	WR	NAWCAD:Lakehurst, NJ	4.000	4.500	Dec 2011	4.800	Dec 2012	-		4.800	20.000	33.300	
Integrated Logistics Support	WR	NADEP:Cherry Point, NC	2.000	2.500	Dec 2011	2.950	Dec 2012	-		2.950	15.000	22.450	
Integrated Logistics Support	WR	Various:Various	34.904	2.084	Dec 2011	2.750	Dec 2012	-		2.750	23.022	62.760	
Studies & Analyses	WR	NSWC:Crane, IN	2.000	5.000	Dec 2011	5.000	Dec 2012	-		5.000	9.272	21.272	
Studies & Analyses	Various	Various:Various	21.627	1.272	Dec 2011	1.300	Dec 2012	-		1.300	25.462	49.661	
		Subtotal	64.531	15.356		21.352		-		21.352	119.877	221.116	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	WR	Various:Various	10.239	2.357	Dec 2011	6.213	Dec 2012	-		6.213	44.371	63.180	
Developmental Test & Evaluation	WR	TBD:TBD	-	4.000	Dec 2011	6.180	Dec 2012	-		6.180	0.000	10.180	
Operational Test & Evaluation	WR	COMPTEVFOR:Norfolk, VA	1.095	2.000	Dec 2011	4.000	Dec 2012	-		4.000	29.178	36.273	
Live Fire Test & Evaluation	WR	NAWCWD:China Lake, CA	2.534	0.454	Dec 2011	1.520	Dec 2012	-		1.520	11.848	16.356	
		Subtotal	13.868	8.811		17.913		-		17.913	85.397	125.989	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	12.296	2.621	Dec 2011	2.930	Dec 2012	-		2.930	18.077	35.924	
Government Engineering Support	WR	NAWCAD:Pax River, MD	180.420	38.159	Dec 2011	46.101	Dec 2012	-		46.101	265.235	529.915	
Program Management Support	C/CPFF	Camber:MD	11.000	11.500	Dec 2011	11.500	Dec 2012	-		11.500	20.000	54.000	54.000
Program Management Support	Various	Various:Various	58.645	3.793	Dec 2011	4.844	Dec 2012	-		4.844	82.385	149.667	
Travel	WR	NAWCAD:Pax River, MD	3.246	0.500	Dec 2011	0.540	Dec 2012	-		0.540	4.771	9.057	
Acquisition Workforce Fund	Various	Various:Various	1.950	-		-		-		-	0.000	1.950	
		Subtotal	267.557	56.573		65.915		-		65.915	390.468	780.513	

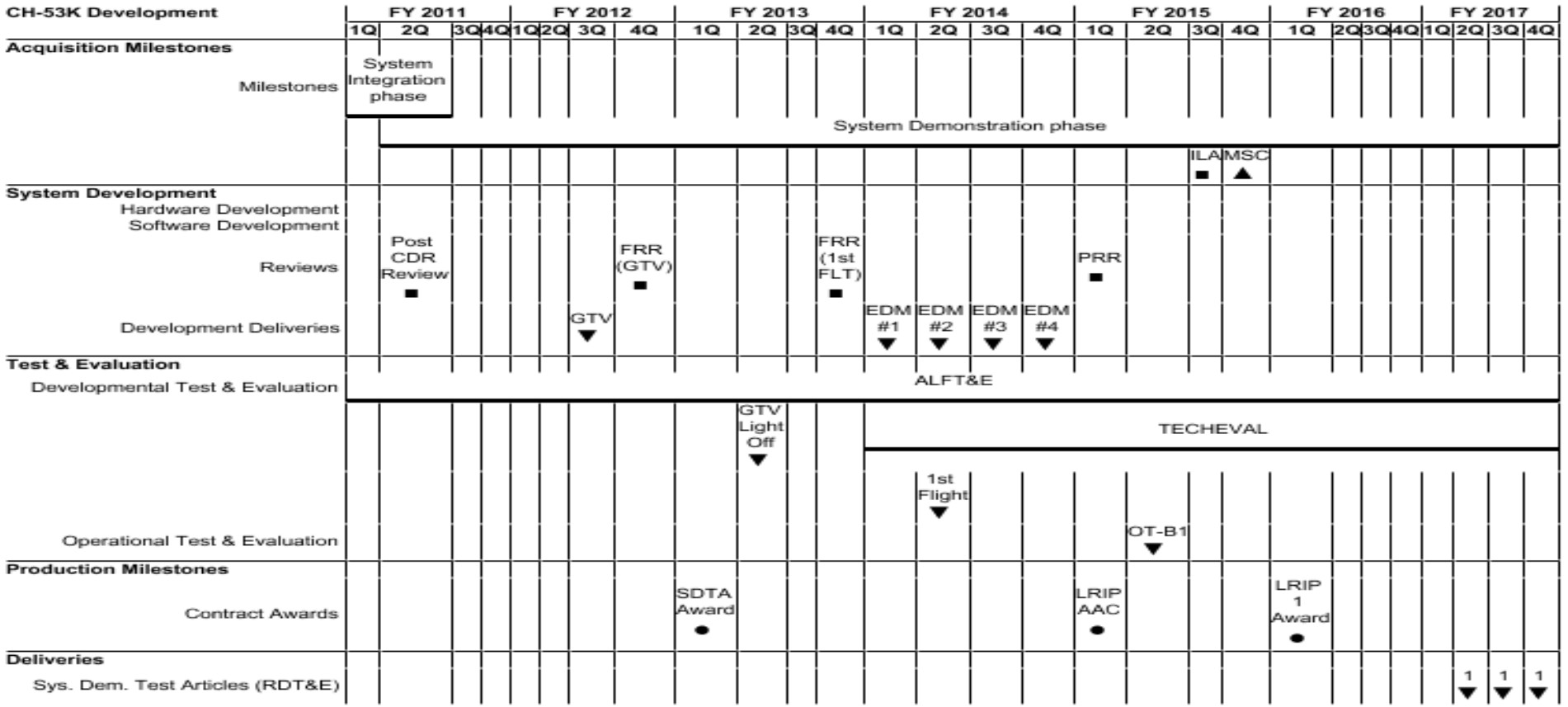
	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	2,691.079	624.461		606.204		-		606.204	2,231.991	6,153.735	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*	

	Total Prior Years Cost	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*



2013PB - 0605212N - 3059

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605212N: *CH-53K*	**PROJECT** 3059: *CH-53K Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
CH-53K Development				
Acquisition Milestones: Milestones: System Integration phase	1	2011	2	2011
Acquisition Milestones: Milestones: System Demonstration phase	2	2011	4	2017
Acquisition Milestones: Milestones: Integrated Logistics Assessment (ILA)	3	2015	3	2015
Acquisition Milestones: Milestones: Milestone C	4	2015	4	2015
System Development: Reviews: DRR/Post CDR Assessment	2	2011	2	2011
System Development: Reviews: Flight Readiness Review (FRR) - GTV	4	2012	4	2012
System Development: Reviews: Flight Readiness Review (FRR) - 1st Flight	4	2013	4	2013
System Development: Reviews: Production Readiness Review (PRR)	1	2015	1	2015
System Development: Development Deliveries: Ground Test Vehicle (GTV) Delivery	3	2012	3	2012
System Development: Development Deliveries: Engineering Development Model (EDM) #1 delivery	1	2014	1	2014
System Development: Development Deliveries: Engineering Development Model (EDM) #2 delivery	2	2014	2	2014
System Development: Development Deliveries: Engineering Development Model (EDM) #3 delivery	3	2014	3	2014
System Development: Development Deliveries: Engineering Development Model (EDM) #4 delivery	4	2014	4	2014
Test & Evaluation: Developmental Test & Evaluation: Alternative Live Fire T&E (ALFT&E) (Comp.)	1	2011	4	2017
Test & Evaluation: Developmental Test & Evaluation: Developmental Test / TECHEVAL	1	2014	4	2017
Test & Evaluation: Developmental Test & Evaluation: GTV Light Off	2	2013	2	2013
Test & Evaluation: Developmental Test & Evaluation: First Flight	2	2014	2	2014

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605212N: *CH-53K*	PROJECT 3059: *CH-53K Development*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Test & Evaluation: Operational Test & Evaluation: Operational Test & Evaluation (OT) B1 (OT-B1)	2	2015	2	2015
Production Milestones: Contract Awards: System Demonstration Test Articles (SDTA) Award	1	2013	1	2013
Production Milestones: Contract Awards: LRIP Advance Acquisition Contract	1	2015	1	2015
Production Milestones: Contract Awards: LRIP 1 Contract Award	1	2016	1	2016
Deliveries: Sys. Dem. Test Articles (RDT&E): System Demonstration Test Articles (SDTA) *1	2	2017	2	2017
Deliveries: Sys. Dem. Test Articles (RDT&E): System Demonstration Test Articles (SDTA) *2	3	2017	3	2017
Deliveries: Sys. Dem. Test Articles (RDT&E): System Demonstration Test Articles (SDTA) *3	4	2017	4	2017

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	80.911	108.395	-	-	-	-	-	-	-	0.000	189.306
2211: *Joint Air-to-Ground Missile*	80.911	108.395	-	-	-	-	-	-	-	0.000	189.306

A. Mission Description and Budget Item Justification

Joint Air-to-Ground Missile (JAGM) is an Army-led close-air-support missile program that will utilize tri-mode seeker technology and be employed against land and maritime stationary and moving targets. JAGM will provide a fixed wing, rotary wing, and unmanned aircraft system launched missile system that provides advanced Line-of-sight and Beyond-line-of-sight capabilities, including precision point targeting and fire and forget seeker technologies, increased range, and increased lethality against soft and hardened moving and stationary targets. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/ countermeasure environment, against both stationary and moving targets. Initial Navy platform integration efforts include the F/A-18E/F, AH-1Z and MH-60R platforms. The JAGM system includes the missiles, trainers, containers, support equipment, and launcher modifications.

FY08 funding captured under PE 0604450N.

Due to changing priorities within the Department and overall reduction in defense funding it was deemed a manageable risk to terminate the Navy Marine Corps investment in the JAGM program through the FYDP.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	100.846	118.395	124.490	-	124.490
Current President's Budget	80.911	108.395	-	-	-
Total Adjustments	-19.935	-10.000	-124.490	-	-124.490
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-10.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-9.950	-			
• SBIR/STTR Transfer	-2.072	-			
• Program Adjustments	-	-	-124.754	-	-124.754
• Rate/Misc Adjustments	-	-	0.264	-	0.264
• Congressional Recision Adjustments	-7.400	-	-	-	-
• Congressional General Reductions Adjustments	-0.513	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605450N: *Joint Air-to-ground Missile (JAGM)*

Change Summary Explanation

Due to changing priorities within the Department and overall reduction in defense funding it was deemed a manageable risk to terminate the Navy Marine Corps investment in the JAGM program through the FYDP.

Funding in FY12 will go towards the orderly shutdown of Navy and Marine Corp investment in JAGM. Following the maturation of the shutdown requirement the Department of Navy intends to apply any remaining funds towards other higher Navy priorities.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2211: *Joint Air-to-Ground Missile*	80.911	108.395	-	-	-	-	-	-	-	0.000	189.306
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Joint Air-to-Ground Missile (JAGM) is an Army-led close-air-support missile program that will utilize tri-mode seeker technology and be employed against land and maritime stationary and moving targets. JAGM will provide a fixed wing, rotary wing, and unmanned aircraft system launched missile system that provides advanced Line-of-sight and Beyond-line-of-sight capabilities, including precision point targeting and fire and forget seeker technologies, increased range, and increased lethality against soft and hardened moving and stationary targets. Its multi-mode seeker will provide robust capability in adverse weather, day or night, and in an obscured/ countermeasure environment, against both stationary and moving targets. Initial Navy platform integration efforts include the F/A-18E/F, AH-1Z and MH-60R platforms. The JAGM system includes the missiles, trainers, containers, support equipment, and launcher modifications.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: JAGM Technology Development (TD) Phase	80.911	108.395	-
Articles:	0	0	
FY 2011 Accomplishments: Major efforts included continued software integration activities on the AH-1Z and F/A-18E/F, preparation and release of the EMD RFP, activities associated with preparation for MS B, source selection activities, and modeling and simulation efforts associated with maritime target and scene generation software.			
FY 2012 Plans: Funding in FY12 will go towards the orderly shutdown of Navy and Marine Corp investment in JAGM. Following the maturation of the shutdown requirement the Department of Navy intends to apply any remaining funds towards other higher Navy priorities.			
Accomplishments/Planned Programs Subtotals	80.911	108.395	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• RDT&E ARMY, 0605450A: *JAGM*	130.340	126.895	10.000	0.000	10.000	10.000	9.800	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The Joint Air-to-Ground Missile (JAGM) system is a pre-Acquisition Category 1D Joint Army/Navy program with the Army designated as lead service. The Government utilized full and open competition to initiate the Technology Development (TD) phase of the JAGM program. The originally planned 27 month TD phase is complete and

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*

In the TD Phase the two contractors completed a Preliminary Design Review, wind tunnel, ground testing, and flight testing in support of initial Navy platform integration activities.

Due to changing priorities within the Department and overall reduction in defense funding it was deemed a manageable risk to terminate the Navy Marine Corps investment in the JAGM program through the FYDP. Funding in FY12 will go towards the orderly shutdown of Navy and Marine Corp investment in JAGM. Following the maturation of the shutdown requirement the Department of Navy intends to apply any remaining funds towards other higher Navy priorities.

E. Performance Metrics

JAGM completed the OSD directed 27 month competitive technology development effort 1Q FY11.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Technology Development	C/FP	Lockheed Martin:Orlando, FL	13.846	36.947	Aug 2012	-		-		-	0.000	50.793	50.793
Technology Development	C/FP	Raytheon:Tucson, AZ	13.846	36.947	Aug 2012	-		-		-	0.000	50.793	50.793
Technology Development	MIPR	AMRDEC Redstone Arsenal:Huntsville, AL	-	17.000	Aug 2012	-		-		-	0.000	17.000	
Aircraft Integration (AH-1Z)	SS/T&M	Bell Helicopter:Hurst, TX	6.920	2.100	Apr 2012	-		-		-	0.000	9.020	9.020
Sytems Eng - WD	WR	NAWCWD:China Lake, CA	43.412	9.401	Apr 2012	-		-		-	0.000	52.813	
EMD	C/CPIF	TBD:TBD	27.499	-		-		-		-	0.000	27.499	27.499
Aircraft Integration	WR	NAWCAD:Patuxent River	4.395	-		-		-		-	0.000	4.395	
Aircraft Integration	SS/T&M	Various:Various	21.193	-		-		-		-	0.000	21.193	21.193
		Subtotal	131.111	102.395		-		-		-	0.000	233.506	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Development Support	WR	NAWCWD:China Lake, CA	13.007	1.400	Apr 2012	-		-		-	0.000	14.407	
Integrated Logistics Support	WR	NAWCWD:China Lake, CA	1.602	0.600	Apr 2012	-		-		-	0.000	2.202	
Software Development	SS/T&M	LMSI:Owego, NY	11.446	-		-		-		-	0.000	11.446	11.446
		Subtotal	26.055	2.000		-		-		-	0.000	28.055	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	NAWCWD:China Lake, CA	8.172	0.400	Apr 2012	-		-		-	0.000	8.572	
Test & Evaluation	WR	NAWCAD:Patuxent River, MD	8.125	-		-		-		-	0.000	8.125	
Test & Evaluation	MIPR	Various:Various	11.865	-		-		-		-	0.000	11.865	
		Subtotal	28.162	0.400		-		-		-	0.000	28.562	

Remarks

Contract type for Test $ Evaluation to NASA AMES is IPR.

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contr Eng Supt - ETS (NON-FFRDC)	Various	Various:Various	7.200	1.000	Apr 2012	-		-		-	0.000	8.200	
Government Eng Sup	WR	NAWCAD:Pax River, MD	9.193	2.000	Apr 2012	-		-		-	0.000	11.193	
Travel - Internal	WR	NAVAIR:Pax River, MD	0.300	0.600	Feb 2012	-		-		-	0.000	0.900	
Acquisition Workforce Fund	Various	Various:Various	0.404	-		-		-		-	0.000	0.404	
		Subtotal	17.097	3.600		-		-		-	0.000	20.697	

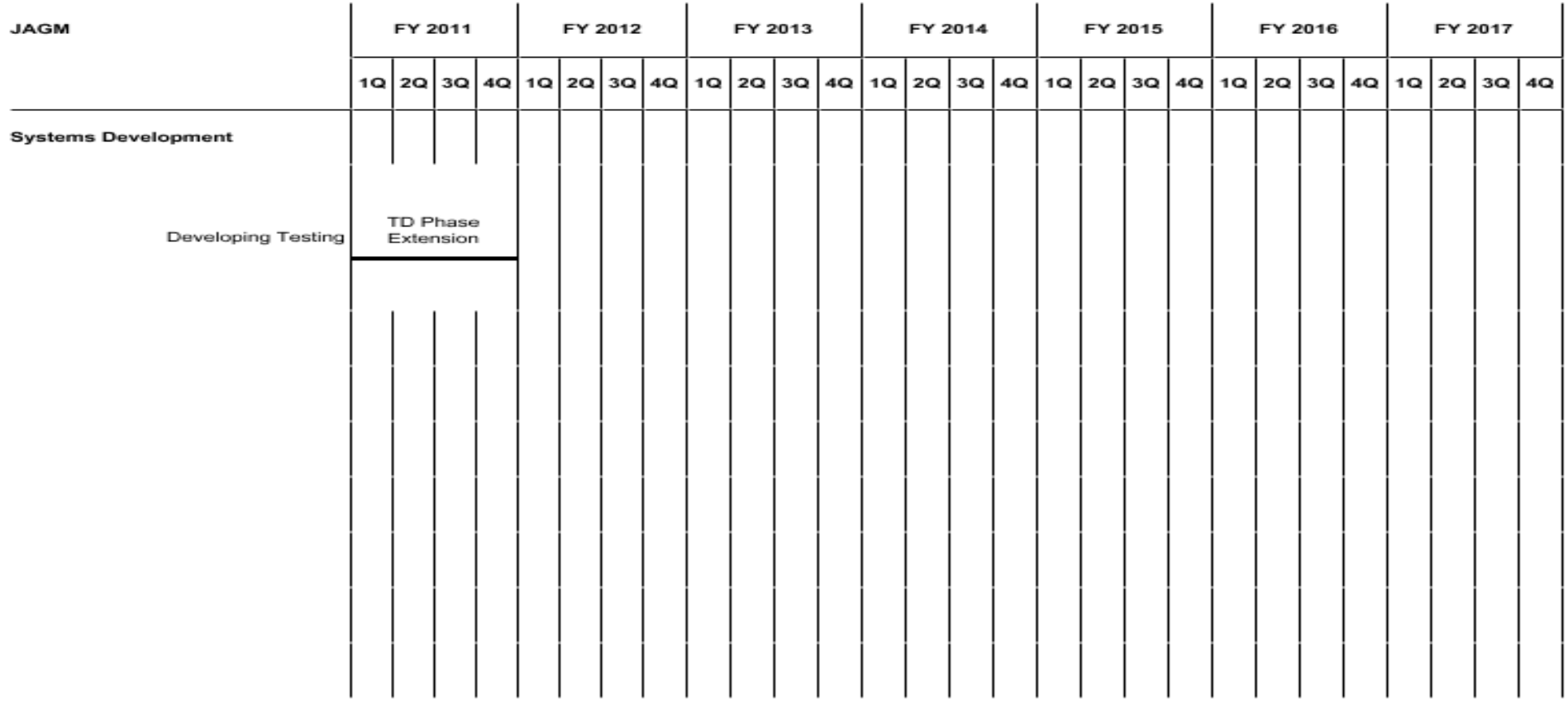
Remarks

Contract type for Travel is TO.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	202.425	108.395		-		-		-	0.000	310.820	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*



2013PB - 0605450N - 2211

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605450N: *Joint Air-to-ground Missile (JAGM)*	PROJECT 2211: *Joint Air-to-Ground Missile*

Schedule Details

	Start		End	
Events by Sub Project	Quarter	Year	Quarter	Year
JAGM				
Systems Development: Developing Testing: TD Phase	1	2011	4	2011

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	907.465	618.684	421.102	-	421.102	269.733	299.211	210.604	199.875	Continuing	Continuing
2696: *Multi-Mission Maritime Aircraft*	889.634	544.637	341.621	-	341.621	137.053	127.065	29.375	10.820	Continuing	Continuing
3181: *P-8A Spiral One Development*	3.956	59.832	58.149	-	58.149	54.236	43.325	21.363	-	0.000	240.861
3218: *P-8A Spiral 2 Development*	1.936	4.215	21.332	-	21.332	78.444	128.821	159.866	189.055	Continuing	Continuing
9999: *Congressional Adds*	11.939	10.000	-	-	-	-	-	-	-	0.000	21.939

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft will replace the aging P-3 aircraft. The P-8A program was initiated in response to the Joint Requirements Oversight Council (JROC) validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the P-8A Capability Production Document #791-88-09, validated and approved on 22 June 2009. A successful Critical Design Review was completed in June 2007. In August 2007 the Design Readiness Review was conducted and resulted in approval to obligate funding for the fabrication of the Stage II flight test aircraft. The Interim Program Review (IPR) was completed on 7 April 2009 based on release of Acquisition Decision Memorandum. The first flight of P-8A occurred on 25 Apr 2009. Milestone (MS) C was successfully completed on 11 August 2010.

The primary objectives of SDD are to: perform the system detailed design, develop and produce Systems Integration Labs, develop and build ground and flight test articles, conduct ground and flight tests and prepare for milestones. Ground testing includes the conduct of static testing, fatigue testing and Live Fire Test and Evaluation. Six flight test aircraft have been built during SDD. These test aircraft are grouped into two stages based on which phase of the test program the aircraft will support. SDD Stage I flight test aircraft (FY06/Qty-3) support Integrated Test and Evaluation (IT&E). SDD Stage II flight test aircraft (FY09/Qty-3) support the completion of IT&E and Initial Operational Test and Evaluation (IOT&E) after being updated to the production configuration. The SDD contract includes the development and initial builds of training devices to support IOT&E. The scope of SDD includes activities necessary to facilitate an efficient transition of the fleet to achieve the P-8A Initial Operational Capability (IOC) of Increment 1 in CY13. The scope of SDD also includes the engineering and verification of correction of deficiencies identified in testing. P-8A entered Production and Deployment development phase in the 4th quarter of FY10 after completing MS-C Defense Acquisition Board.

P-8A program is based on an evolutionary acquisition strategy consisting of sequential incremental enhancements to system capabilities that will retain cost-wise effectiveness for winning major combat operations through 2020. In order to pace the threat, Increment 2, the Next Phase of Capabilities, will incorporate the following capabilities into the P-8A: Multi-Static Active Coherent (MAC), Automatic Identification System, Rapid Capabilities Insertion (RCI), updates to the Tactical Operations Center, as well as additional Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW) and Intelligence Surveillance and Reconnaissance capabilities as Engineering Change Proposals (ECPs). The scope of this effort includes the integration, design, and test of the capability enhancements to the P-8A and associated TOC ground support facilities and initial trainers. Integration of these capabilities will be accomplished incrementally, based on the scope of the integration effort.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*

As part of the P-8A evolutionary acquisition strategy, Increment 3 will incorporate the capabilities defined in the Capabilitiy Development Document approved by JROC on 25 June 2010. In order to pace the threat, the Increment 3 will incorporate the following capabilities into the P-8A: MAC, RCI, updates to the TOC, as well as additional ASW, ASuW and Intelligence Surveillance and Reconnaissance capabilities. These capabilities and other emergent capability requirements will be investigated during the Technology Development phase of Increment 3 for the P-8A and Tactical Operations Center (ground support facility).

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	929.240	622.713	334.551	-	334.551
Current President's Budget	907.465	618.684	421.102	-	421.102
Total Adjustments	-21.775	-4.029	86.551	-	86.551
• Congressional General Reductions	-	-0.029			
• Congressional Directed Reductions	-	-14.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	10.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-1.157	-			
• SBIR/STTR Transfer	-27.802	-			
• Program Adjustments	-	-	86.359	-	86.359
• Rate/Misc Adjustments	-	-	0.192	-	0.192
• Congressional General Reductions Adjustments	-4.816	-	-	-	-
• Congressional Add Adjustments	12.000	-	-	-	-

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Small Business Technology Insertion*	11.939	-
Congressional Add: *MMA SBIR (Cong)*	-	10.000
Congressional Add Subtotals for Project: 9999	11.939	10.000
Congressional Add Totals for all Projects	11.939	10.000

Change Summary Explanation

Technical:

Schedule:

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*

Project 2696: Based on current program development Integrated Test & Evaluation extended to 3Q FY13; added Correction of Deficiencies Engineering from 1Q FY13 to 4Q FY15; added Follow-on Test & Evaluation (FOT&E) 1 Verification/Correction of Deficiencies(VCD) from 3Q FY13 to 1Q FY14; and changed FOT&E to FOT&E 2 (VCD); LRIP end date moved to 3Q FY15; AP 3 Contract Award moved from 3Q FY11 to 4Q FY11 and LRIP 2 Contract Award moved from 3Q FY11 to 1Q FY12: Due to the scope changes, S-2 Fatigue Test has been amended to add 3rd Lifetime of Fatigue Test to include Teardown and Inspection, S-2 Fatigue Testing was added to schedule from 2Q FY12 to 4Q FY17.

Project 3181: As a result of updated schedule analysis Contract Award Integration/Engineering and Manufacturing Development (EMD) award date moved from 1Q FY12 to 3Q FY12 and Integration/EMD start moved from 1Q FY12 to 3Q FY12 and end was extended to 2Q FY16. The decision to execute the Increment 2 project via Engineering Change Proposals allowed accelerated delivery of some Increment 2 capabilities, subsequently added Operation Test & Evaluation (OT&E)(Early Operational Capability (EOC)), Retrofit Kits contract award moved from 3Q FY14 to 1Q FY14, Kit Deliveries moved from 1Q FY16 to 2Q FY15 and removed Production and Deployment; renamed OT&E to OT&E (IOC) and shifted it to a 2Q FY15 start and 4Q FY15 end.

Project 3218: Based on current program profile, MS-A changed from 3Q FY12 to 2Q FY13, MS-B changed from 2Q FY14 to 3Q FY15, Tech Dev Contract Award moved from 3Q FY12 to 3Q FY13, Tech Dev start and end dates shifted 3 qtrs, from 3Q FY12 to 2Q FY13, Preliminary Design Review moved from 3Q FY13 to 1Q FY15: Due to MS-B move from 2Q FY14 to 3Q FY15, System Development and Demonstration EMD moved from 2Q FY14 to 3Q FY15 and Contract Award (EMD) moved from 2Q FY14 to 3Q FY15, CDR moved from 4Q FY15 to 4Q FY16, and IT start moved from 3Q FY16 to 2Q FY17 and was extended to 4Q FY17. Added Engineering Studies starting 4Q FY12 and ending 2Q FY13 and Lab Testing starting 2Q FY15 and ending 1Q FY17.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2696: *Multi-Mission Maritime Aircraft*	889.634	544.637	341.621	-	341.621	137.053	127.065	29.375	10.820	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) will replace the aging P-3 aircraft. The P-8A program was initiated in response to the Joint Requirements Oversight Council (JROC) validated Mission Needs Statement (MNS), "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the P-8A Capability Production Document (CPD) #791-88-09, validated and approved on 22 June 2009. A successful Critical Design Review was completed in June 2007. In August 2007 the Design Readiness Review was conducted and resulted in approval to obligate funding for the fabrication of the Stage II flight test aircraft. The Interim Program Review was completed on 7 April 2009 based on release of Acquisition Decision Memorandum. The first flight of P-8A occurred on 25 Apr 2009. Milestone (MS) C was successfully completed on 11 August 2010.

The primary objectives of SDD are to: perform the system detailed design, develop and produce Systems Integration Labs, develop and build ground and flight test articles, conduct ground and flight tests and prepare for milestones. Ground testing includes the conduct of static testing, fatigue testing and Live Fire Test and Evaluation. Six flight test aircraft have been built during SDD. These test aircraft are grouped into two stages based on which phase of the test program the aircraft will support. SDD Stage I flight test aircraft (FY06/Qty-3) support Integrated Test and Evaluation (IT&E). SDD Stage II flight test aircraft (FY09/Qty-3) support the completion of IT&E and Initial Operational Test and Evaluation (IOT&E) after being updated to the production configuration. The SDD contract includes the development and initial builds of training devices to support IOT&E. The scope of SDD includes activities necessary to facilitate an efficient transition of the fleet to achieve the P-8A Initial Operational Capability of Increment 1 in CY13. The scope of SDD also includes the engineering and verification of correction of deficiencies identified in testing. P-8A entered Production and Deployment development phase in the 4th quarter of FY10 after completing MS-C Defense Acquisition Board.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Continue System Development & Demonstration	844.108	475.710	312.601
Articles:	0	0	0
FY 2011 Accomplishments: SDD phase. Scope of effort included: design, develop, build, and test P-8A aircraft, avionics, mission systems, Systems Integration Lab (SILs), ground and flight test articles (SDD Stage I, FY06, Qty-3; SDD Stage II, FY09, Qty-3), other test articles, associated Tactical Operations Center (TOC) updates, and development and initial builds of training devices to support IOT&E. Conducted the periodic cost and schedule performance reviews associated with Earned Value Management (EVM) and prepare and conduct technical, test and logistic reviews.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
SDD phase. Scope of effort includes: design, develop, build, and test P-8A aircraft, avionics, mission systems, SILs, wind tunnel test models, ground and flight test articles (SDD Stage I, FY06, Qty-3; SDD Stage II, FY09, Qty-3), other test articles, associated TOC updates, and development and initial builds of training devices to support Initial Operational Test & Evaluation. Conduct the periodic cost and schedule performance reviews associated with Earned Value Management and prepare and conduct technical, test and logistic reviews. ***FY 2013 Plans:*** SDD phase. Scope of effort includes: design, develop, build, and test P-8A aircraft, avionics, mission systems, Systems Integration Labs, wind tunnel test models, ground and flight test articles (SDD Stage I, FY06, Qty-3; SDD Stage II, FY09, Qty-3), other test articles, associated Tactical Operation Center updates, and development and initial builds of training devices to support continuation of engineering and verification of correction of deficiencies and Follow On Test & Evaulation and Verification of Correction of Deficiencies. Conduct the periodic cost and schedule performance reviews associated with EVM and prepare and conduct technical, test and logistic reviews.			
Title: Continue Engineering and Technical Development and Test for Sys Dev & Demonstration contracts	45.526	68.927	29.020
Articles:	0	0	0
FY 2011 Accomplishments: Test, Government Furnished Equipment, Engineering and Technical Development for the SDD contract: Effort included: analysis of contracted deliverables; direct technical and logistic support of system development and delivery; assessment of contractors readiness to proceed in design/development; evaluate contract cost, schedule, and performance; test preparations, provide necessary government furnished equipment and test articles, risk assessment/mitigation; program control; performance status; and plan and prepare for future Milestone/Decision Reviews and develop associated documentation. Modeling & Simulation tools will be developed to assess proposed risk mitigations. Conduct and support IT&E and Live Fire Test & Evaluation (LFT&E). ***FY 2012 Plans:*** Continue analysis of contracted deliverables; direct technical and logistic support of system development and delivery; assessment of contractors readiness to proceed in design/development; evaluate contract cost, schedule, and performance; test preparations, provide necessary government furnished equipment and test articles, risk assessment/mitigation; program control; performance status; and plan and prepare for future Milestone/Decision Reviews and develop associated documentation. Modeling & Simulation tools will be developed to assess proposed risk mitigations. Conduct and support IT&E and LFT&E. ***FY 2013 Plans:*** Continue analysis of contracted deliverables; direct technical and logistic support of system development and delivery; assessment of contractors readiness to proceed in design/development; evaluate contract cost, schedule, and performance; test preparations, provide necessary government furnished equipment and test articles, risk assessment/mitigation; program			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
control; performance status; and plan and prepare for future Milestone/Decision Reviews and develop associated documentation. Modeling & Simulation tools will be developed to assess proposed risk mitigations. Conduct and support IT&E and LFT&E.			
Accomplishments/Planned Programs Subtotals	889.634	544.637	341.621

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN1/0193: *P-8A MMA*	1,903.128	2,253.745	2,746.434	0.000	2,746.434	3,687.148	4,261.513	3,870.661	2,515.746	2,376.792	25,515.627
• APN6/0605: *P-8A Initial Spares*	98.060	62.307	90.691	0.000	90.691	15.415	15.348	1.614	0.352	0.000	389.525
• MILCON: *P-8A MILCON*	0.000	32.070	0.000	0.000	0.000	111.338	263.691	69.324	0.000	0.000	482.340

D. Acquisition Strategy

The MMA Milestone 0 was approved 22 March 2000 and the resulting Acquisition Decision Memorandum directed P-8A to begin the Concept Exploration phase consisting of an Analysis of Alternatives and industry concept studies. These activities began 3Q/01 and were funded under Program Element 0702207N Project Unit W2737. Approval to enter Component Advance Development (CAD) was attained from the Overarching Integrated Product Team on 18 Jan 2002 and the Milestone Decision Authority Under Secretary of Defense for Acquisition, Technology, & Logistics approved the program Acquisition Strategy on 8 Feb 2002. The CAD was a competitive award to multiple contractors to define alternative MMA concept system architectures and evaluate associated risks and proposed mitigations. Selection of MMA concept and approval to enter SDD phase occurred at MS B decision review on 28 May 2004. The contract was awarded to Boeing on 14 June 2004. The SDD phase is being used to design, develop and test the P-8A system. The P-8A program was initiated in response to the Joint Requirements Oversight Council validated Mission Needs Statement, "Broad Area Maritime and Littoral Armed Intelligence, Surveillance and Reconnaissance" and the requirements for the program are defined in the Capability Production Document. MS C was successfully completed on 11 August 2010 approving entry into the Production and Deployment Phase. P-8A Initial Operational Capability objective is FY 2013.

E. Performance Metrics

Milestone C completed 4th quarter 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Award Fee for Primary HW	C/CPAF	Boeing:Seattle, WA	174.181	49.399	Oct 2011	4.587	Oct 2012	-		4.587	0.000	228.167	228.167
Info. Assurance	WR	NAWC AD:Pax River, MD	0.931	-		-		-		-	0.000	0.931	
Primary HW Dev - Boeing	C/CPAF	Boeing:Seattle, WA	5,914.953	421.611	Oct 2011	303.125	Oct 2012	-		303.125	284.021	6,923.710	6,923.710
Primary HW Dev - SPAWAR	WR	SPAWAR:San Diego, CA	38.619	3.000	Feb 2012	-		-		-	0.000	41.619	
Sys Eng (gov)	WR	NAWC AD:Pax River, MD	61.308	1.700	Nov 2011	4.889	Nov 2012	-		4.889	2.830	70.727	
All other PY Product Dev.	Various	Various:Various	70.538	-		-		-		-	0.000	70.538	
		Subtotal	6,260.530	475.710		312.601		-		312.601	286.851	7,335.692	

Remarks

The total award fee issued to date was 2.4% of the total budget.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Int. Log Gov	WR	NAWC AD:Pax River, MD	40.354	4.006	Nov 2011	3.699	Nov 2012	-		3.699	0.000	48.059	
Int Log Gov	WR	NAWC TSD:Orlando, FL	12.091	0.961	Nov 2011	-		-		-	0.000	13.052	
Tech Dev Gov	WR	NAWC AD:Pax River, MD	68.648	2.756	Nov 2011	0.753	Nov 2012	-		0.753	0.000	72.157	
All other PY Support Cost	Various	Various:Various	15.486	-		-		-		-	0.000	15.486	
		Subtotal	136.579	7.723		4.452		-		4.452	0.000	148.754	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev T&E - Gov	WR	NAWC AD:Pax River, MD	54.699	18.970	Nov 2011	8.414	Nov 2012	-		8.414	16.542	98.625	
GFE & GFI	WR	NAWC AD:Pax River, MD	48.764	21.843	Nov 2011	4.933	Nov 2012	-		4.933	0.000	75.540	
LFT&E - Gov	WR	NAWC WD:China Lake	21.771	5.321	Nov 2011	2.162	Nov 2012	-		2.162	0.000	29.254	
Oper Test & Eval	WR	NAWC AD:Pax River, MD	-	9.804	Nov 2011	6.680	Nov 2012	-		6.680	0.000	16.484	
All other PY T&E Cost	Various	Various:Various	5.187	-		-		-		-	0.000	5.187	
		Subtotal	130.421	55.938		22.189		-		22.189	16.542	225.090	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Mgmt Suppt Serv (NON-FFRDC)	C/CPFF	RBC INC:Alexandria, VA	21.274	0.233	Nov 2011	0.661	Nov 2012	-		0.661	0.461	22.629	22.629
Program Mgmt Support	WR	NAWC AD:Pax River, MD	29.811	5.033	Nov 2011	1.092	Nov 2012	-		1.092	0.000	35.936	
Travel	Various	NAWC AD:Pax River, MD	2.785	-		0.201	Oct 2012	-		0.201	0.125	3.111	
All other PY Support Cost	Various	Various:Various	20.060	-		-		-		-	0.000	20.060	
Eng Tech Services (NON-FFRDC)	C/CPFF	ASEC:Lexington Park MD	2.979	-	Nov 2011	0.425	Nov 2012	-		0.425	0.334	3.738	3.738
		Subtotal	76.909	5.266		2.379		-		2.379	0.920	85.474	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	6,604.439	544.637		341.621		-		341.621	304.313	7,795.010	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 2696: *Multi-Mission Maritime Aircraft*

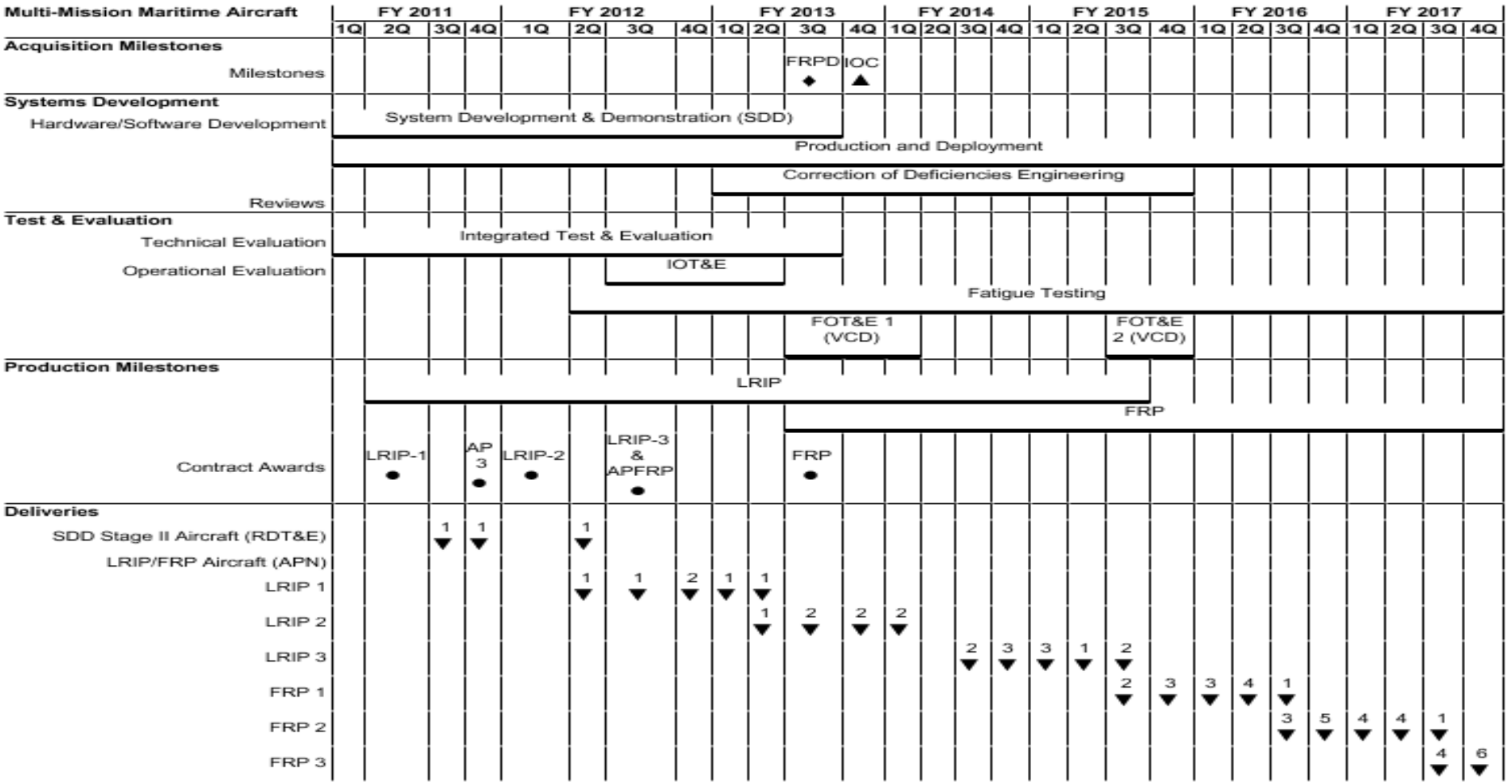


Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 2696: *Multi-Mission Maritime Aircraft*

2013PB - 0605500N - 2696

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 2696: *Multi-Mission Maritime Aircraft*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Multi-Mission Maritime Aircraft				
Acquisition Milestones: Milestones: Full Rate Production (FRP) Decision	3	2013	3	2013
Acquisition Milestones: Milestones: Initial Operating Capability (IOC)	4	2013	4	2013
Systems Development: Hardware/Software Development: System Development & Demonstration (SDD)	1	2011	3	2013
Systems Development: Hardware/Software Development: Production and Deployment	1	2011	4	2017
Systems Development: Hardware/Software Development: Correction of Deficiencies Engineering	1	2013	4	2015
Test & Evaluation: Technical Evaluation: Integrated Test & Evaluation (Flight Test)	1	2011	3	2013
Test & Evaluation: Operational Evaluation: Initial Operational Test and Evaluation (IOT&E)	3	2012	2	2013
Test & Evaluation: Operational Evaluation: Fatigue Testing	2	2012	4	2017
Test & Evaluation: Operational Evaluation: Follow-on Test & Evaluation 1 (Defferals & High Priority Correction of Deficiencies)	3	2013	1	2014
Test & Evaluation: Operational Evaluation: Follow-on Test & Evaluation 2 (Verification of Correction of Deficiencies)	3	2015	4	2015
Production Milestones: Low Rate Initial Production (LRIP)	2	2011	3	2015
Production Milestones: Full Rate Production (FRP)	3	2013	4	2017
Production Milestones: Contract Awards: LRIP Lot #1 (Aircraft Procurement Navy (APN))	2	2011	2	2011
Production Milestones: Contract Awards: AP LRIP#3 Contract award	4	2011	4	2011
Production Milestones: Contract Awards: LRIP Lot #2 (APN)	1	2012	1	2012
Production Milestones: Contract Awards: LRIP Lot #3 (APN) and AP FRP Contract award	3	2012	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 2696: *Multi-Mission Maritime Aircraft*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Production Milestones: Contract Awards: FRP Contract Award	3	2013	3	2013
Deliveries: SDD Stage II Aircraft (RDT&E): SDD Stage II Aircraft (RDT&E) Q3 2011	3	2011	3	2011
Deliveries: SDD Stage II Aircraft (RDT&E): SDD Stage II Aircraft (RDT&E) Q4 2011	4	2011	4	2011
Deliveries: SDD Stage II Aircraft (RDT&E): SDD Stage II Aircraft (RDT&E) Q2 2012	2	2012	2	2012
Deliveries: LRIP 1: LRIP Aircraft (APN) Q2 2012	2	2012	2	2012
Deliveries: LRIP 1: LRIP Aircraft (APN) Q3 2012	3	2012	3	2012
Deliveries: LRIP 1: LRIP Aircraft (APN) Q4 2012	4	2012	4	2012
Deliveries: LRIP 1: LRIP Aircraft (APN) Q1 2013	1	2013	1	2013
Deliveries: LRIP 1: LRIP Aircraft (APN) Q2 2013	2	2013	2	2013
Deliveries: LRIP 2: LRIP Aircraft (APN) Q2 2013	2	2013	2	2013
Deliveries: LRIP 2: LRIP Aircraft (APN) Q3 2013	3	2013	3	2013
Deliveries: LRIP 2: LRIP Aircraft (APN) Q4 2013	4	2013	4	2013
Deliveries: LRIP 2: LRIP Aircraft (APN) Q1 2014	1	2014	1	2014
Deliveries: LRIP 3: LRIP Aircraft (APN) Q3 2014	3	2014	3	2014
Deliveries: LRIP 3: LRIP Aircraft (APN) Q4 2014	4	2014	4	2014
Deliveries: LRIP 3: LRIP Aircraft (APN) Q1 2015	1	2015	1	2015
Deliveries: LRIP 3: LRIP Aircraft (APN) Q2 2015	2	2015	2	2015
Deliveries: LRIP 3: LRIP Aircraft (APN) Q3 2015	3	2015	3	2015
Deliveries: FRP 1: FRP Aircraft (APN) Q3 2015	3	2015	3	2015
Deliveries: FRP 1: FRP Aircraft (APN) Q4 2015	4	2015	4	2015
Deliveries: FRP 1: FRP Aircraft (APN) Q1 2016	1	2016	1	2016
Deliveries: FRP 1: FRP Aircraft (APN) Q2 2016	2	2016	2	2016
Deliveries: FRP 1: FRP Aircraft (APN) Q3 2016	3	2016	3	2016
Deliveries: FRP 2: FRP Aircraft (APN) Q3 2016	3	2016	3	2016
Deliveries: FRP 2: FRP Aircraft (APN) Q4 2016	4	2016	4	2016

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 2696: *Multi-Mission Maritime Aircraft*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Deliveries: FRP 2: FRP Aircraft (APN) Q1 2017	1	2017	1	2017
Deliveries: FRP 2: FRP Aircraft (APN) Q2 2017	2	2017	2	2017
Deliveries: FRP 2: FRP Aircraft (APN) Q3 2017	3	2017	3	2017
Deliveries: FRP 3: FRP Aircraft (APN) Q3 2017	3	2017	3	2017
Deliveries: FRP 3: FRP Aircraft (APN) Q4 2017	4	2017	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3181: *P-8A Spiral One Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3181: *P-8A Spiral One Development*	3.956	59.832	58.149	-	58.149	54.236	43.325	21.363	-	0.000	240.861
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) program is based on an evolutionary acquisition strategy consisting of sequential incremental enhancements to system capabilities that will retain cost-wise effectiveness for winning major combat operations through 2020. In order to pace the threat, Increment 2, the Next Phase of Capabilities (NPC-1), will incorporate the following capabilities into the P-8A: Multi-Static Active Coherent (MAC), Automatic Identification System, Rapid Capabilities Insertion (RCI), updates to the Tactical Operations Center (TOC), as well as additional Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW) and Intelligence Surveillance and Reconnaissance (ISR) capabilities. Increment 2 will be executed as an Engineering Change Proposal to the baseline program.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Perform technology demostrations and analyses of proposed new capabilities	0.537	53.029	39.792
Articles:	0	0	0
FY 2011 Accomplishments: Continued development of integration design of new P-8A capabilities. Prepared for Engineering Change Proposals (ECP) 1 Program Design Review (PDR).			
FY 2012 Plans: Continue development of integration design of new P-8A capabilities. Complete ECP 1 PDR & Critical Design Review. Conduct laboratory and preliminary development testing.			
FY 2013 Plans: Continue development of integration design of new P-8A capabilities. Complete ECP 2 PDR. Conduct laboratory and preliminary development testing.			
Title: Conduct technical, cost, risk and logistics analysis of proposed technologies	3.419	6.803	18.357
Articles:	0	0	0
FY 2011 Accomplishments: Conducted technical, cost, risk and logistics analysis of proposed technologies. Provided technical and management support for the development of acquisition documentation. Provided engineering and management of technical development effort.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3181: *P-8A Spiral One Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct technical, cost, risk and logistics analysis of proposed technologies. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of technical development effort.			
FY 2013 Plans: Conduct technical, cost, risk and logistics analysis of proposed technologies. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of technical development effort.			
Accomplishments/Planned Programs Subtotals	3.956	59.832	58.149

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• APN5/0586: *P-8 Series*	0.000	0.000	5.302	0.000	5.302	7.152	21.571	21.942	22.316	2,140.203	2,218.486

D. Acquisition Strategy

The P-8A MMA program is based on an evolutionary acquisition strategy consisting of sequential incremental enhancements to system capabilities that will retain cost-wise effectiveness for winning major combat operations through 2020. In order to pace the threat, the Next Phase of Capabilities (NPC-1) will incorporate the following capabilities into the P-8A: Multi-Static Active Coherent, Rapid Capabilities Insertion, updates to the Tactical Operations Center, as well as additional Anti-Submarine Warfare, Anti-Surface Warfare and Intelligence Surveillance and Reconnaissance capabilities.

E. Performance Metrics

Approval of Increment 2 ECPs.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3181: *P-8A Spiral One Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev - Risk Reduction/Preliminary Design II	C/CPFF	Boeing:Seattle, WA	1.975	5.291	Nov 2011	-		-		-	0.000	7.266	7.266
Primary HW Dev - Integration/ EMD	C/CPFF	Boeing:Seattle, WA	-	41.359	Apr 2012	33.422	Nov 2012	-		33.422	59.863	134.644	134.644
Sys Eng (gov)	WR	NAWC AD:Pax River, MD	9.233	6.379	Nov 2011	6.370	Nov 2012	-		6.370	17.312	39.294	
All other PY Product Dev	Various	Various:Various	7.893	-		-		-		-	0.000	7.893	7.893
		Subtotal	19.101	53.029		39.792		-		39.792	77.175	189.097	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Sup	WR	NAWC AD:Pax River, MD	1.307	0.668	Nov 2011	0.646	Nov 2012	-		0.646	4.250	6.871	
All other PY Support	Various	Various:Various	0.542	-		-		-		-	0.000	0.542	
		Subtotal	1.849	0.668		0.646		-		0.646	4.250	7.413	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	WR	NAWC AD:Pax River, MD	1.863	2.295	Nov 2011	7.464	Nov 2012	-		7.464	16.202	27.824	
GFE/GFI/GFP	WR	NAWC AD:Pax River, MD	0.050	1.072	Nov 2011	7.877	Nov 2012	-		7.877	6.198	15.197	
Oper Test & Eval	WR	NAWC AD:Pax River, MD	-	-		-		-		-	5.573	5.573	
Test Assets	WR	NAWC AD:Pax River, MD	-	-		-		-		-	3.000	3.000	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3181: *P-8A Spiral One Development*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	1.913	3.367		15.341		-		15.341	30.973	51.594	

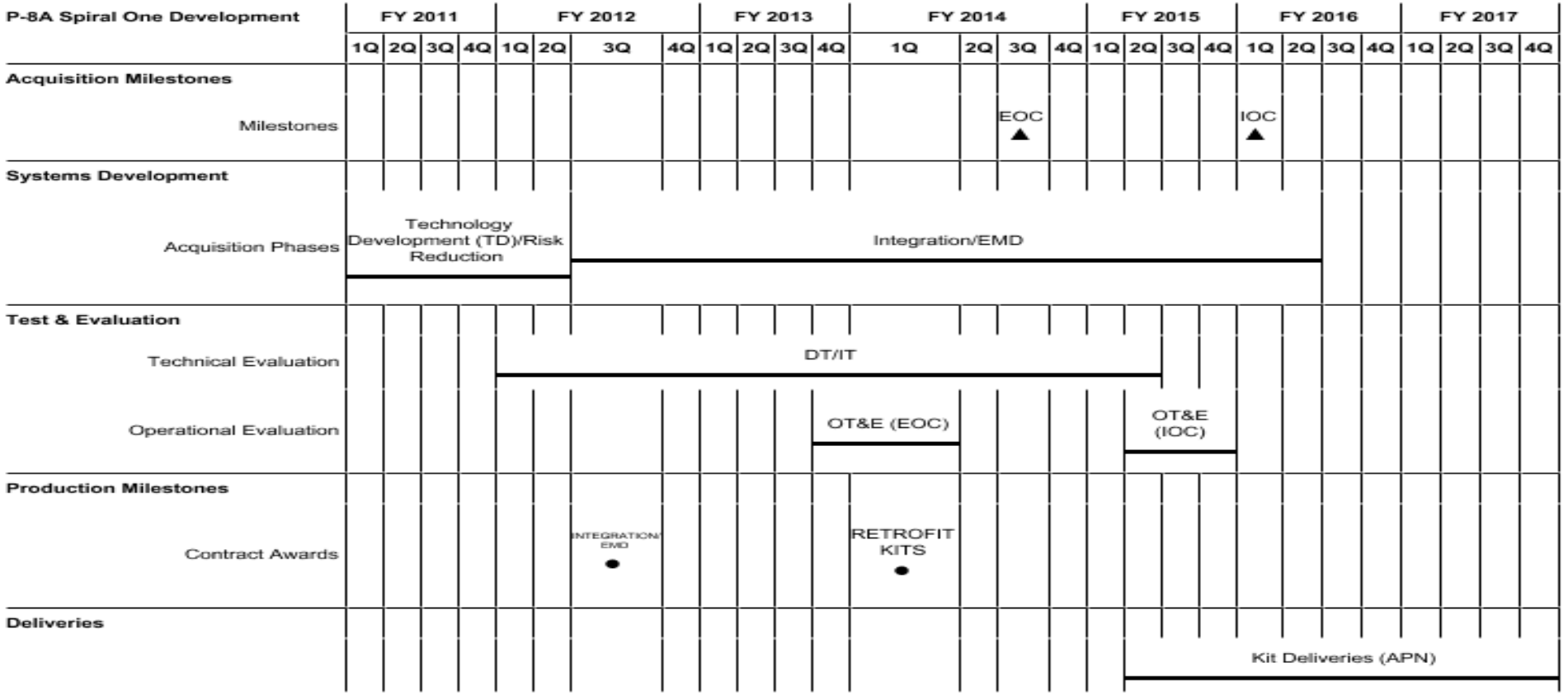
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Tech Serv (NON-FFRDC)	C/CPFF	RBC INC:Alexandria, VA	1.260	0.401	Nov 2011	0.083	Nov 2012	-		0.083	0.887	2.631	2.631
Mgmt Suppt Serv (NON-FFRDC)	C/CPFF	RBC INC:Alexandria, VA	4.112	0.601	Nov 2011	0.585	Nov 2012	-		0.585	2.520	7.818	7.818
Program Mgmt Support	WR	NAWC AD:Pax River, MD	2.815	1.691	Nov 2011	1.613	Nov 2012	-		1.613	2.873	8.992	
Travel	WR	NAWC AD:Pax River, MD	0.127	0.075	Oct 2011	0.089	Oct 2012	-		0.089	0.245	0.536	
		Subtotal	8.314	2.768		2.370		-		2.370	6.525	19.977	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	31.177	59.832		58.149		-		58.149	118.923	268.081	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 3181: *P-8A Spiral One Development*



2013PB - 0605500N - 3181

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 3181: *P-8A Spiral One Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
P-8A Spiral One Development				
Acquisition Milestones: Milestones: Early Operational Capability (EOC)	3	2014	3	2014
Acquisition Milestones: Milestones: Initial Operational Capability (IOC)	1	2016	1	2016
Systems Development: Acquisition Phases: Technology Development (TD)/Risk Reduction	1	2011	2	2012
Systems Development: Acquisition Phases: Integration/EMD	3	2012	2	2016
Test & Evaluation: Technical Evaluation: Developmental Testing (Integration Testing)	1	2012	2	2015
Test & Evaluation: Operational Evaluation: Operational Test & Evaluation (OT&E) (EOC)	4	2013	1	2014
Test & Evaluation: Operational Evaluation: Operational Test & Evaluation (OT&E) (IOC)	2	2015	4	2015
Production Milestones: Contract Awards: Contract Award Integration/ Engineering, Manufacturing, and Development (EMD)	3	2012	3	2012
Production Milestones: Contract Awards: Retrofit Kits	1	2014	1	2014
Deliveries: Kit Deliveries (APN)	2	2015	4	2017

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3218: *P-8A Spiral 2 Development*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3218: *P-8A Spiral 2 Development*	1.936	4.215	21.332	-	21.332	78.444	128.821	159.866	189.055	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The P-8A Multi-mission Maritime Aircraft (MMA) program is based on an evolutionary acquisition strategy consisting of sequential increments that will retain cost-wise effectiveness for winning major combat operations through 2020. In order to pace the threat, Increment 3 may include the following capabilities: Net-Ready Key Performance Parameters (KPP) implementation, integration of a network enabled Anti-Surface Warfare (ASuW) weapon, Survivability Upgrades, Precision Targeting improvements, and Rapid Capabilities Insertion (RCI), as well as additional Anti-Submarine Warfare (ASW), ASuW and Intelligence Surveillance and Reconnaissance (ISR) capabilities. These capabilities and other emergent capability requirements will be investigated during the Technology Development phase of Increment 3 for the P-8A and Tactical Operations Center (TOC)(ground support facility).

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Perform technology demostrations and analyses of proposed new capabilities	0.980	2.827	17.657
Articles:	0	0	0
FY 2011 Accomplishments: Prepared to initiate multiple engineering studies of the proposed new P-8A capabilities to ascertain the most affordable, military useful, most mature technological solution.			
FY 2012 Plans: Conduct multiple engineering studies of the proposed new P-8A capabilities to ascertain the most affordable, military useful, most mature technological solution.			
FY 2013 Plans: Initiate design for integrating new capabilities into P-8A TOC. Complete engineering studies and award Increment 3 technology development contract for competitive prototyping capabilities.			
Title: Conduct technical, cost, risk and logistics analysis of proposed technologies	0.956	1.388	3.675
Articles:	0	0	0
FY 2011 Accomplishments: Conducted technical, cost, risk and logistics analysis of proposed technologies. Evaluated system requirements through cost/ performance trade-off analysis. Provided technical and management support for the development of acquisition documentation. Provided engineering and management support.			
FY 2012 Plans:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3218: *P-8A Spiral 2 Development*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/ performance trade-off analysis. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of engineering studies. ***FY 2013 Plans:*** Conduct technical, cost, risk and logistics analysis of proposed technologies. Evaluate system requirements through cost/ performance trade-off analysis. Provide technical and management support for the development of acquisition documentation. Provide engineering and management of technical development effort.			
Accomplishments/Planned Programs Subtotals	1.936	4.215	21.332

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

The P-8A MMA program is based on an evolutionary acquisition strategy consisting of sequential increments that will retain cost-wise effectiveness for winning major combat operations through 2020. In order to pace the threat, Increment 3 may include the following capabilities: Net-Ready Key Performance Parameters implementation, integration of a network enabled Anti-Surface Warfare (ASuW) weapon, Survivability Upgrades, Precision Targeting improvements, and Rapid Capabilities Insertion Capabilities, as well as additional Anti-Submarine Warfare, ASuW and Intelligence Surveillance and Reconnaissance capabilities. The scope of this effort includes the integration design and test of capability enhancements to the P-8A. Fleet introduction is planned to be accomplished incrementally based on the scope of change, with a planned completion in FY19. These capabilities and other emergent capability requirements will be investigated during the Technology Development phase of Increment 3 for the P-8A and Tactical Operation Center (ground support facility).

E. Performance Metrics

Milestone A to be completed 2nd quarter 2013; Milestone B to be completed 3rd quarter 2015.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3218: *P-8A Spiral 2 Development*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary HW Dev - Engineering Studies	TBD	TBD:Not Specified	-	1.000	Jul 2012	5.000	Nov 2012	-		5.000	0.000	6.000	6.000
Primary Hdw Dev - Technology Development	C/CPFF	TBD:TBD	-	-		5.427	Apr 2013	-		5.427	12.469	17.896	17.896
Primary HW Dev - EMD	C/CPFF	TBD:TBD	-	-		-		-		-	328.375	328.375	328.375
Sys Eng (gov)	WR	NAWC AD:Pax River, MD	0.980	1.827	Nov 2011	7.230	Nov 2012	-		7.230	111.054	121.091	
		Subtotal	0.980	2.827		17.657		-		17.657	451.898	473.362	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Integrated Logistics Sup	WR	NAWC AD:Pax River, MD	-	0.053	Nov 2011	0.500	Nov 2012	-		0.500	30.350	30.903	
Studies & Analysis	C/CPFF	TBD:TBD	-	-	Dec 2011	0.891	Dec 2012	-		0.891	0.000	0.891	0.891
		Subtotal	-	0.053		1.391		-		1.391	30.350	31.794	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Dev Test & Eval	WR	NAWC AD:Pax River, MD	-	-	Nov 2011	0.400	Nov 2012	-		0.400	106.161	106.561	
GFE/GFI/GFP	WR	NAWC AD:Pax River, MD	-	-		-		-		-	17.341	17.341	
Oper Test & Eval	WR	NAWC AD:Pax River, MD	-	-		-		-		-	44.000	44.000	
Test Assets	WR	NAWC AD:Pax River, MD	-	-		-		-		-	25.000	25.000	
		Subtotal	-	-		0.400		-		0.400	192.502	192.902	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3218: *P-8A Spiral 2 Development*	

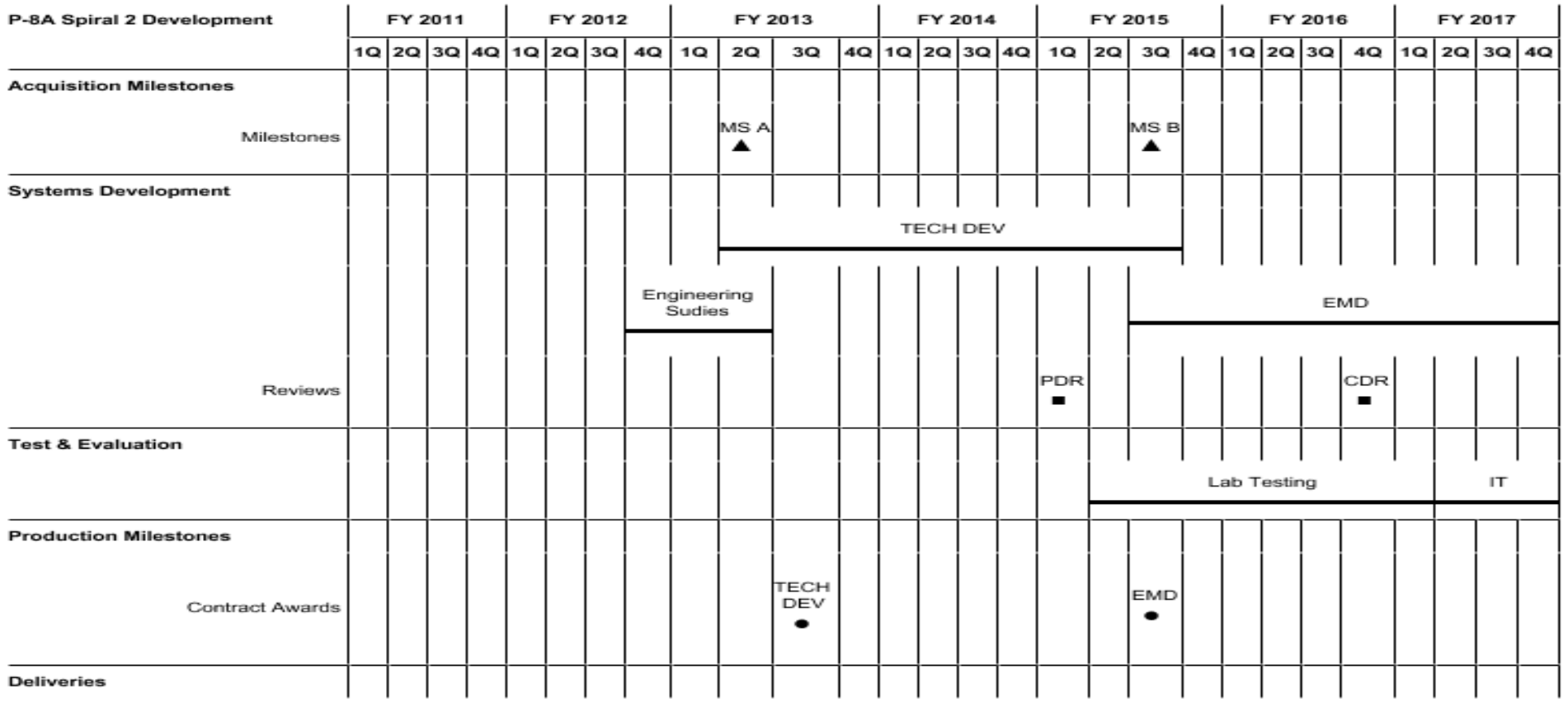
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Eng Tech Serv (NON-FFRDC)	C/CPFF	RBC:Alexandria, VA	0.228	0.400	Nov 2011	0.515	Nov 2012	-		0.515	16.864	18.007	18.007
Mgmt Suppt Serv (NON-FFRDC)	C/CPFF	RBC:Alexandria, VA	0.300	0.600	Nov 2011	0.772	Nov 2012	-		0.772	25.297	26.969	26.969
Program Mgmt Support	WR	NAWC AD:Pax River, MD	0.328	0.235	Nov 2011	0.500	Nov 2012	-		0.500	3.800	4.863	
Travel	WR	NAWC AD:Pax River, MD	0.100	0.100	Oct 2011	0.097	Oct 2012	-		0.097	3.307	3.604	
		Subtotal	0.956	1.335		1.884		-		1.884	49.268	53.443	

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.936	4.215		21.332		-		21.332	724.018	751.501	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 3218: *P-8A Spiral 2 Development*



2013PB - 0605500N - 3218

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	**PROJECT** 3218: *P-8A Spiral 2 Development*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
P-8A Spiral 2 Development				
Acquisition Milestones: Milestones: Increment 3 MS A	2	2013	2	2013
Acquisition Milestones: Milestones: Increment 3 MS B	3	2015	3	2015
Systems Development: Technology Development	2	2013	3	2015
Systems Development: Engineering Manufacturing & Development (EMD)	3	2015	4	2017
Systems Development: Engineering Sudies	4	2012	2	2013
Systems Development: Reviews: Preliminary Design Review (PDR)	1	2015	1	2015
Systems Development: Reviews: Critical Design Review (CDR)	4	2016	4	2016
Test & Evaluation: Integrated Test (IT)	2	2017	4	2017
Test & Evaluation: Lab Testing	2	2015	1	2017
Production Milestones: Contract Awards: Contract Award - Technology Development	3	2013	3	2013
Production Milestones: Contract Awards: Engineering Manufacturing & Development (EMD)	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0605500N: *Multi-mssn Maritime Aircraft (MMA) (P-8A)*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	11.939	10.000	-	-	-	-	-	-	-	0.000	21.939
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Congressional Add.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Small Business Technology Insertion ***FY 2011 Accomplishments:*** N/A	11.939	-
Congressional Add: MMA SBIR (Cong) ***FY 2012 Plans:*** N/A	-	10.000
Congressional Adds Subtotals	11.939	10.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Not required for Congressional Adds.

E. Performance Metrics

Not required for Congresisonal Adds.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	348.763	257.580	124.655	-	124.655	168.047	163.576	99.767	101.693	Continuing	Continuing
2464: *DD(X) Sys Design, Dev & Integration*	244.046	210.991	115.821	-	115.821	149.281	163.576	99.767	101.693	Continuing	Continuing
4009: *Advanced Gun System (AGS) on DD(X)*	104.717	46.589	8.834	-	8.834	18.766	-	-	-	0.000	178.906

A. Mission Description and Budget Item Justification

This Program Element (PE) provides funds for development of the DDG 1000 Class of U.S. Navy surface combatants. The mission of the DDG 1000 class is to provide credible independent forward presence/deterrence and operate as an integral part of Naval, Joint or Combined Maritime Forces. DDG 1000 will provide advanced land attack capability in support of the ground campaign and contribute to Naval, Joint or Combined battlespace dominance in littoral operations. DDG 1000 will establish and maintain surface and sub-surface superiority, provide local air defense, and incorporate signature reduction to operate in all threat environments. DDG 1000 will have seamless Joint Interoperability to integrate all source information for battlespace awareness and weapons direction.

In accordance with the Nunn McCurdy recertification 1 June 2010, the Department processed an FY 2011 $170M Above Threshhold Reprogramming (ATR) from this RDT&E,N line (0204202N) into the DDG-1000 SCN line (2119). The ATR was approved by Congress August 2011.

In FY13, the program retired 222M of risk.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	549.241	261.604	340.009	-	340.009
Current President's Budget	348.763	257.580	124.655	-	124.655
Total Adjustments	-200.478	-4.024	-215.354	-	-215.354
• Congressional General Reductions	-	-0.024			
• Congressional Directed Reductions	-	-4.000			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-170.000	-			
• SBIR/STTR Transfer	-12.761	-			
• Program Adjustments	-	-	-215.211	-	-215.211
• Rate/Misc Adjustments	-	-	-0.143	-	-0.143
• Congressional General Reductions Adjustments	-2.717	-	-	-	-
• Congressional Directed Reductions Adjustments	-15.000	-	-	-	-

Change Summary Explanation

Decreased FY11 funding reflects implementation of DDG-1000 risk mitigation plan. Funding has been realigned to cover SCN cost risk in Mission Systems Equipment (MSE) procurement and ship construction labor and support hours, material costs, and changes necessary to meet ship delivery MSE requirements and IOC.

In FY13, the program retired 222M of risk.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2464: *DD(X) Sys Design, Dev & Integration*	244.046	210.991	115.821	-	115.821	149.281	163.576	99.767	101.693	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project encompasses DDG 1000 development efforts required to deliver the Flight I DDG 1000 Class Ships. Major efforts include software requirements analysis, architectural and design code and unit testing, integration, qualification testing, and Independent Verification and Validation (IV&V) for Software Release 6 and Spiral Release; execution of Integrated Power Systems (IPS) and ship control system testing and integration; Live Fire Test and Evaluation (LFT&E), Developmental Testing, and Integrated Testing in support of the TEMP and development of Tomahawk Weapon Control System software. Funding for previous years is included in PE 0604300N.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Software Development	182.000	126.500	81.500
Articles:	0	0	0

Description: Software Development

FY 2011 Accomplishments:

Incremental Software Release 6 and Spiral Release were structured to match Ship Activation and Test schedule including Integrated Power System (IPS), Ship Control System (SCS), Engineering Control System (ECS) releases, Self Defense Test Ship (SDTS) tactical release/Post Delivery Availability (PDA) release and Spiral Post Shakedown Availability (PSA) release. Total Ship Computing Environment (TSCE) Software Release 6-Hull, Mechanical, & Electrical (HM&E) Build entered into the Design, Code, Test and Integration phase and began Software Integration and Test (SWIT) activities. The following efforts continued in FY11: Conducted developmental software test planning, conducted test data analysis and reporting in accordance with the DDG 1000 Test and Evaluation Management Plan (TEMP). Performed total ship system design analysis. Performed systems engineering, developed, and integrated into the DDG 1000 System Electric Ship (ES). Continued development, testing and integrating the Common Display System (CDS) consoles. Began Integrated Power System (IPS) and Ship Control System (SCS) testing and integration at Naval Surface Warfare Center/Philadelphia.

FY 2012 Plans:

Continuation of development of Release 6 HM&E build to support Ship Activation and Test schedule. Software delivery to support initial light-off of engineering plant. Begin development of Release 6 SDTS/PDA software build.

FY 2013 Plans:

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Completion of Release 6 HM&E build. Continuation of development of Release 6 SDTS/PDA software build. Planned delivery of engineering builds to Self Defense Test Ship for TSCE Infrastructure (TSCEI) integration. Begin system engineering and development of Spiral PSA software release.			
Title: Test and Evaluation	50.046	77.815	33.821
Articles:	0	0	0
Description: Test and Evaluation Master Plan Execution ***FY 2011 Accomplishments:*** Completed Developmental Test (DTB2-210) Full Power Testing of Integrated Power System at Land Based Test Site Philadelphia. Initiated planning for Developmental Test (DTB2-260) Integrated Power System - Ship Control System - Engineering Control System Land Based Testing. Completed Developmental Test (DTB3-160) Nuclear Survivability Analysis. Completed Developmental Test (DTB3-350) Mission System Test/Software Testing. Continued Composite Blast Testing. Initiated Engineering Survivability Assessments. Continued signature range Non-Recurring Engineering (NRE) to upgrade ranges to support DDG 1000 Test and Evaluation. Initiate planning for Integrated Test (ITB1-120) Extended Sea Sparrow Missile (ESSM) engagements using Self Defense Test Ship. Initiate Volume Search Radar (VSR) removal study. ***FY 2012 Plans:*** Initiate planning for Developmental Test (DTB3-360) Software Release 6 (SR6) Software Testing. Continue Engineering Survivability Assessments for Live Fire Test and Evaluation. Initiate and complete AIREX, UNDEX Vulnerability and Recoverability Analysis for TEMP Live Fire Test and Evaluation. Complete Composite Blast Testing. Complete signature range upgrades to support DDG 1000 Test and Evaluation. Continue planning for Integrated Test (ITB1-120) ESSM engagements using the Self Defense Test Ship. Continue X-Band Multi-Function Radar (MFR) modification due to removal of S-Band Volume Search Radar (VSR) during Nunn-McCurdy certification. Complete Electronic Modular Enclosure (EME) shock qualification testing. ***FY 2013 Plans:*** Continue planning for Developmental Test (DTB3-360) Software Testing. Complete Engineering Survivability Assessments for Live Fire Test and Evaluation. Continue planning for Integrated Test (ITB1-120) ESSM engagements using the Self Defense Test Ship. Initiate procurements of test articles for Initial Operational Test and Evaluation (IOT&E), including Long Range Land Attack Projectile (LRLAP), SM-2, and ESSMs.			
Title: Management Support	12.000	6.676	0.500
Articles:	0	0	0
Description: Government and Contractor Engineering Support. ***FY 2011 Accomplishments:***			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Provide government and contractor technical services for design engineering, radar engineering, and design manufacturing. Provide technical services for Tomahawk engineering and manufacturing development. Provide technical services for Weapons Systems Engineering Review Board (WSERB). ***FY 2012 Plans:*** Continue to provide government and contractor technical services for design engineering, radar engineering, and design manufacturing. Continue to provide technical services for Tomahawk engineering and manufacturing development. Continue to provide technical services for Weapons Systems Engineering Review Board (WSERB). ***FY 2013 Plans:*** Continue to provide government and contractor technical services for design engineering, radar engineering, and design manufacturing. Continue to provide technical services for Tomahawk engineering and manufacturing development. Continue to provide technical services for Weapons Systems Engineering Review Board (WSERB).			
Accomplishments/Planned Programs Subtotals	244.046	210.991	115.821

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/ 2119: *DDG 1000*	247.084	453.727	669.222	0.000	669.222	173.210	322.054	0.000	0.000	0.000	3,243.829

D. Acquisition Strategy

A revised acquisition strategy has been determined that supports the DDG-1000/DDG-51 restart shipyard allocation workload MOAs. Execution of the MOAs shifted primary construction of all three DDG-1000 class ships to Bath Iron Works (BIW). Award of the DDG 1001/1002 to BIW occurred in September 2011.

E. Performance Metrics

Successfully achieve Milestone C. Successfully achieve Initial Operational Capability. Successfully complete Operation Test Readiness Review. Successfully complete Developmental Test/Operational Test.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Ship Integration Development Phase IV	SS/CPAF	Raytheon:Tewksbury MA	501.771	120.500	Dec 2011	81.500	Oct 2012	-		81.500	Continuing	Continuing	Continuing
Ship Integration Development	SS/CPFF	Converteam:Pittsburgh, PA	6.250	6.000	Jan 2012	-		-		-	Continuing	Continuing	Continuing
		Subtotal	508.021	126.500		81.500		-		81.500			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Live Fire Test and Evaluation	Various	Various:Various	1.100	-		-		-		-	0.000	1.100	
Live Fire Test and Evaluation	WR	NSWC:Bethesda, MD	0.700	-		-		-		-	0.000	0.700	
Live Fire Test and Evaluation	C/CPIF	ROI:Mullica Hills, NJ	2.300	5.650	Jan 2012	-		-		-	Continuing	Continuing	Continuing
Test & Evaluation	SS/CPFF	Raytheon:Portsmouth, RI	53.126	20.480	Oct 2011	13.591	Oct 2012	-		13.591	Continuing	Continuing	Continuing
Test & Evaluation	C/CPIF	CSC:Washington, DC	0.300	0.600	Feb 2012	0.550	Dec 2012	-		0.550	0.000	1.450	
Test & Evaluation	SS/CPFF	JHU/APL:Laurel, MD	0.300	0.500	Jan 2012	4.260	Dec 2012	-		4.260	Continuing	Continuing	Continuing
Test & Evaluation	C/CPIF	TBD:TBD	0.800	0.900	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC:Dahlgren, VA	2.840	2.090	Nov 2011	1.450	Dec 2012	-		1.450	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC:Bethesda, MD	7.210	1.900	Nov 2011	-	Dec 2012	-		-	Continuing	Continuing	Continuing
Test & Evaluation	WR	NSWC:Port Hueneme, CA	2.014	2.220	Oct 2011	4.270	Dec 2012	-		4.270	Continuing	Continuing	Continuing
Test & Evaluation	WR	NRL:Washington, DC	1.125	0.650	Nov 2011	0.020	Dec 2012	-		0.020	Continuing	Continuing	Continuing
Test & Evaluation	WR	NAWC:China Lake, CA	3.070	1.200	Nov 2011	1.200	Dec 2012	-		1.200	Continuing	Continuing	Continuing
Test & Evaluation	WR	SCSC:Wallops, Is, VA	6.127	-		1.240	Dec 2012	-		1.240	Continuing	Continuing	Continuing
Test & Evaluation	WR	COTF:Norfolk, VA.	2.634	1.260	Oct 2011	2.700	Dec 2012	-		2.700	Continuing	Continuing	Continuing
Test & Evaluation	TBD	BAE:Minneapolis, MN	-	-		-	Apr 2013	-		-	0.000	0.000	
Test & Evaluation	C/CPIF	ROI:Mullica Hills, NJ	27.071	-		3.200	Dec 2012	-		3.200	0.000	30.271	
Test & Evaluation	TBD	Raytheon:Tucson, AZ	-	40.360	Mar 2012	-	Dec 2012	-		-	0.000	40.360	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test & Evaluation	WR	NUWC:Newport, RI	-	0.005	Nov 2011	-		-		-	0.000	0.005	
Test & Evaluation	WR	NSWC:Corona, CA	-	-		1.340	Dec 2012	-		1.340	0.000	1.340	
		Subtotal	110.717	77.815		33.821		-		33.821			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Engineering Services	WR	NSWC:Dahlgren VA	6.781	1.200	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Services	WR	NSWC:Philadelphia PA	8.488	-		-		-		-	0.000	8.488	
Government Engineering Services	WR	NSWC:Port Hueneme CA	3.091	1.000	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Services	WR	NAWC:Patuxent River MD	6.934	1.300	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Services	WR	NSWC:Bethesda MD	15.810	2.500	Feb 2012	-		-		-	Continuing	Continuing	Continuing
Government Engineering Services	Various	Other Govt Activities:Various	6.308	-		-		-		-	0.000	6.308	
Travel	Various	NAVSEA:Washington DC	1.400	0.676	Dec 2011	0.500	Dec 2012	-		0.500	Continuing	Continuing	Continuing
Contractor Engineering Support	SS/CPFF	General Dynamics:Fairfax, VA	5.614	-		-		-		-	0.000	5.614	
Contractor Engineering Support	SS/CPAF	Alion:Washington, DC	1.703	-		-		-		-	0.000	1.703	
Contractor Engineering Support	SS/CPFF	JHU/APL:Laurel, MD	2.696	-		-		-		-	0.000	2.696	
Contractor Engineering Support	SS/CPFF	EG&G:Fairfax, VA	0.200	-		-		-		-	0.000	0.200	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 2464: *DD(X) Sys Design, Dev & Integration*

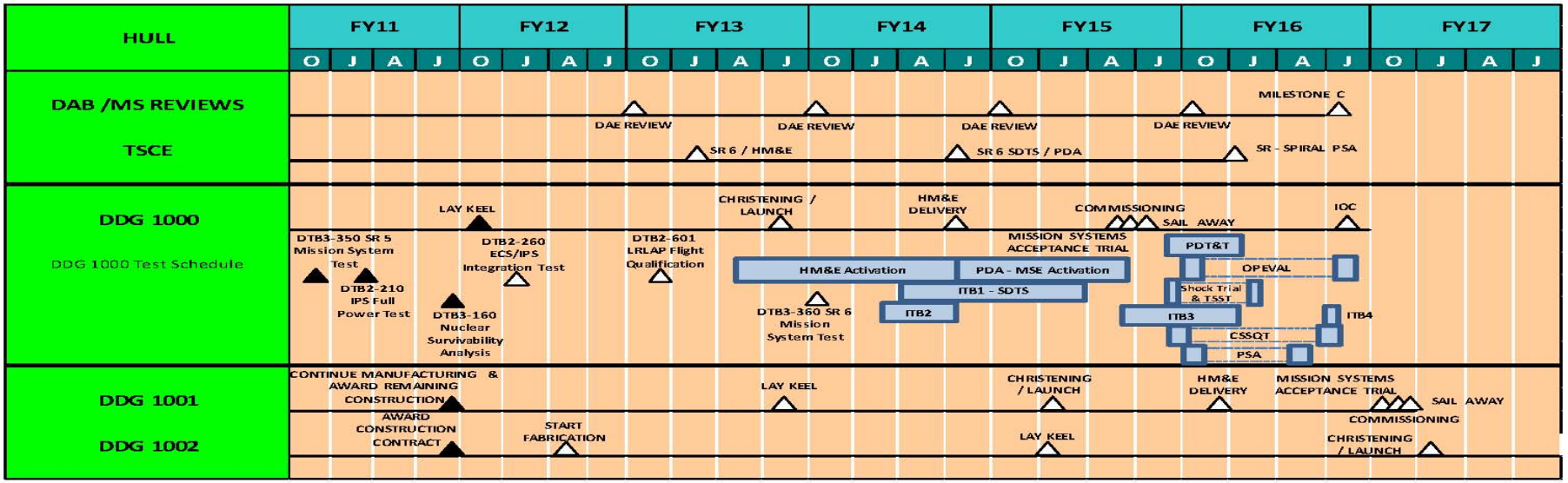
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	SS/CPAF	Sayres:Washington,DC	0.800	-		-		-		-	0.000	0.800	
		Subtotal	59.825	6.676		0.500		-		0.500			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	678.563	210.991		115.821		-		115.821			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0204202N: *DDG-1000*	**PROJECT** 2464: *DD(X) Sys Design, Dev & Integration*



KEY

DAB	DEFENSE ACQUISITION BOARD
DAE	DEFENSE ACQUISITION EXECUTIVE
SR	SOFTWARE RELEASE
▲	COMPLETED EVENT
HM&E	HULL, MECHANICAL & ELECTRICAL
SDTS	SELF-DEFENSE TEST SHIP
PDA	POST DELIVERY AVAILABILITY
PSA	POST SHAKEDOWN AVAILABILITY
IOC	INITIAL OPERATIONAL CAPABILITY
IPS	INTEGRATED POWER SYSTEM
ECS	ENGINEERING CONTROL SYSTEM
LRLAP	LONG RANGE LAND ATTACK PROJECTILE
PDT&T	POST DELIVERY TEST & TRIALS
TSST	TOTAL SHIP SURVIVABILITY TEST
OPEVAL	OPERATIONAL EVALUATION

1

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0204202N: *DDG-1000*	**PROJECT** 2464: *DD(X) Sys Design, Dev & Integration*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2464				
Software Release SR6/HM&E	2	2013	2	2013
Software Release SR6 Self Defense Test Ship/Post Delivery Availability	4	2014	4	2014
Software Release-Spiral Post Shakedown Availability	2	2016	2	2016

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
4009: *Advanced Gun System (AGS) on DD(X)*	104.717	46.589	8.834	-	8.834	18.766	-	-	-	0.000	178.906
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

These funds provide for the development of the Advanced Gun System (AGS) and the development, qualification and initial production of the Long Range Land Attack Projectile (LRLAP) associated with the development of DDG 1000. The AGS will consist of a major caliber gun, an automated ammunition handling system, and a guided projectile/propelling charge. The AGS will, at a minimum, meet the Land Attack and Surface Dominance Missions assigned to the gun system. The system will provide a high rate of fire (10 rounds per minute) with a magazine capacity of 600 rounds (total for both guns). LRLAP will be stored throughout its life cycle in an 8 round pallet which is handled by the AGS magazine. By palletizing the munition, AGS is able to significantly reduce manning and improve munition reliability, safety and resupply. System Design and Development began in FY06 with final land based qualification testing planned in FY13. The Long Range Land Attack Projectile (LRLAP) is a rocket-assisted projectile that will deliver a high explosive unitary payload with Global Positioning System (GPS) accuracy. Funding for previous years is included in PE 0604300N.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: System Engineering, Development and Testing	77.787	36.589	8.834
Articles:	0	0	0
Description: System Engineering, Development and Testing			
FY 2011 Accomplishments: LRLAP System Design, development, guided flight tests and qualification testing.			
FY 2012 Plans: LRLAP System Design, development, guided flight tests and qualification testing.			
FY 2013 Plans: LRLAP guided flight tests and qualification testing.			
Title: Procurement of Ordnance Test Assets	26.930	10.000	-
Articles:	0	0	
Description: Procurement of Ordnance Test Assets			
FY 2011 Accomplishments:			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Procurement of LRLAP rounds for qualification testing. ***FY 2012 Plans:*** Procurement of LRLAP rounds for qualification testing.			
Accomplishments/Planned Programs Subtotals	104.717	46.589	8.834

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• SCN/2119: *DDG 1000*	247.084	453.727	669.222	0.000	669.222	173.210	322.054	0.000	0.000	0.000	3,243.829

D. Acquisition Strategy

A revised acquisition strategy has been determined that supports the DDG-1000/DDG-51 restart shipyard allocation workload MOAs. Execution of the MOAs shifted primary construction of all three DDG-1000 class ships to Bath Iron Works (BIW). DDG 1001/1002 awarded to BIW 4th quarter FY11. AGS is developed via a sole source contract to BAE. Lockheed is the key supplier to BAE for LRLAP development.

E. Performance Metrics

Successfully achieve LRIP Decision. Successfully achieve Initial Operational Capability. Successfully complete LRLAP guided flights and Initial Operational Test and Evaluation (IOT&E) test events.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	C/CPAF	BAE:Minneapolis MN	201.350	38.541	Dec 2011	4.000	Dec 2012	-		4.000	0.000	243.891	
		Subtotal	201.350	38.541		4.000		-		4.000	0.000	243.891	

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	Various	Various:Not Specified	6.872	-		-		-		-	0.000	6.872	
Test and Evaluation	WR	White Sands Missile Range:New Mexico	1.686	3.910	Dec 2011	3.000	Nov 2012	-		3.000	0.000	8.596	
		Subtotal	8.558	3.910		3.000		-		3.000	0.000	15.468	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Services	Various	Various:Not Specified	0.852	0.350	Dec 2011	0.246	Dec 2012	-		0.246	0.000	1.448	
Government Engineering Services	WR	NSWC DD:Dahlgren VA	2.291	2.592	Dec 2011	0.745	Nov 2012	-		0.745	0.000	5.628	
Government Engineering Services	WR	NSWC PHD:Pt Hueneme CA	0.590	0.226	Nov 2011	0.843	Nov 2012	-		0.843	0.000	1.659	
Government Engineering Services	WR	NSWC IHD:Indian Head MD	0.760	0.745	Dec 2011	-		-		-	0.000	1.505	
Government Engineering Services	WR	NAWC, China Lake:China Lake, CA	-	0.225	Dec 2011	-		-		-	0.000	0.225	
		Subtotal	4.493	4.138		1.834		-		1.834	0.000	10.465	

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0204202N: *DDG-1000*	PROJECT 4009: *Advanced Gun System (AGS) on DD(X)*	

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	214.401	46.589		8.834		-		8.834	0.000	269.824	

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0204202N: *DDG-1000*	**PROJECT** 4009: *Advanced Gun System (AGS) on DD(X)*

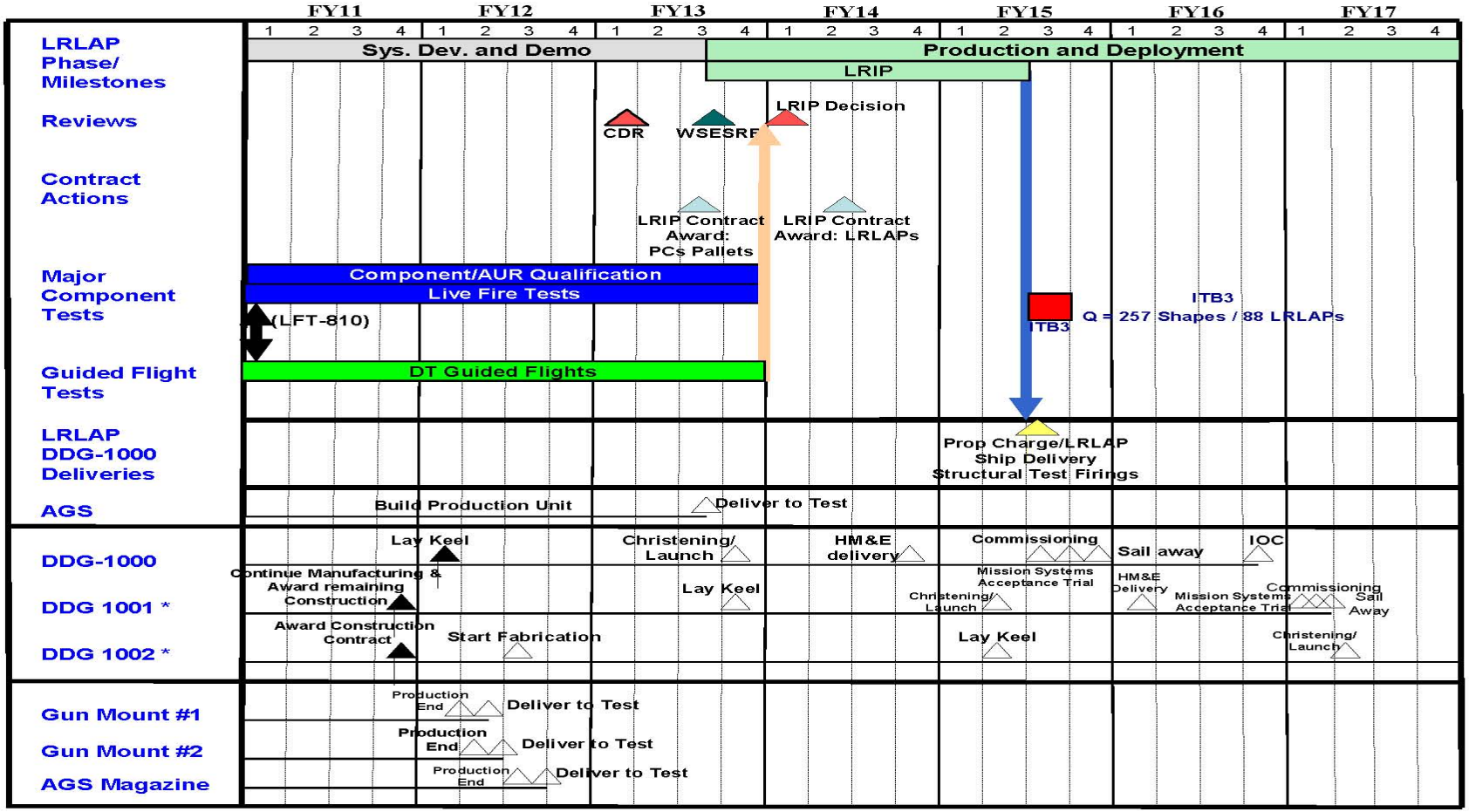


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0204202N: *DDG-1000*	**PROJECT** 4009: *Advanced Gun System (AGS) on DD(X)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 4009				
Low Rate Initial Production (LRIP)	3	2013	2	2015
Wpn Sys Explosive Safety Revw Bd (WSESRB)	3	2013	3	2013
LRIP Decision	1	2014	1	2014
Critical Design Review (CDR)	1	2013	1	2013
LRLAP Contract Award: PCs, Pallets	3	2013	3	2013
LRLAP Contract Award: LRLAPs	2	2014	2	2014
Component/AUR Qualification	1	2011	4	2013
Live Fire Tests	1	2011	4	2013
DT Guided Flights	1	2011	4	2013
Prop Charge/LRLAP Ship Delivery Structural Test Firings	3	2015	3	2015
AGS Build Production Unit	1	2011	3	2013
AGS Deliver to Test	3	2013	3	2013
Gun Mount #1 Production End	1	2012	1	2012
Gun Mount #1 Deliver to Test	2	2012	2	2012
Gun Mount #2 Production End	2	2012	2	2012
Gun Mount #2 Deliver to Test	3	2012	3	2012
AGS Magazine Production End	3	2012	3	2012
AGS Magazine Deliver to Test	3	2012	3	2012

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	1.311	0.979	1.170	-	1.170	1.141	1.172	1.148	1.168	Continuing	Continuing
2009: *OSIS Evolutionary Development (OED)*	1.311	0.979	1.170	-	1.170	1.141	1.172	1.148	1.168	Continuing	Continuing

Note

Resources were transferred from PE 0604231N to PE 0304231N beginning in FY11.

A. Mission Description and Budget Item Justification

Trusted Information Systems (TIS): Radiant Mercury (RM) is a secure information platform that provides an automated means to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments, and releasabilities. With the aid of a reliable human reviewer, RM can process nonstandard messages, such as messages with National Imagery Transmission Format (NITF) products and other non/semi-formatted file types. It enables Combat Commanders as well as operational commanders, afloat and ashore to disseminate and receive critical operational and intelligence information with Coalition and Allied forces.

Major Focus Area for FY13: Develop Radiant Mercury Version 6.0 to run on Security Enhanced (SE) Linux which removes dependency on proprietary vendor products. Conduct Certification Test and Evaluation of RM 6.0.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	1.318	0.979	1.170	-	1.170
Current President's Budget	1.311	0.979	1.170	-	1.170
Total Adjustments	-0.007	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Congressional General Reductions Adjustments	-0.007	-	-	-	-

Change Summary Explanation

Schedule : Delivery of RM Version 6.X Slipped from 3Q 2015 to 1Q 2016 due to NSA Schedule delays.
Delivery of RM Version 5.1 accelerated from 4Q 2012 to 3Q 2012.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*

Technical: Not Applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*	PROJECT 2009: *OSIS Evolutionary Development (OED)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2009: *OSIS Evolutionary Development (OED)*	1.311	0.979	1.170	-	1.170	1.141	1.172	1.148	1.168	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Resources were transferred from PE 0604231N to PE 0304231N beginning in FY11.

A. Mission Description and Budget Item Justification

Radiant Mercury (RM): Trusted Information System (TIS) Radiant Mercury (RM) is a system that successfully provides accredited Cross Domain Solutions (CDS) to the Navy, Department of Defense (DoD), and Intelligence Community. TIS RM is a critical component of network-centric warfare, supporting joint operations and Allied and Coalition forces world-wide. The ability to pass sensitive and critical data across security domains and to our Allied and Coalition partners in a timely fashion can only be met by accredited Cross Domain Solution (CDS) systems such as Radiant Mercury. RM enables operation in a multi-national environment.

TIS RM provides automated, bi-directional sanitization, transliteration, and guarding capability for formatted and unformatted data between security enclaves. Radiant Mercury helps ensure critical intelligence is provided quickly to operational decision-makers. TIS RM provides the capability to disseminate information for operating forces worldwide, including the operating forces of key allies in Pacific, Central and Europe Command regions. This capability to move all-source intelligence-derived track information into the realm of the operational community significantly improves the situational awareness of tactical operators and planners. Additionally, it assists in providing critical operational information to intelligence and cryptologic analysts. Unformatted data is handled by the Information Review Process (IRP). The system provides cross domain services to a wide variety of customers including Combatant Commanders, Air Force (Shared Early Warning program), Army (Blue Force Tracking program), Navy (Global Command and Control System - Maritime (GCCS-M) and Automatic Identification System (AIS), Maritime Operations Centers (MOC), Distributed Common Ground System-Navy (DCGS-N), Tactical Ranges (TR), and numerous other DoD and Intelligence agencies.

Major Focus Area for FY13: Develop Radiant Mercury Version 6.0 to run on Security Enhanced (SE) Linux which removes dependency on proprietary vendor products. SE Linux allows the developer to customize the Operating System (OS) for the RM application, increasing processing speed and improving security. Improve remote configuration management by replacing the current version of Windows with a Lightweight Text Interface for initial configuration control and a web-based interface to configure the system. Use Free and Open Source Software (FOSS) to manage the Log, Audit Reduction, and Mission Assessment capabilities. Enhance our Message Analysis Generator (MAG) Generic Interface Functionality (MGIF) in order to take advantage of software and capabilities developed elsewhere within the Navy, Department of Defense (DoD), and Intelligence communities.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Radiant Mercury	1.311	0.979	1.170
Articles:	0	0	0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*	PROJECT 2009: *OSIS Evolutionary Development (OED)*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
FY 2011 Accomplishments: Developed and tested RM version 5.0.1 Identified and defined emerging requirements for RM version 5.0.1 to meet Navy and non-Navy Cross Domain Solution (CDS) requirements. Conducted RM software version 5.0.1 certification tests by Defense Intelligence Agency (DIA) and risk assessment by National Security Agency (NSA). Identified and defined emerging requirements for RM version 5.1 to meet other Navy and non-Navy Cross Domain Solution (CDS) requirements. ***FY 2012 Plans:*** Develop RM Version 5.1 based upon user feedback. The next RM incremental update will include improvements identified by operational commands and remedies to shortfalls as identified in the Unified Cross Domain Management Office (UCDMO) roadmap. Continue to develop and Integrate Radiant Mercury into PEO-C4I Program Offices evolving architectures to include Consolidated Afloat Networks and Enterprise Services (CANES). ***FY 2013 Plans:*** Develop Radiant Mercury Version 6.0 to run on Security Enhanced (SE) Linux which removes dependency on proprietary vendor products. SE Linux allows the developer to customize the Operating System (OS) for the RM application, increasing processing speed and improving security. Improve remote configuration management by replacing the current version of Windows with a Lightweight Text Interface for initial configuration control and a web-based interface to configure the system. Use Free and Open Source Software (FOSS) to manage the Log, Audit Reduction, and Mission Assessment capabilities. Enhance our Message Analysis Generator (MAG) Generic Interface Functionality (MGIF) in order to take advantage of software and capabilities developed elsewhere within the Navy, Department of Defense (DoD), and Intelligence communities.			
Accomplishments/Planned Programs Subtotals	1.311	0.979	1.170

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/2608: *GCCS-M (TIS)*	0.336	0.426	0.448	0.000	0.448	0.399	0.412	0.377	0.383	Continuing	Continuing

D. Acquisition Strategy

Trusted Information Systems (TIS) Radiant Mercury (RM) provides automated, bi-directional sanitization, transliteration, and guarding capability for formatted and unformatted data between security enclaves. RM helps ensure critical indications and warning intelligence is provided quickly to operational decision-makers. RM is actively involved in the production and cross domain dissemination of information for operating forces worldwide, including the operating forces of key allies involved in the Overseas Contingency Operations (OCO), in Pacific Command (PACOM), Europe Command (EUCOM) and Central Command (CENTCOM) regions. RM is a fee-for-service program, it receives partial funding from the Navy to cover basic program management and infrastructure costs. The remaining funds needed to keep the

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*	PROJECT 2009: *OSIS Evolutionary Development (OED)*

program operating are generated from the fee-for-service model by charging customers Life Cycle Surcharge (LCS) on all new task orders and Annual User Fee (AUF) on all operational RM systems currently fielded.

E. Performance Metrics

Provide and develop certified, accredited Cross Domain Solution (CDS) and transfer capabilities to the Department of Defense (DoD) and Intelligence Community, and provide the capability to disseminate and receive operational and intelligence information for 100% of authorized sites. Complete 100% of certification, system, and security testing of Radiant Mercury (RM) version 5.0.1 for release. Provide the capability to sanitize, downgrade, guard, and transliterate formatted data at various classifications, compartments and releasabilities to combat and operational commanders, coalition and allied forces at over 420 sites world wide and 660 fielded.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304231N: *Tactical Command System - MIP*	PROJECT 2009: *OSIS Evolutionary Development (OED)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/CPFF	Lockheed Martin:Denver Colorado	0.890	0.676	Oct 2011	0.848	Oct 2012	-		0.848	0.000	2.414	
Software Development	C/CPFF	Lockheed Martin:Denver Colorado	0.382	0.250	Oct 2011	0.255	Oct 2012	-		0.255	0.000	0.887	
		Subtotal	1.272	0.926		1.103		-		1.103	0.000	3.301	

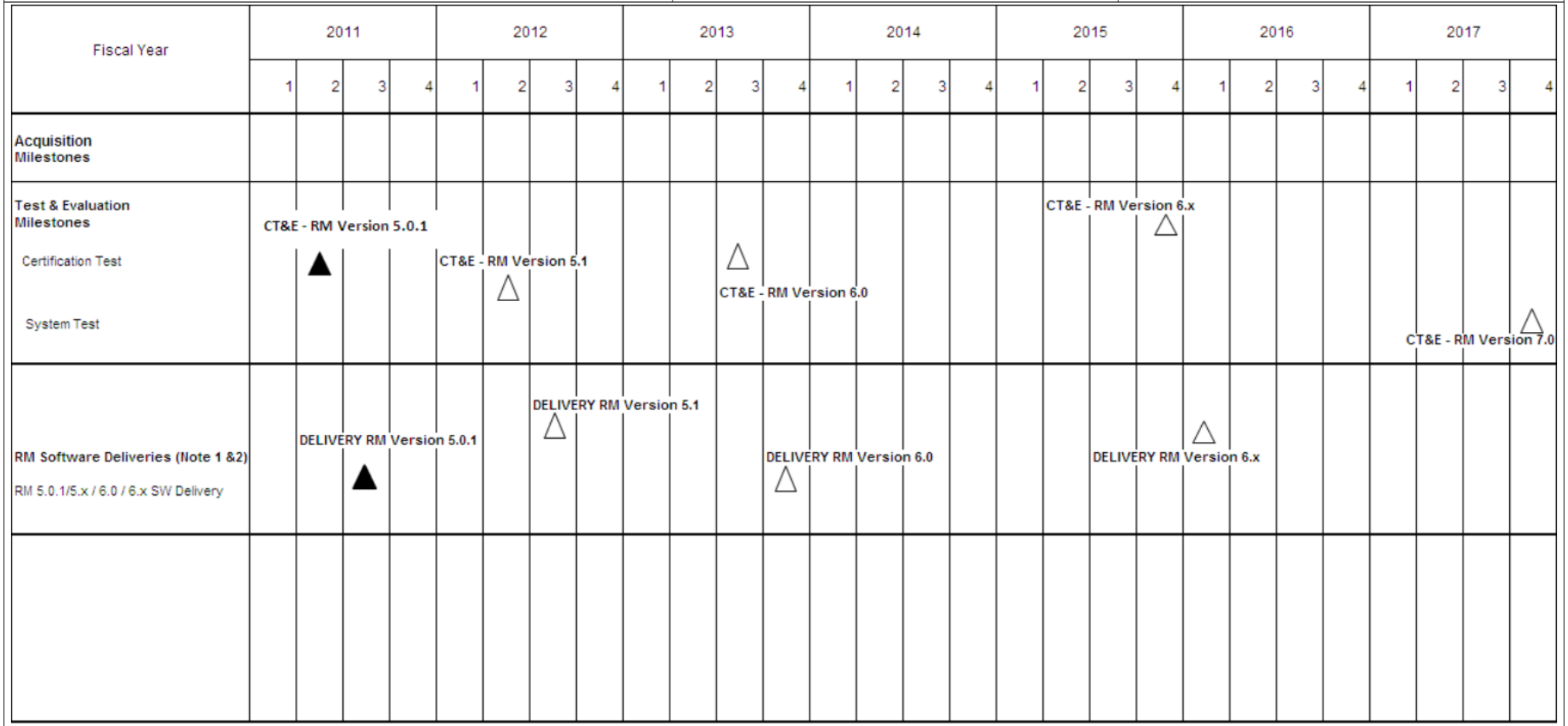
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	Booz Allen Hamilton:Virgina, Mclean	0.039	0.053	Nov 2011	0.067	Nov 2012	-		0.067	Continuing	Continuing	Continuing
		Subtotal	0.039	0.053		0.067		-		0.067			

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.311	0.979		1.170		-		1.170			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304231N: *Tactical Command System - MIP*	**PROJECT** 2009: *OSIS Evolutionary Development (OED)*



NOTES:
1) Delivery of RM Version 6.X Slipped from 3Q 2015 to 1Q 2016 due to NSA Schedule delays.
2) Delivery of RM Version 5.1 accelerated from 4Q 2012 to 3Q 2012.

Exhibit R-4, Schedule Profile

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304231N: *Tactical Command System - MIP*	**PROJECT** 2009: *OSIS Evolutionary Development (OED)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2009				
RM Software - Delivery of RM Version 5.0.1	3	2011	3	2011
RM Software - Delivery of RM Version 5.1	3	2012	3	2012
RM Software - Delivery of RM Version 6.0	4	2013	4	2013
RM Software - Delivery of RM Version 6.x	1	2016	1	2016
RM Test & Evaluation Milestone - CT&E - RM Version 5.0.1	2	2011	2	2011
RM Test & Evaluation Milestone - CT&E - RM Version 5.1	2	2012	2	2012
RM Test & Evaluation Milestone - CT&E - RM Version 6.0	3	2013	3	2013
RM Test & Evaluation Milestone - CT&E - RM Version 6.x	4	2015	4	2015
RM Test & Evaluation Milestone - CT&E - RM Version 7.0	4	2017	4	2017

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	1.408	-	-	-	-	-	-	-	-	0.000	1.408
0775: *Submarine Supt Equip Prog*	1.408	-	-	-	-	-	-	-	-	0.000	1.408

A. Mission Description and Budget Item Justification

The Submarine Support Equipment Program develops and improves techniques, components, equipment, and systems that will increase submarine operational effectiveness, safety of ship, and survivability in the increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. Improvements are necessary for Submarine Electronic Warfare Support (ES) systems to be operationally effective in the following mission areas: Joint Littoral Warfare; Joint Space and Electronic Warfare and Intelligence Collection; Maritime Protection; Information Operations, Special Operations Force (SOF) Support; and Joint Strike. Efforts include: (1) Integration of Surveillance, the technology developed and transitioned from the Advanced Submarine Support Equipment Program (ASSEP), project F0770 into the tactical ES system; (2) Resolution of software trouble reports during technology updates, from fleet feedback reports, and Submarine Warfare Federated Tactical System (SWFTS)/Non Propulsion Electronic System (NPES) Tactical Local Area Network (TACLAN) migrations; (3) Integration, test, and installation of COTS technology for system enhancements.

The Electronic Warfare Support (ES) Development Projects include the development of: Low Probability of Intercept (LPI) Direction Finding (DF), Distant ES Support and Remote Log-In, Specific Emitter Identification (SEI) Improvements, ES Vulnerability Tool, Integrated ES and Radio Frequency Distribution Unit (RFDU), Capability and Technical Initiatives, and next generation processes and radar wideband miniaturization.

Submarine Support Equipment Program was transfered from a Military Intelligence Program, Program Element (PE) 0304503N in Fiscal Year 2012 back to PE 0604503N.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy					DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*		R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*			
B. Program Change Summary ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**
Previous President's Budget	1.415	-	-	-	-
Current President's Budget	1.408	-	-	-	-
Total Adjustments	-0.007	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Congressional General Reductions Adjustments	-0.007	-	-	-	-

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*	PROJECT 0775: *Submarine Supt Equip Prog*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
0775: *Submarine Supt Equip Prog*	1.408	-	-	-	-	-	-	-	-	0.000	1.408
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program develops and improves techniques, components, equipment, and systems that will increase submarine operational effectiveness, safety of ship, and survivability in the increasingly dense and sophisticated electromagnetic environment caused by the proliferation of complex radar, communications, and navigation equipment of potential adversaries. Improvements are necessary for Submarine Electronic Warfare Support (ES) systems to be operationally effective in the following mission areas: Joint Littoral Warfare; Joint Surveillance, Space and Electronic Warfare and Intelligence Collection; Maritime Protection; Information Operations, Special Operations Force (SOF) Support; and Joint Strike. Efforts include: (1) Integration of the technology developed and transitioned from the Advanced Submarine Support Equipment Program (ASSEP), project F0770 into the tactical ES system; (2) Resolution of software trouble reports during technology updates, from fleet feedback reports, and Submarine Warfare Federated Tactical System (SWFTS)/Non Propulsion Electronic System (NPES) Tactical Local Area Network (TACLAN) migrations; (3) Integration, test, and installation of COTS technology for system enhancements.

The Electronic Warfare Support (ES) Development Projects include the development of: Low Probability of Intercept (LPI) Direction Finding (DF), Distant ES Support and Remote Log-In, Specific Emitter Identification (SEI) Improvements, ES Vulnerability Tool, Integrated ES and ECS Radio Frequency Distribution Unit (RFDU), Capability and Technical Initiatives, and next generation processes and radar wideband miniaturization.

RDTE Funding line supports the entire AN/BLQ-10 ES procurement program. Average FY OPN and SCN hardware procurement yearly funds are $100M.

Submarine Support Equipment Program was transfered from a Military Intelligence Program, Program Element (PE) 0304503N in Fiscal Year 2012 back to PE 0604503N.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Submarine Support Equipment Program	1.408	-	-
Articles:	0		
FY 2011 Accomplishments: Updated AN/BLQ-10 software baseline changes for SWFTS and NPES. Researched, tested and integrated technical insertion upgrades to the AN/BLQ-10 system. Tested the next generation of technical insertion processors.			
Accomplishments/Planned Programs Subtotals	1.408	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*	PROJECT 0775: *Submarine Supt Equip Prog*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN/256000: *Submarine Supt Equip Prog*	69.728	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	69.728
• SCN/201300: *Virginia Class Submarine*	57.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	57.952
• RDT&E/0604558N: *Submarine Tactical Warfare*	2.775	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.775

D. Acquisition Strategy

AN/BLQ-10 (V) ES System - Procurements are executed/managed in accordance with the Acquisition Strategy Report (Rev 6) for AN/BLQ-10(V) ES System dtd 12/14/09 and the Acquisition Plan (Rev 8) for AN/BLQ-10(V) ES System dtd 12/15/09. PE 0304503N funds will be executed via work requests.

E. Performance Metrics

The RDD program goal is to respond to urgent operational needs within 30 days and provide for rapid development and fielding of prototype solutions within 270 days.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*	PROJECT 0775: *Submarine Supt Equip Prog*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
AN/BLQ-10 ES Product Development	C/CPFF	Various:Not Specified	0.156	-		-		-		-	0.000	0.156	Continuing
Systems Engineering and Test Support	WR	NUWC:Newport RI	0.962	-		-		-		-	0.000	0.962	Continuing
Systems Engineering and Test Support	C/CPAF	TBD*:Not Specified	0.255	-		-		-		-	0.000	0.255	Continuing
		Subtotal	1.373	-		-		-		-	0.000	1.373	

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Travel	WR	NAVSEA:WNY	0.007	-		-		-		-	0.000	0.007	0.014
SBIR Assessment	Various	Not Specified:Not Specified	0.028	-		-		-		-	0.000	0.028	0.028
		Subtotal	0.035	-		-		-		-	0.000	0.035	0.042

Remarks

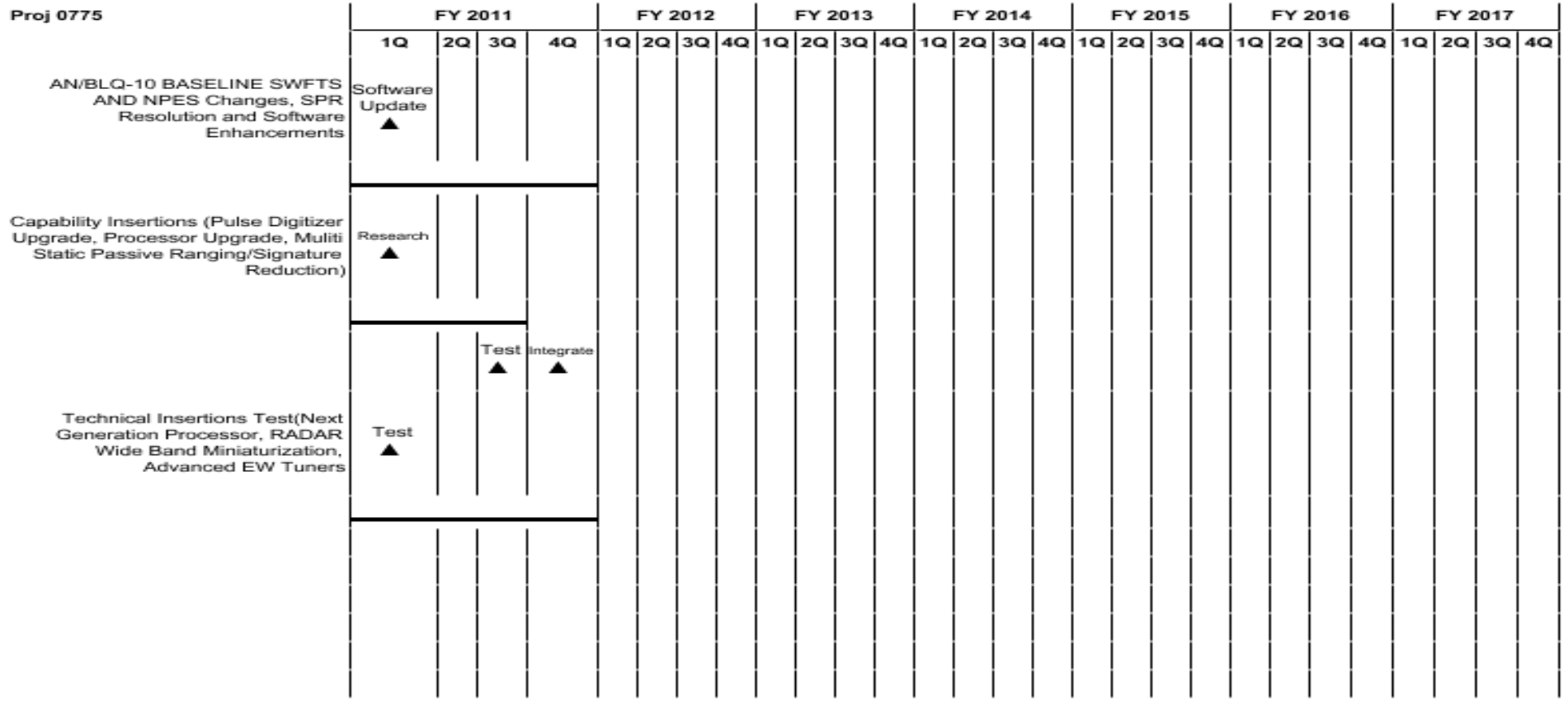
Labor (Research) removed. No longer applicable.

	Total Prior Years Cost	FY 2012		FY 2013 Base		FY 2013 OCO		FY 2013 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	1.408	-		-		-		-	0.000	1.408	

Remarks

* FY11 Systems Engineering and Test Support contract is to be competitively awarded.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304503N: *SSN-688 and Trident Modernization-MIP*	PROJECT 0775: *Submarine Supt Equip Prog*



2013PB - 0304503N - 0775

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304503N: *SSN-688 and Trident Modernization-MIP*	**PROJECT** 0775: *Submarine Supt Equip Prog*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 0775				
AN/BLQ-10 BASELINE SWFTS AND NPES Changes, SPR Resolution and Software Enhancements: Software Update	1	2011	1	2011
AN/BLQ-10 BASELINE SWFTS AND NPES Changes, SPR Resolution and Software Enhancements:	1	2011	4	2011
Capability Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Research	1	2011	1	2011
Capability Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction):	1	2011	3	2011
Capability Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Test	3	2011	3	2011
Capability Insertions (Pulse Digitizer Upgrade, Processor Upgrade, Muliti Static Passive Ranging/Signature Reduction): Integrate	4	2011	4	2011
Technical Insertions Test(Next Generation Processor, RADAR Wide Band Miniaturization, Advanced EW Tuners: Test	1	2011	1	2011
Technical Insertions Test(Next Generation Processor, RADAR Wide Band Miniaturization, Advanced EW Tuners:	1	2011	4	2011

THIS PAGE INTENTIONALLY LEFT BLANK

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*				R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	12.303	31.740	23.255	-	23.255	9.310	9.351	9.587	9.837	Continuing	Continuing
2134.: *Shipboard IW Exploit*	11.840	31.740	23.255	-	23.255	9.310	9.351	9.587	9.837	Continuing	Continuing
3165: *Automatic Identification System (AIS)*	0.463	-	-	-	-	-	-	-	-	0.000	0.463

A. Mission Description and Budget Item Justification

The Shipboard Information Warfare (IW) line includes the Ships Signal Exploitation Equipment (SSEE) Increment (Inc) E, F,G and Modification programs. The SSEE program is a classified IW / Electronic Warfare (EW) and tactical cryptologic system that provides critical tactical intelligence, situational awareness, battlespace awareness, indications and warnings and hostile threat assessment. These systems provide the battle group and combatant commanders with the surface fleet's only EW non-kinetic capabilities ("Finish"). In addition they provide the battle groups with real time indications and warnings by acquisition ("Find") and localization ("Fix") of Signals of Interest (SOI). As an incremental acquisition program, Research, Development, Test & Evaluation (RDT&E) funding is required to have new technologies and associated new operational capabilities rapidly developed and transitioned as Pre-Planned Product Improvements (P3I) upgrades into the system's hardware/ software configuration. This program's funding incorporates P3I, new Commercial Off-the-Shelf (COTS) based technologies and software into the existing systems. Funding will also focus on developing and delivering expanded non-kinetic EW capabilities and net-centric Service Oriented Architecture (SOA), which includes the development, integration and test of Medusa and the SSEE Modification capabilities in support of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations (CNO) Executive Board Information Operation (IO) Countermeasure Red Flash/Medusa (details classified)."

SSEE Inc F will be developing software and hardware upgrades in support of emergent adversary Signal of Interest (SOI), inserting SOI and new technology enhancements via incremental software builds and corresponding hardware upgrades.

SSEE Inc G will integrate and improve upon all aspects of the "BMD EXCOM ASW CNO CEB IO Countermeasure Red Flash/Medusa" and expand upon the SSEE Inc F capability of exploiting signals throughout the Radio Frequency (RF) spectrum, in addition to focusing new technologies towards new and previously unexplored/ unexploited CYBER capabilities as we integrate into the Electronic Warfare (EW) Battle Management Network. SSEE Inc G will build off of the advancement of the Inc F system to automate and integrate all existing Ships Signal Exploitation Space (SSES) capabilities into a common user interface, while still advancing and incorporating new technologies through an open software architecture that allows for rapid integration and deployment of those capabilities.

The SSEE Modification program includes the "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa", capabilities of Paragon and Graywing. Paragon (Frequency Extension) is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ships Signal Exploitation Equipment (SSEE) Inc E and F programs. This capability provides simultaneous detection, collection, processing, Electronic Warfare and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or encountered today. Graywing is an electronic sensing and attack capability that shares the Paragon topside exploitation assets and will be integrated into SSEE Inc E and F systems. Both Paragon and Graywing will commence

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*

development of its Engineering Development Model (EDM) as well as its initial laboratory integration and testing in FY12 and preparation for at sea Operational testing in FY13. Additional program details are held at a higher classification level.

Integrated Communications and Data Systems (ICADS): ICADS (AN/URC-148(V)) is a Chief of Naval Operations (CNO) directed mission critical system which provided limited back-up, mobile communications capability for large deck naval platforms. The system provided a reliable, limited solution for re-establishing command and control for high value unit, subordinate units, and controlling fleet entities. ICADS is comprised of several mature systems. Specific program details held at a higher classification.

Automatic Identification System (AIS) is an International Maritime Very High Frequency Communication system that allows ships to exchange information (machine to machine) on Navigation (Position, Course, Speed, etc), Ship Info (Ship Name, Call Sign, Length/Beam), and Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival) and Messaging (Safety, Text). This technology will improve capabilities in three diverse areas: (a) Situational Awareness/Common Operational Picture (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. Funding will support the integration of modified Commercial Off-The-Shelf AIS equipment with the existing Global Command and Control - Maritime/Common Operational Picture, navigation and bridge display capabilities, surface search / weapons systems and intelligence / cryptologic capabilities.

FY13 funding will further incorporate Pre Planned Improvement(P3I) capabilities into SSEE Inc F, improve the software user interface and continue its phased software build approach of rolling capability into the system, and initiate the process of the "Application Store" (App Store) concept. The App Store concept will use the SSEE Inc F system as a Service Oriented Architecture (SOA) host for integrating special black box capability developed by third party providers.
FY13 funding for the SSEE Modification Program will complete the accelerated development and operationalization of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" capabilities of Paragon and Graywing.
FY13 funding is required to complete acquisition documentation to support a Milestone C production decision. Funding will develop and integrate system design variants to support refined COMPACFLT requirements and support multiple test events. Specific program details held at a higher classification.

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	17.019	31.740	14.784	-	14.784
Current President's Budget	12.303	31.740	23.255	-	23.255
Total Adjustments	-4.716	-	8.471	-	8.471
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	-	-	8.526	-	8.526
• Rate/Misc Adjustments	-	-	-0.055	-	-0.055
• Congressional General Reductions Adjustments	-0.084	-	-	-	-
• Congressional Directed Reductions Adjustments	-4.632	-	-	-	-

Change Summary Explanation

The increase in funding from FY11 to FY12 reflects the transfer of efforts and funds to accelerate the development and operationalization of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" from PE 0204575N, project unit 2263. The SSEE Modification Program was created to develop and integrate Graywing and Paragon capabilities into the SSEE programs to support this effort.

SSEE Inc G Request For Proposal(RFP) shifted from FY12 to FY14. Funding will be used to complete higher priority efforts; (the development and operationalization of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" capabilities of Paragon and Graywing under the SSEE Modification Program).

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
2134.: *Shipboard IW Exploit*	11.840	31.740	23.255	-	23.255	9.310	9.351	9.587	9.837	Continuing	Continuing
Quantity of RDT&E Articles	0	2	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Shipboard Information Warfare (IW) line includes the Ships Signal Exploitation Equipment (SSEE) Increment (Inc) E, F,G and Modification programs. The SSEE program is a classified IW / Electronic Warfare (EW) and tactical cryptologic system that provides critical tactical intelligence, situational awareness, battlespace awareness, indications and warnings and hostile threat assessment. These systems provide the battle group and combatant commanders with the surfaces fleet's only EW non-kinetic capabilities ("Finish"). In addition they provide the battle groups with real time indications and warnings by acquisition ("Find") and localization ("Fix") of Signals of Interest (SOI). As an incremental acquisition program, Research, Development, Test & Evaluation (RDT&E) funding is required to have new technologies and associated new operational capabilities rapidly developed and transitioned as Pre-Planned Product Improvements (P3I) upgrades into the system's hardware/ software configuration. This program's funding incorporates P3I, new Commercial Off-the-Shelf (COTS) based technologies and software into the existing systems. Funding will also focus on developing and delivering expanded non-kinetic EW capabilities and net-centric Service Oriented Architecture (SOA), which includes the development, integration and test of Medusa and the SSEE Modification capabilities in support of "Ballistic Missile Defense (BMD) Executive Committee (EXCOM) Anti-Submarine Warfare (ASW) Chief of Naval Operations (CNO) Executive Board Information Operation (IO) Countermeasure Red Flash/Medusa (details classified)."

SSEE Inc F will be developing software and hardware upgrades in support of emergent adversary SOI, inserting SOI and new technology enhancements via incremental software builds and corresponding hardware upgrades.

SSEE Inc G will integrate and improve upon all aspects of the "BMD EXCOM ASW CNO CEB IO Countermeasure Red Flash/Medusa" and expand upon the SSEE Inc F capability of exploiting signals throughout the Radio Frequency (RF) spectrum, in addition to focusing new technologies towards new and previously unexplored/ unexploited CYBER capabilities as we integrate into the Electronic Warfare (EW) Battle Management Network. SSEE Inc G will build off of the advancement of the Inc F system to automate and integrate all existing Ships Signal Exploitation Space (SSES) capabilities into a common user interface, while still advancing and incorporating new technologies through an open software architecture that allows for rapid integration and deployment of those capabilities.

The SSEE Modification program includes the "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa", capabilities of Paragon and Graywing. Paragon (Frequency Extension) is a classified Navy tactical signals intelligence frequency extension capability that will be integrated into Ships Signal Exploitation Equipment (SSEE) Inc E and F programs. This capability provides simultaneous detection, collection, processing, Electronic Warfare and display of communication intelligence data from hostile, high threat and adversary platforms in select frequency ranges that are not prosecuted or encountered today. Graywing is an electronic sensing and attack capability that shares the Paragon topside exploitation assets and will be integrated into SSEE Inc E and F systems. Both Paragon and Graywing will commence development of its Engineering Development Model (EDM) as well as its initial laboratory integration and testing in FY12 and preparation for at sea Operational testing in FY13. Additional program details are held at a higher classification level.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

Integrated Communications and Data Systems (ICADS): ICADS (AN/URC-148(V)) is a Chief of Naval Operations (CNO) directed mission critical system which provided limited back-up, mobile communications capability for large deck naval platforms. The system provided a reliable, limited solution for re-establishing command and control for high value unit, subordinate units, and controlling fleet entities. ICADS is comprised of several mature systems. Specific program details held at a higher classification.

FY13 funding will further incorporate Pre Planned Improvement(P3I)capabilities into SSEE Inc F, improve the software user interface and continue its phased software build approach of rolling capability into the system, and initiate the process of the "Application Store" (App Store) concept. The App Store concept will use the SSEE Inc F system as a Service Oriented Architecture (SOA) host for integrating special black box capability developed by third party providers.
FY13 funding for the SSEE Modification Program will complete the accelerated development and operationalization of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" capabilities of Paragon and Graywing.
FY13 funding will also support the continuation of pre-acquisition activities of SSEE Inc G, with a prime focus on analyzing and documenting the results of FY12 funded maritime feasibility studies on CYBER capabilities and their incorporation into the SSEE Inc G software, and employ an Analysis of Alternative (AoA) based on these feasibility results.
FY13 funding is required to complete acquisition documentation to support a Milestone C production decision. Funding will develop and integrate system design variants to support refined COMPACFLT requirements and support multiple test events. Specific program details held at a higher classification.
Graywing is currently a part of SSEE Mods, the Navy Acqusition Category (ACAT) III Program of Record (POR) to expand the capability of the Ship Signal Exploitation Equipment (SSEE). The POR will acquire multiple Graywing systems for ship installation over the period FY13 through FY17. The Speed to Fleet Project 2134 uses hardware provided in conjunction with Graywing development to deliver a self-contained, transportable system to provide shore based capabilities. In addition to providing an independent shore based capability the Speed to Fleet design provides an alternative Graywing receive and transmit subsystem design for risk reduction to the POR. The transportable Speed to Fleet Graywing also provides an accessible platform to rapidly demonstrate new or improved Information Operations (IO) capabilities by providing a relatively low cost land-based field test article. Furthermore, the hardware developed under this project could be adapted as a roll-on/roll-off ship configuration to supplement the POR installations, if needed by the Fleet.
Medusa is a part of the SSEE programs. The POR will acquire multiple Medusa systems for ship installation over the period FY11 through FY17. The Speed to Fleet Project 2134 will deliver a new firmware spiral that increases the capability of Medusa to respond to a wider range of threat systems, and to improve aspects of its deception generation capability. It will also deliver a laboratory test system that will be used to validate future firmware changes.

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Ship Signals Exploitation Equipment Inc F (SSEE Inc F)	10.901	5.638	5.220
Articles:	0	0	0
FY 2011 Accomplishments:			
Expanded Signal of Interest (SOI) processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated Electroninc Warfare (EW)/non-kinetic capabilities for support to time critical military strike operation and subsequent processing and analysis capabilities for timely and accurate situational awareness for force protection. Conducted developmental testing and operational evaluation in support of full rate decision and corrected identified limitations. Continued to develop and deliver Information Operation (IO) capabilities based on FY11 SOI threats and Net-Centric System			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Oriented Architecture(SOA)in support of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa". Completed Medusa Phase 1 Lab Testing, Shipboard Testing and Factory Acceptance Testing to reach Initial Operating Capability(IOC) allowing for completion of deployment plan for Medusa integration within the SSEE Inc F Full Rate Production (FRP) suite of equipment (Phase II). SSEE Inc F software development phase (Cryptologic Unified Build (CUB) Replacement) were broken into interim phases. Significant elements of the software build were delayed to FY12. ***FY 2012 Plans:*** Complete SSEE Inc F (Cryptologic Unified Build (CUB) Replacement)software development. Continue to expand SOI processing capability to allow collection of the newest high priority modern technology threat signals for tightly integrated IO/non-kinetic capabilities for support to time critical military strike operation and subsequent processing and analysis capabilities for timely and accurate situational awareness for force protection. Continue to develop and deliver EW capabilities based on FY12 SOI threats for integration into SSEE Inc F. ***FY 2013 Plans:*** Continue to advance SOI processing capability by incorporating the next incremental software build, which will also allow transition of the SSEE Inc F software Graphic User Interface (GUIs) to SSEE Inc E. This allows for a common user interface between Inc E and F, simplifies the training for the sailor and saves future training costs by collapsing both curriculums into one. FY13 funding will fund integration of new capabilities into the Inc F software baseline, reducing the current hardware footprint required, freeing up space for other black box capability. Red Falcon development and integration will be used as a test case for the App Store concept, pioneering a new software integration process for SSES capabilities. Finalization of the integration interfaces for third party software, including an Interface Control Drawing (ICD) process and Software Development Kit (SDK) process, will open capability development potential to new technology partners in the industry by standardizing a process for incorporation into the host Inc F system. In support of the "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" initiative, the Medusa Phase III integration will network the capability and complete integration of Mommand and Control (C2) Infrastructure by enabling follow on automated tasking and synchronize system use across the Force. The networking aspect of the Medusa Phase III development is the most critical effort of the Medusa capability, and will showcase the benefits of all previous phased development. Medusa Phase III testing will be part of the Developmental Test (DT)/Operational Assessment (OA), demonstrating the Red Flash capabilities alongside Paragon and Graywing capabilities.			
Title: Ship Signals Exploitation Equipment Inc G (SSEE Inc G)	-	1.207	2.051
Articles:		0	0
FY 2012 Plans: SSEE Inc G is a new start in FY12. Decrease in FY12 funding from PB12 reflects a reprioritization of requirements being allocated to the SSEE Modification Program to complete the accelerated development and operationalization of "BMD EXCOM			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
ASW CEB Information Operation (IO) Countermeasure Red Flash/Medusa". These capabilities will be part of the SSEE Inc G baseline. Commence the initial research and pre-acquisition activities in support of SSEE Inc G. Conduct research into CYBER capabilities (details classified) that can be integrated into SSEE Inc G software and determine if their use is feasible in the maritime environment. ***FY 2013 Plans:*** Continuation of pre-acquisition activities leading up to MS B in FY14, with a prime focus on analyzing and documenting the results of FY12 funded maritime feasibility studies on CYBER capabilities and their incorporation into the SSEE Inc G software, and employ an Analysis of Alternative (AoA) based on these feasibility results. Begin a detailed review of the feasibility of all new technologies looking beyond the current Radio Frequency (RF) spectrum to bound the requirements for the SSEE Inc G system, in preparation for the eventual release of a Request for Proposal (RFP) for both software and hardware in FY14.			
Title: Integrated Communications and Data Systems (ICADS) ***Articles:*** ***FY 2011 Accomplishments:*** FY11 - Integrated Communications and Data Systems (ICADS): ICADS (AN/URC-148(V)) is a Chief of Naval Operations (CNO) directed mission critical system which provided limited back-up, mobile communications capability for large deck naval platforms. The system provided a reliable, limited solution for re-establishing command and control for high value unit, subordinate units, and controlling fleet entities. ICADS is a Rapid Deployment Capability (RDC) and is comprised of several mature systems. Specific program details held at a higher classification. ***FY 2013 Plans:*** FY13 - Integrated Communications and Data Systems (ICADS): ICADS (AN/URC-148(V)) is a Chief of Naval Operations (CNO) directed mission critical system which provided limited back-up, mobile communications capability for large deck naval platforms. The system provided a reliable, limited solution for re-establishing command and control for high value unit, subordinate units, and controlling fleet entities. ICADS is is comprised of several mature systems. FY13 funding is required to complete acquisition documentation to support a Milestone C production decision. Funding will develop and integrate system design variants to support refined COMPACFLT requirements and support multiple test events. Specific program details held at a higher classification.	0.939 0	- 	3.787 0
Title: SSEE Modifications ***Articles:*** ***FY 2012 Plans:***	- 	24.895 2	11.000 0

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Accelerate development, integration and testing of the Paragon and Graywing capability to operationalize within the Future Year Defense Plan (FYDP). Continue Phase I development towards Initial Operating Capability (IOC), refine and complete final Engineering Development Model (EDM) design for the high gain Information Operatoin (IO) topside antennas and below-deck rack components. Initiate procurement of the EDM hardware, complete build, assemble, and integration; receive delivery of 1 Paragon and 1 Graywing EDM. Initiate laboratory testing for the below deck integration to the topside antenna suite, and software integration and testing of Paragon/Graywing software with the SSEE Inc E and F software. Begin development on the Developmental Test (DT)/Operational Assessment (OA) test plan. Note: Funding and developmental efforts for Graywing transferred from PE 0204575N, project unit 2263 beginning in FY12. FY12 funding increase reflects Paragon and Graywing efforts being combined under the SSEE Modification Program to support the accelerated development and operationalization of "BMD EXCOM ASW CEB IO Countermeasure Red Flash/Medusa" capabilities. ***FY 2013 Plans:*** Conduct environmental testing on 1 Paragon EDM and 1 Graywing EDM. Complete integration and testing with the Paragon High Gain IO topside antenna and install EDM for Paragon/Graywing Phase I(OA). The frequency extension and targeting enhancement Paragon will bring to the Fleet will expand the IO capability realm to boundaries previously presumed unreachable. Commence development efforts for Phase II, which replaces larger Paragon/Graywing below deck hardware components in the racks with component cards in the Inc F system and fully integrates the capability into the SSEE Inc F software. Further FY13 development efforts to build an automated asset controller to control Paragon, Graywing and other Red Flash assets, will improve the control of operations and maintenance procedures by removing the manual cabling swap out currently required under Phase I. FY13 efforts will deliver Paragon/Graywing IOC to the Fleet in support of the "BMD EXCOM ASW CEB IO Countermeasure Red Flash", and initiate further development enhancements with the ultimate goal of full integration into the Inc F system as part of another crucial capability component of a coordinated IO weapon system.			
Title: Shipboard IW Exploit	-	-	1.197
Articles:			0
FY 2013 Plans: Shore based Graywing: - Assemble system and perform end-to-end hardware testing. - Integrate and test the control software including user interface for operations, displays and diagnostics. - Integrate and test the Mission Planning Tool modified for land operation. - Perform end-to-end testing of the system. Document results in after-test reports. - Develop operator user manuals, diagnostic procedures and a capabilities description.			

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Medusa Upgrade: - Conduct benchtop testing of new Medusa firmware against designated signals. - Conduct field test against surrogate threat system. Document test results. - Document firmware modifications.			
Accomplishments/Planned Programs Subtotals	11.840	31.740	23.255

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN / 2360: *Shipboard IW Exploit*	108.551	100.745	107.060	0.000	107.060	139.126	171.724	166.311	185.597	Continuing	Continuing
• OPN/2188: *Electronic Warfare MILDEC*	0.000	16.841	0.000	0.000	0.000	20.609	54.248	4.526	4.995	Continuing	Continuing

D. Acquisition Strategy

Acquisition, management and contracting strategies are to support engineering and manufacturing development by providing funds to a Prime Contractor and Space & Naval Warfare Systems Command (SPAWAR) Systems Center (SSC) - Atlantic, SSC - Pacific and miscellaneous contractors, with management oversight by SPAWAR.

Funding supports development and demonstration to rapidly deliver advanced and improved Information Operation (IO) capabilities to the Fleet. The Shore based Graywing unit developed will provide a rapidly deployable capability for the protection of land based resources. Multiple copies of the first article can be replicated depending on operational needs. These systems could also be used as a carry on capability to supplement the Graywing ship installations via the SSEE Mods ACAT III program or to those ships that are not SSEE capable. The Medusa upgrade adds additional capabilities via software to address a different class of radars which are proliferating, allowing backfit into existing systems via a new software load.

E. Performance Metrics

SSEE Inc F achieved Full Rate Production (FRP) in FY11.

Program of Record (POR) specification has established Graywing performance metrics that will be met in the Speed to Fleet transportable version. Field testing will be used to verify this performance. Medusa firmware modifications will meet existing Medusa performance metrics for the new signal classes and will be verified via bench testing and end-to-end field testing.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Primary Hardware Development	Various	Various:Various	73.395	-		-		-		-	Continuing	Continuing	Continuing
Primary Hardware Development	WR	SSC PAC:San Diego, CA	1.125	5.685	Nov 2011	2.647	Nov 2012	-		2.647	Continuing	Continuing	Continuing
Systems Engineering	Various	Various:Various	22.309	-		-		-		-	Continuing	Continuing	Continuing
Systems Engineering	C/CPAF	Classified Contract:Classified Contract	0.950	3.159	Nov 2011	2.550	Nov 2012	-		2.550	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC PAC:San Diego, CA	0.750	1.650	Nov 2011	0.875	Nov 2012	-		0.875	Continuing	Continuing	Continuing
Systems Engineering	WR	SSC LANT:Charleston, SC	2.485	1.487	Nov 2011	0.750	Nov 2012	-		0.750	Continuing	Continuing	Continuing
Training Development	WR	SSC PAC:San Diego, CA	1.696	0.613	Nov 2011	0.700	Nov 2012	-		0.700	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPAF	Classified Contract:TBD	-	2.000	Nov 2011	1.850	Nov 2012	-		1.850	Continuing	Continuing	Continuing
Primary Hardware Development	WR	NRL:Washington, DC	-	1.800	Nov 2011	0.750	Nov 2012	-		0.750	Continuing	Continuing	Continuing
Primary Hardware Development	C/CPAF	Classified Contracts:TBD	-	-		1.000	Nov 2012	-		1.000	0.000	1.000	
		Subtotal	102.710	16.394		11.122		-		11.122			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	Various	Various:Various	40.776	-		-		-		-	Continuing	Continuing	Continuing
Software Development	C/CPAF	Classified Contract:Classified Contract	11.800	6.600	Nov 2011	3.100	Nov 2012	-		3.100	Continuing	Continuing	Continuing
Software Development	WR	SSC PAC:San Diego, CA	0.392	0.465	Nov 2011	0.250	Nov 2012	-		0.250	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Training Development	Various	Various:Various	0.079	-		-		-		-	Continuing	Continuing	Continuing
Training Development	C/CPFF	Classified Contract:Classified Contract	0.445	0.907	Nov 2011	0.375	Nov 2012	-		0.375	Continuing	Continuing	Continuing
Integrated Logistics Support	Various	Various:Various	2.206	-		-		-		-	Continuing	Continuing	Continuing
Integrated Logistics Support	C/CPFF	Unknown:Unknown	-	0.300	Nov 2011	0.200	Nov 2012	-		0.200	Continuing	Continuing	Continuing
Configuration Management	WR	SSC Lant:Charleston, SC	1.390	0.123	Nov 2011	0.125	Nov 2012	-		0.125	Continuing	Continuing	Continuing
Configuration Management	WR	SSC PAC:San Diego, CA	0.113	0.123	Nov 2011	0.100	Nov 2012	-		0.100	Continuing	Continuing	Continuing
Technical Data	Various	Various:Various	0.542	-		-		-		-	Continuing	Continuing	Continuing
Technical Data	WR	SSC PAC:San Diego, CA	0.219	0.917	Nov 2011	0.400	Nov 2012	-		0.400	Continuing	Continuing	Continuing
Training Development	WR	SSC LANT:Charleston, SC	-	-		0.125	Nov 2012	-		0.125	0.000	0.125	
Integrated Logistic Support	WR	SSC LANT:Charleston, SC	-	-		0.250	Nov 2012	-		0.250	0.000	0.250	
		Subtotal	57.962	9.435		4.925		-		4.925			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Various	Various:Various	7.375	-		-		-		-	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	SSC PAC:San Diego, CA	0.505	0.925	Nov 2011	0.850	Nov 2012	-		0.850	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	SSC LANT:Charleston, SC	0.817	1.128	Nov 2011	0.535	Nov 2012	-		0.535	Continuing	Continuing	Continuing
Developmental Test & Evaluation	WR	NRL:Washington, DC	0.400	0.776	Nov 2011	0.585	Nov 2012	-		0.585	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Test & Evaluation	WR	OPTEVFOR:Norfolk, VA	3.078	0.395	Nov 2011	0.975	Nov 2012	-		0.975	Continuing	Continuing	Continuing
Test Assets	WR	SSC PAC:San Diego, CA	1.747	-		-		-		-	Continuing	Continuing	Continuing
Test Assets	WR	SSC LANT:Charleston, SC	0.070	0.085	Nov 2011	-		-		-	Continuing	Continuing	Continuing
Operational Test & Evaluation	WR	SSC LANT:Charleston, SC	-	-		0.500	Nov 2012	-		0.500	0.000	0.500	
Developmental Test & Evaluation	WR	OPTEVFOR:Norfolk, VA	-	-		0.125	Nov 2012	-		0.125	0.000	0.125	
Developmental Test and Evaluation	WR	NRL:Washington DC	-	-		1.197	Nov 2012	-		1.197	0.000	1.197	Continuing
		Subtotal	13.992	3.309		4.767		-		4.767			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Engineering Support	Various	Various:Various	0.933	-		-		-		-	Continuing	Continuing	Continuing
Contractor Engineering Support	C/CPFF	Classified Contract:Classified Contract	0.952	0.652	Nov 2011	0.315	Nov 2012	-		0.315	Continuing	Continuing	Continuing
Government Engineering Support	Various	Various:Various	1.290	-		-		-		-	Continuing	Continuing	Continuing
Government Engineering Support	WR	SSC LANT:Charleston, SC	0.407	0.525	Nov 2011	0.339	Nov 2012	-		0.339	Continuing	Continuing	Continuing
Government Engineering Support	WR	SSC PAC:San Diego, CA	1.040	0.668	Nov 2011	0.365	Nov 2012	-		0.365	Continuing	Continuing	Continuing
Program Management Support	Various	Various:Various	16.211	-		-		-		-	Continuing	Continuing	Continuing

Exhibit R-3, RDT&E Project Cost Analysis: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

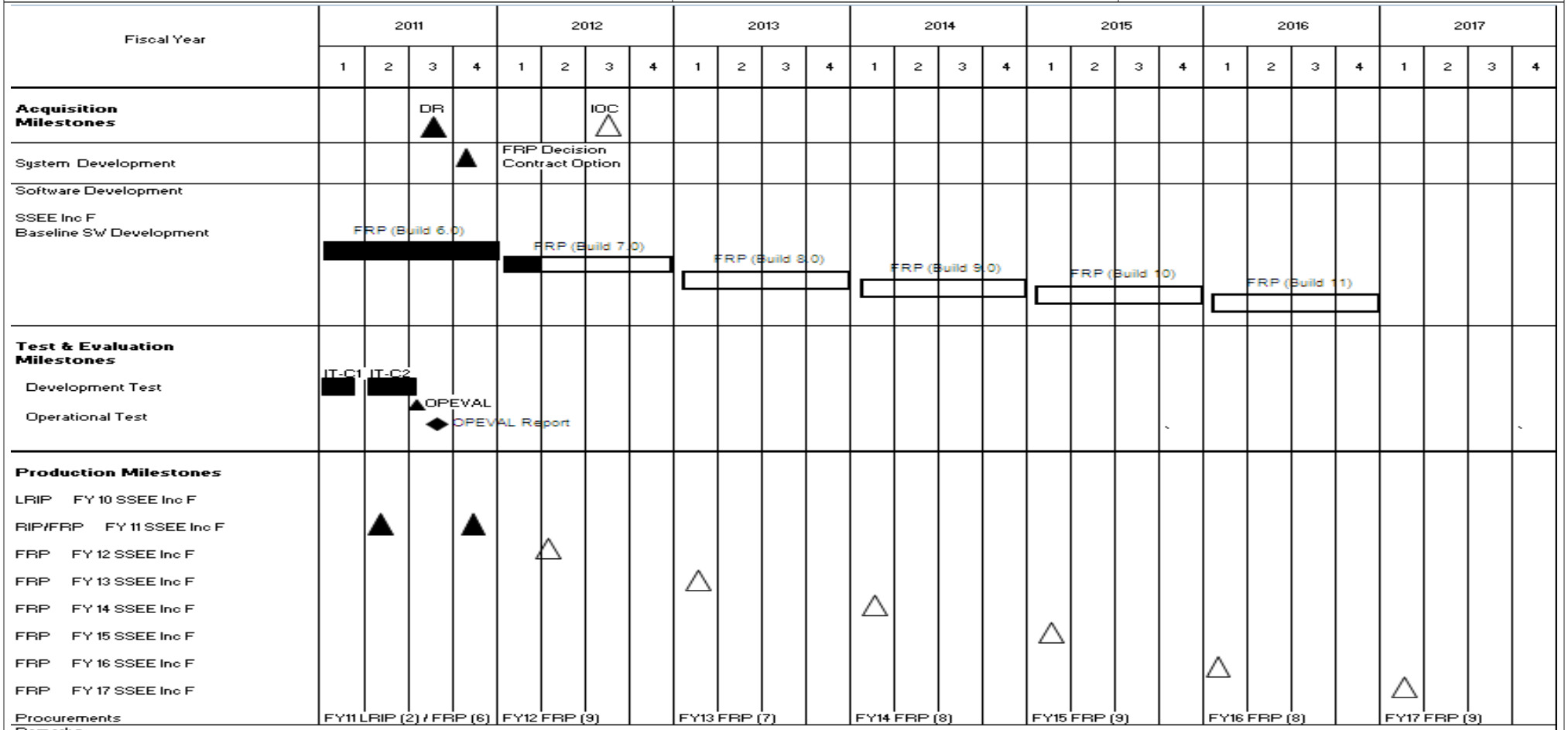
Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Support	C/CPFF	Classified Contract:Classified Contract	0.535	0.614	Nov 2011	0.362	Nov 2012	-		0.362	Continuing	Continuing	Continuing
Program Management Support	WR	SSC LANT:Charleston, SC	0.065	0.063	Nov 2011	0.440	Nov 2012	-		0.440	Continuing	Continuing	Continuing
Travel	WR	SPAWAR:San Diego, CA	2.101	0.080	Nov 2011	0.070	Nov 2012	-		0.070	Continuing	Continuing	Continuing
Acquisition Workforce	Various	Various:Various	0.062	-		-		-		-	Continuing	Continuing	Continuing
Contractor Engineering Support	WR	SPAWAR:San Diego, CA	-	-		0.550	Nov 2012	-		0.550	0.000	0.550	
		Subtotal	23.596	2.602		2.441		-		2.441			

	Total Prior Years Cost	FY 2012 Cost	FY 2012 Award Date	FY 2013 Base Cost	FY 2013 Base Award Date	FY 2013 OCO Cost	FY 2013 OCO Award Date	FY 2013 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	198.260	31.740		23.255		-		23.255			

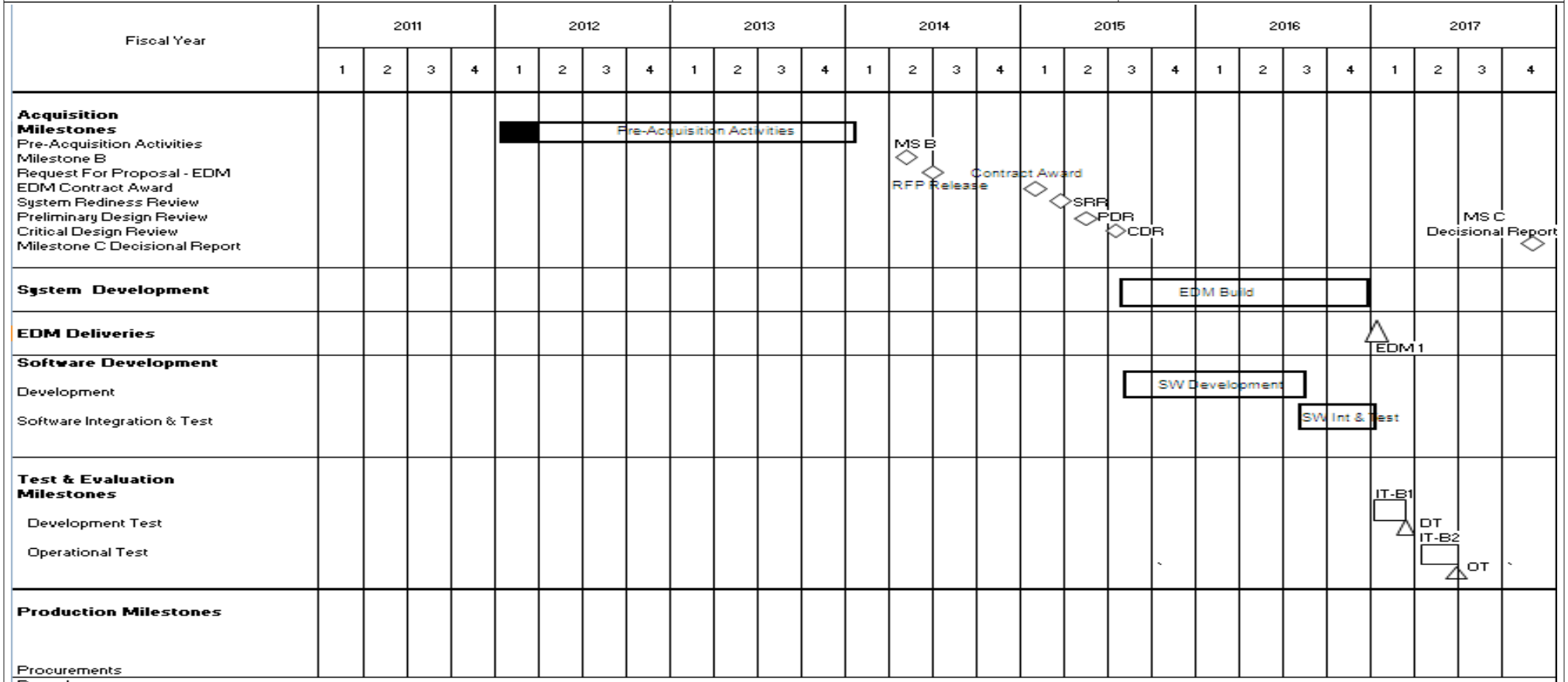
Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304785N: *Tactical Cryptologic Systems*	**PROJECT** 2134.: *Shipboard IW Exploit*



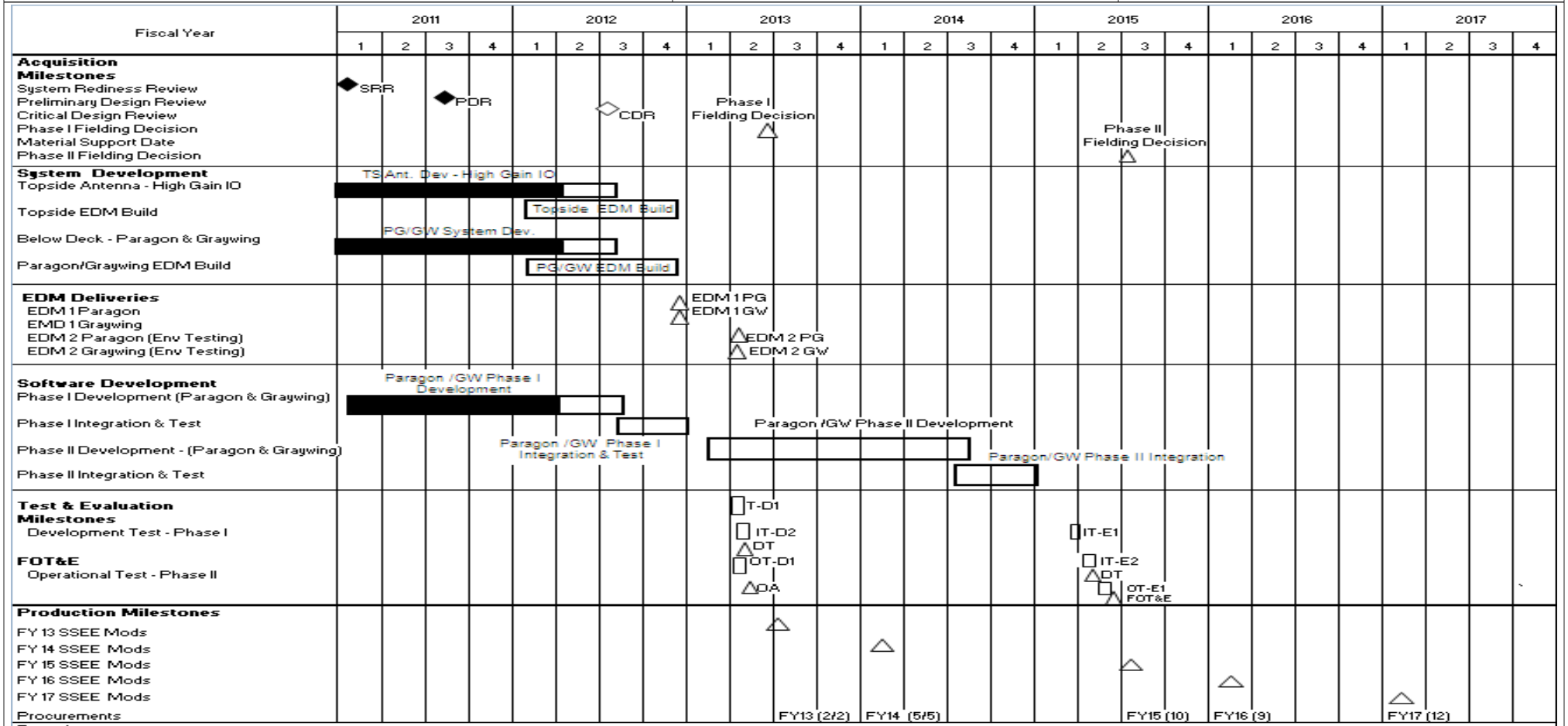
Remarks:
1) Shipboard Information Warfare (IW) Exploit / 2134 (SSEE Inc F)
2) Production Milestones reflect contract award dates.

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*



Remarks:
Shipboard Information Warfare (IW) Exploit / 2134 (SSEE Inc G)

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304785N: *Tactical Cryptologic Systems*	**PROJECT** 2134.: *Shipboard IW Exploit*



Remarks:
Shipboard Information Warfare (IW) Exploit / 2134 (SSEE Mods)
Paragon and Grawing are fielded seperately until Q3 FY15 Fielding decision when Paragon capabilities will be integrated into Graywing

EXHIBIT R4, Schedule Profile

Exhibit R-4, RDT&E Schedule Profile: PB 2013 Navy		**DATE:** February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304785N: *Tactical Cryptologic Systems*	**PROJECT** 2134.: *Shipboard IW Exploit*

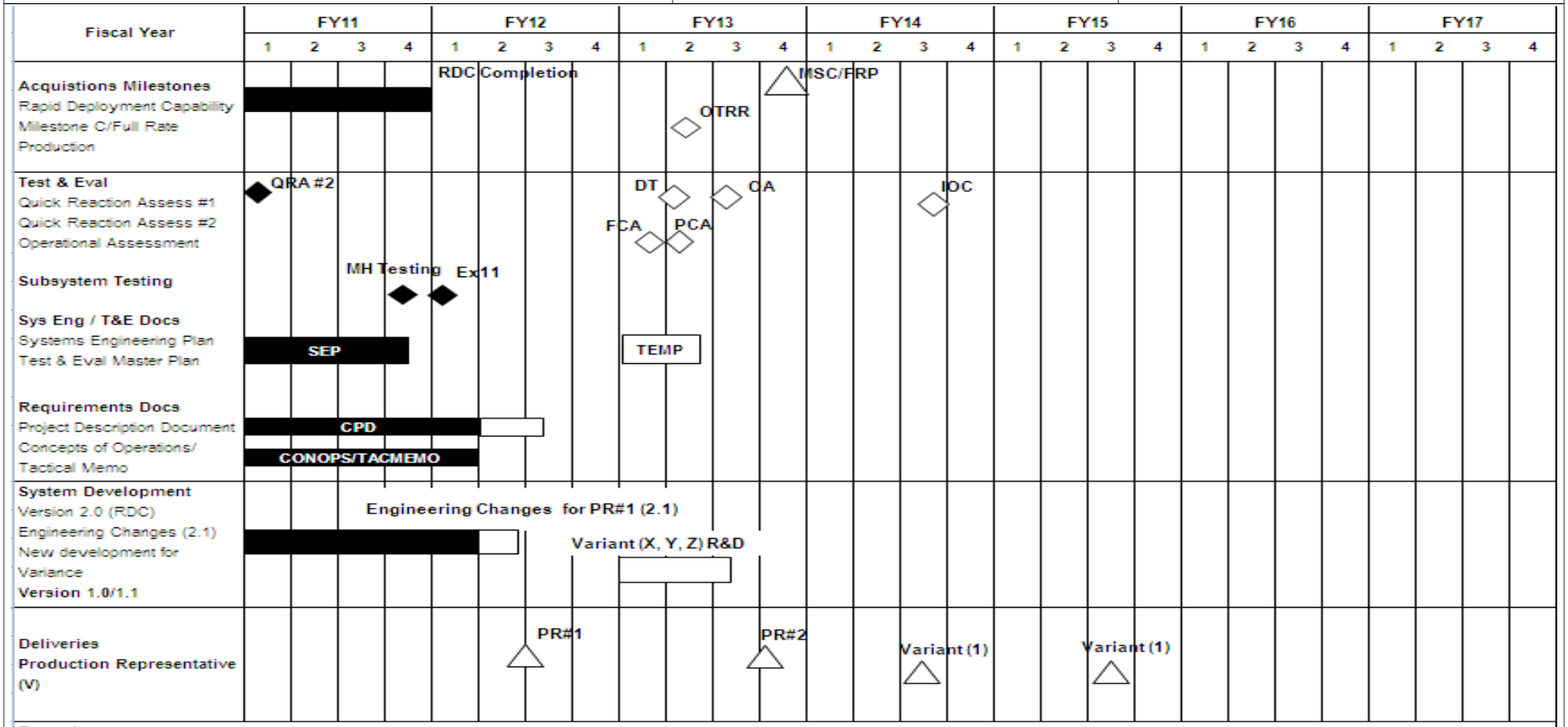


Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	**R-1 ITEM NOMENCLATURE** PE 0304785N: *Tactical Cryptologic Systems*	**PROJECT** 2134.: *Shipboard IW Exploit*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Proj 2134.S14				
Testing and Documentation	1	2013	4	2013
SSEE Inc F				
Operator Training	1	2014	1	2014
Inc F - Developmental Testing IT-C1	1	2011	1	2011
Inc F - Sotware Development	1	2011	4	2016
Inc F - Developmental Testing IT-C2	2	2011	3	2011
Inc F - Operational Testing (OT) OPEVAL	2	2011	2	2011
Inc F - Full Rate Production (FRP) Decision Review (DR)	4	2011	4	2011
Inc F - FRP Contract Award	4	2011	4	2011
Inc F - Initial Operational Capability (IOC)	3	2012	3	2012
SSEE Inc G				
Inc G - Pre-Milestone B (MSB) Activities	1	2012	1	2014
Inc G - Milestone B (MSB)	2	2014	2	2014
Inc G - Fequest For Proposal Release (RFP)	2	2014	3	2014
Inc G - EDM Contract Award	1	2015	1	2015
Inc G - Systems Readiness Review (SRR)	1	2015	1	2015
Inc G - Preliminary Design Review (PDR)	2	2015	2	2015
Inc G - Critical Design Review (CDR)	3	2015	3	2015
Inc G - Developmental Testing (DT) IT-B1	1	2017	1	2017
Inc G - Operational Testing (OT) IT-B2	2	2017	2	2017
Inc G - Engineering Development Models (EDM) Deliveries	1	2017	1	2017

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
Inc G - MS C Decisional Report	4	2017	4	2017
SSEE Modifications				
SSEE Modification - Sytem Readiness Review	1	2011	1	2011
SSEE Modification - System Development (Topside/Below Deck)	1	2011	3	2012
SSEE Modification - Software Development (Phase I)	1	2011	3	2012
SSEE Modification - Preliminary Design Review	3	2011	3	2011
SSEE Modification - Critical Design Review	3	2012	3	2012
SSEE Modification - EDM Build	1	2012	4	2012
SSEE Modification - Software Integration & Test (Phase I)	3	2012	4	2012
SSEE Modification - DT (Phase I)	2	2013	2	2013
SSEE Modification - OT (Phase I)	2	2013	2	2013
SSEE Modification - EDM #1 (Paragon & Graywing)	4	2012	4	2012
SSEE Modification - EDM #2 (Paragon & Graywing)	2	2013	2	2013
SSEE Modification - Graywing Development (Phase II)	1	2013	3	2014
SSEE Modification - Phase I Fielding Decision	2	2013	2	2013
SSEE Modification - Software Integration & Test (Phase II)	3	2014	4	2014
SSEE Modification - DT (Phase II)	2	2015	2	2015
SSEE Modification - OT (Phase II)	2	2015	2	2015
SSEE Modification - Phase II Fielding Decision	3	2015	3	2015
SSEE Modification - Production Contract Award	2	2013	2	2013
ICADS				
ICADS- Rapid Deployment Capability	1	2011	4	2011
ICADS- Quick Reaction Assessment #2	1	2011	1	2011
ICADS- Systems Engineering Plan	1	2011	4	2011
ICADS- Capabilities Production Document (CPD)	1	2011	3	2012

Exhibit R-4A, RDT&E Schedule Details: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 2134.: *Shipboard IW Exploit*

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
ICADS- Concepts of Operations/Tactical Memo	1	2011	1	2012
ICADS- Engineering Changes Production Representative #1	1	2011	2	2012
ICADS- Subsystem Testing MH Testing	4	2011	4	2011
ICADS- Subsystem Testing Ex11	1	2012	1	2012
ICADS- Production Representative (V) #1	3	2012	3	2012
ICADS- Test and Evaluation Master Plan	1	2013	2	2013
ICADS- New Development for Variance (Variant X, Y, Z)	1	2013	3	2013
ICADS- Functional Configuration Audit (FCA)	1	2013	1	2013
ICADS- Developmental Testing	1	2013	1	2013
ICADS- Physical Configuration Audit (PCA)	2	2013	2	2013
ICADS- Operational Test Readiness Review	2	2013	2	2013
ICADS- Operational Assessment	3	2013	3	2013
ICADS- Milestone C / Full Rate Production	4	2013	4	2013
ICADS- Production Representative #2	4	2013	4	2013
ICADS- Initial Operational Capabilities	3	2014	3	2014
ICADS- Variant (1 FY14)	3	2014	3	2014
ICADS- Variant (1 FY15)	3	2015	3	2015

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 3165: *Automatic Identification System (AIS)*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
3165: *Automatic Identification System (AIS)*	0.463	-	-	-	-	-	-	-	-	0.000	0.463
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Automatic Identification System (AIS) is an International Maritime Very High Frequency Communication system that allows ships to exchange information (machine to machine) on Navigation (Position, Course, Speed, etc), Ship Info (Ship Name, Call Sign, Length/Beam), and Cargo Info (Draft, Type, Destination, Route, Estimated Time of Arrival) and Messaging (Safety, Text). This technology will improve capabilities in three diverse areas: (a) Situational Awareness/Common Operational Picture (b) Navigation/Safety of Ship and (c) Other intelligence gathering/correlation. Funding will support the integration of modified Commercial Off-The-Shelf AIS equipment with the existing Global Command and Control - Maritime/Common Operational Picture, navigation and bridge display capabilities, surface search / weapons systems and intelligence / Cryptologic capabilities

B. Accomplishments/Planned Programs ($ in Millions, Article Quantities in Each)	FY 2011	FY 2012	FY 2013
Title: Automatic Identification System (AIS)	0.463	-	-
Articles:	0		
FY 2011 Accomplishments: AIS development was completed in FY11. Completed the refinement of the Global AIS architecture, and its relation to the overall United State Navy (USN) Maritime Domain Awareness (MDA) effort and Concept of Operation (CONOP) as well as the National MDA CONOP. This provides for secure end-to-end AIS data sharing capability in-line with National MDA CONOPs.			
Accomplishments/Planned Programs Subtotals	0.463	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPN / 2361: *Automatic Identification System*	1.292	1.364	0.914	0.000	0.914	0.902	0.880	0.844	0.868	Continuing	Continuing
• OPN / 2360: : *Shipboard IW Exploit (AIS only)*	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	2.399

D. Acquisition Strategy

Acquisition management and contracting strategies are to support the integration of Commercial Off-The-Shelf (COTS) Automatic Identification System (AIS) data into the existing and emerging United States Navy Command and Control and Network infrastructure capabilities, navigation and bridge capabilities surface search/

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy		DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0304785N: *Tactical Cryptologic Systems*	PROJECT 3165: *Automatic Identification System (AIS)*

weapons systems and intelligence/cryptologic capabilities. COTS will be procured from a contractor with government over sight from Space and Naval Warfare (SPAWAR) Systems Center (SSC) - Atlantic with management oversight by SPAWAR .

E. Performance Metrics

N/A

Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Navy	DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0305124N: *Special Applications Program*

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	-	100.000	-	-	-	-	-	-	-	0.000	100.000
9999: *Congressional Adds*	-	100.000	-	-	-	-	-	-	-	0.000	100.000

A. Mission Description and Budget Item Justification

Additional details with respect to this line item are held at a higher classification. This line item is reported to Congress via separate channels.

B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	100.000	-	-	-
Total Adjustments	-	100.000	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	100.000			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Congressional Add Details ($ in Millions, and Includes General Reductions)	FY 2011	FY 2012
Project: 9999: *Congressional Adds*		
Congressional Add: *Classified Add (Cong)*	-	100.000
Congressional Add Subtotals for Project: 9999	-	100.000
Congressional Add Totals for all Projects	-	100.000

Change Summary Explanation

Technical: Not applicable.

Schedule: Not applicable.

Exhibit R-2A, RDT&E Project Justification: PB 2013 Navy			DATE: February 2012
APPROPRIATION/BUDGET ACTIVITY 1319: *Research, Development, Test & Evaluation, Navy* BA 5: *Development & Demonstration (SDD)*	R-1 ITEM NOMENCLATURE PE 0305124N: *Special Applications Program*	PROJECT 9999: *Congressional Adds*	

COST ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
9999: *Congressional Adds*	-	100.000	-	-	-	-	-	-	-	0.000	100.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Additional details with respect to this line item are held at a higher classification. This line item is reported to Congress via separate channels.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012
Congressional Add: Classified Add (Cong)	-	100.000
FY 2012 Plans: Congressional add.		
Congressional Adds Subtotals	-	100.000

C. Other Program Funding Summary ($ in Millions)

N/A

D. Acquisition Strategy

Congressional add funding.

E. Performance Metrics

Congressional add funding.