DEPARTMENT OF THE AIR FORCE

FISCAL YEAR (FY) 2008/2009 BUDGET ESTIMATES

RESEARCH, DEVELOPMENT, TEST AND EVALUATION (RDT&E)

DESCRIPTIVE SUMMARIES, VOLUME III

BUDGET ACTIVITY 7

FEBRUARY 2007

Fiscal Year 2008/2009 Budget Estimates
RDT&E Descriptive Summaries, Volume III
Budget Activity 7
February 2007

INTRODUCTION AND EXPLANATION OF CONTENTS

1. (U) GENERAL
   A. This document has been prepared to provide information on the United States Air Force (USAF) Research, Development, Test and Evaluation (RDT&E) program elements and projects in the FY 2008 President's Budget.
      5) All exhibits in this document have been assembled in accordance with DoD 7000.14R, Financial Management Regulation, Volume 2B, Chapter 5, Section 050402. Exceptions:
         a) Exhibit R-1, RDT&E Program, which was distributed under a separate cover due to classification.
      6) Other comments on exhibit contents in this document:
         a) Exhibits R-2/2a and R-3 provide narrative information for all RDT&E program elements and projects within the USAF FY 2008 RDT&E program with the exception of classified program elements. The formats and contents of this document are in accordance with the guidelines and requirements of the Congressional committees insofar as possible.
         b) The "Other Program Funding Summary" portion of the R-2 includes, in addition to RDT&E funds, Procurement funds and quantities, Military Construction appropriation funds on specific development programs, Operations and Maintenance appropriation funds where they are essential to the development effort described, and where appropriate, Department of Energy (DOE) costs.
         c) There are no "Facilities Exhibits", Military Construction Project Data, (DD 1391), for improvements to and construction of government-owned facilities funded in RD&E, included in this submission.

2. (U) CLASSIFICATION
   A. All exhibits contained in Volumes I, II, and III are unclassified. Classified exhibits are not included in the submission due to the level of security classification and necessity of special security clearances.

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ALPHABETICAL LISTING

DEPARTMENT OF DEFENSE

FY 2008 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

22 JAN 2007

APPROPRIATION	FY 2006	FY 2007	FY 2008
Research, Development, Test & Eval, AF	22,190,943	24,420,623	26,711,940
Total Research, Development, Test & Evaluation	22,190,943	24,420,623	26,711,940

DEPARTMENT OF DEFENSE

FY 2008 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

22 JAN 2007

Summary Recap of Budget Activities	FY 2006	FY 2007	FY 2008
Basic Research	374,335	408,547	375,199
Applied Research	1,039,305	1,155,523	1,011,075
Advanced Technology Development	974,770	1,037,521	577,266
Advanced Component Development & Prototypes	2,178,587	2,539,678	2,938,712
System Development & Demonstration	4,592,979	4,671,927	4,319,233
RDT&E Management Support	1,376,255	1,060,430	1,054,328
Operational Systems Development	11,654,712	13,546,997	16,436,127
Total Research, Development, Test & Evaluation	22,190,943	24,420,623	26,711,940

Summary Recap of FYDP Programs			
Strategic Forces	109,692	201,421	136,178
General Purpose Forces	3,352,770	3,949,267	3,666,904
Intelligence and Communications	8,218,167	9,315,800	11,970,886
Mobility Forces	757,616	777,078	1,096,094
Research and Development	9,575,886	9,875,249	9,561,730
Central Supply and Maintenance	127,353	240,089	188,985
Training Medical and Other	3,216	3,467	3,243
Administration and Associated Activities	42,661	54,356	83,879
Support of Other Nations	3,582	3,896	4,041
Total Research, Development, Test & Evaluation	22,190,943	24,420,623	26,711,940

DEPARTMENT OF THE AIR FORCE

FY 2008 RDT&E PROGRAM

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DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
1	0601102F	Defense Research Sciences	01	256,565	281,156	258,259	U
2	0601103F	University Research Initiatives	01	105,698	115,035	104,304	U
3	0601108F	High Energy Laser Research Initiatives	01	12,072	12,356	12,636	U
	Basic Research			374,335	408,547	375,199	
4	0602015F	Medical Development	02		23,810		U
5	0602102F	Materials	02	114,877	153,293	122,794	U
6	0602201F	Aerospace Vehicle Technologies	02	102,792	118,901	131,948	U
7	0602202F	Human Effectiveness Applied Research	02	111,369	109,174	79,856	U
8	0602203F	Aerospace Propulsion	02	153,760	218,657	179,161	U
9	0602204F	Aerospace Sensors	02	114,934	133,235	108,055	U
10	0602500F	Multi-disciplinary Space Technology	02	89,761			U
11	0602601F	Space Technology	02	103,604	103,472	109,566	U
12	0602602F	Conventional Munitions	02	58,012	61,868	57,804	U
13	0602605F	Directed Energy Technology	02	43,287	50,019	54,883	U
14	0602702F	Command Control and Communications	02	95,676	128,680	116,705	U
15	0602805F	Dual Use Science and Technology Program	02	962			U
16	0602890F	High Energy Laser Research	02	50,271	52,136	50,303	U
17	0207170F	Joint Helmet Mounted Cueing System (JHMCS)	02		2,278		U
18	0301555F	Classified Programs	02				
19	0301556F	Special Program	02				
	Applied Research			1,039,305	1,155,523	1,011,075	

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
20	0603112F	Advanced Materials for Weapon Systems	03	65,193	82,290	39,730	U
21	0603203F	Advanced Aerospace Sensors	03	38,471	58,228	55,549	U
22	0603211F	Aerospace Technology Dev/Demo	03	38,753	36,286	64,922	U
23	0603216F	Aerospace Propulsion and Power Technology	03	98,901	145,891	117,990	U
24	0603231F	Crew Systems and Personnel Protection Technology	03	33,570	43,890	28,558	U
25	0603270F	Electronic Combat Technology	03	32,247	28,528	23,743	U
26	0603311F	Ballistic Missile Technology	03	11,146	9,365		U
27	0603400F	Joint Unmanned Combat Air Systems (J-UCAS) Advanced Technology Dev and Research	03	80,362			U
28	0603401F	Advanced Spacecraft Technology	03	86,327	101,115	78,704	U
29	0603422F	Global Positioning System (GPS) Extension Program	03			70,758	U
30	0603444F	Maui Space Surveillance System (MSSS)	03	45,943	50,383	5,237	U
31	0603500F	Multi-disciplinary Advanced Development Space Technology	03	51,929			U
32	0603601F	Conventional Weapons Technology	03	35,916	38,530	16,904	U
33	0603605F	Advanced Weapons Technology	03	42,124	76,733	43,999	U
34	0603789F	C3I Advanced Development	03	41,345	48,195	27,357	U
35	0603801F	Special Programs	03	266,984	314,384		U
36	0603924F	High Energy Laser Advanced Technology Program	03	5,559	3,699	3,815	U
37	0207418F	Tactical Airborne Control Systems	03		4		U
38	0301555F	Classified Programs	03				

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

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APPROPRIATION: 3600F Research, Development, Test & Eval, AF

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
39	0301556F	Special Program	03				
		Advanced Technology Development		974,770	1,037,521	577,266	
40	0603260F	Intelligence Advanced Development	04	4,759	4,763	4,930	U
41	0603287F	Physical Security Equipment	04	24,858	1,284	466	U
42	0603421F	NAVSTAR Global Positioning System III	04	89,556	313,401	587,226	U
43	0603430F	Advanced EHF MILSATCOM (SPACE)	04	639,179	630,868	603,179	U
44	0603432F	Polar MILSATCOM (SPACE)	04	6,028	35,470	178,754	U
45	0603438F	Space Control Technology	04	14,598	30,107	37,604	U
46	0603742F	Combat Identification Technology	04	49,569	26,407	26,054	U
47	0603790F	NATO Research and Development	04	3,842	4,080	4,280	U
48	0603791F	International Space Cooperative R&D	04	550	591	619	U
49	0603845F	Transformational SATCOM (TSAT)	04	416,813	729,945	963,585	U
50	0603850F	Integrated Broadcast Service	04	15,930	20,471	21,192	U
51	0603851F	Intercontinental Ballistic Missile	04	56,773	60,907	26,519	U
52	0603854F	Wideband Gapfiller System RDT&E (Space)	04	97,718	37,530	19,213	U
53	0603858F	Space Radar	04	98,062	185,399		U
54	0603859F	Pollution Prevention	04	10,188	7,026	2,838	U
55	0603860F	Joint Precision Approach and Landing Systems	04	6,068	9,908	7,544	U
56	0604015F	Next Generation Bomber	04	24,108	25,491		U
57	0604327F	Hard and Deeply Buried Target Defeat System (HDBTDS) Program	04	3,854			U

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EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
58	0604400F	Joint Unmanned Combat Air Systems (J-UCAS) Advanced Component and Prototype Deve	04	222,540			U
59	0604855F	Operationally Responsive Launch	04	45,155			U
60	0604856F	Common Aero Vehicle (CAV)	04	26,548	33,185	32,806	U
61	0604857F	Operationally Responsive Space	04		35,411	87,032	U
62	0207423F	Advanced Communications Systems	04	3,316			U
63	0305178F	National Polar-Orbiting Operational Environmental Satellite System (NPOESS)	04	318,575	347,434	334,871	U
		Advanced Component Development & Prototypes		2,178,587	2,539,678	2,938,712	
64	0603840F	Global Broadcast Service (GBS)	05	18,648	24,749	29,407	U
65	0604012F	Joint Helmet Mounted Cueing System (JHMCS)	05	3,590	2,781		U
66	0604222F	Nuclear Weapons Support	05	13,952	14,839	20,319	U
67	0604226F	B-1B	05	76,496	130,053	159,126	U
68	0604233F	Specialized Undergraduate Flight Training	05	9,832	3,689	12,622	U
69	0604239F	F-22	05	71,818			U
70	0604240F	B-2 Advanced Technology Bomber	05	281,671	241,608	244,019	U
71	0604261F	Personnel Recovery Systems	05		200,695	290,059	U
72	0604270F	Electronic Warfare Development	05	97,122	92,832	101,649	U
73	0604280F	Joint Tactical Radio	05	77,130			U
74	0604287F	Physical Security Equipment	05	10,685	93	34	U
75	0604329F	Small Diameter Bomb (SDB)	05	64,474	105,481	145,191	U
76	0604421F	Counterspace Systems	05	28,203	50,253	53,412	U

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FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

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Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
77	0604425F	Space Situation Awareness Systems	05		121,696	187,804	U
78	0604429F	Airborne Electronic Attack	05	29,833	12,374	20,007	U
79	0604441F	Space Based Infrared System (SBIRS) High EMD	05	706,560	664,880	587,004	U
80	0604443F	Alternative Infrared Space System (AIRSS)	05		67,552	230,887	U
81	0604600F	Munitions Dispenser Development	05	14,472			U
82	0604602F	Armament/Ordnance Development	05	7,613	5,020	1,985	U
83	0604604F	Submunitions	05	5,368	8,327	1,988	U
84	0604617F	Agile Combat Support	05	11,045	10,056	10,623	U
85	0604618F	Joint Direct Attack Munition	05		15,392		U
86	0604706F	Life Support Systems	05	12,047	14,216	12,649	U
87	0604735F	Combat Training Ranges	05	8,336	16,700	17,657	U
88	0604740F	Integrated Command & Control Applications (IC2A)	05	27,976	23,664	189	U
89	0604750F	Intelligence Equipment	05	2,728	4,907	1,469	U
90	0604762F	Common Low Observables Verification System (CLOVerS)	05	12,737	4,483		U
91	0604800F	Joint Strike Fighter (JSF)	05	2,264,836	2,132,924	1,780,874	U
92	0604851F	Intercontinental Ballistic Missile	05	30,952			U
93	0604853F	Evolved Expendable Launch Vehicle Program (SPACE)	05	19,050	19,738		U
94	0605011F	RDT&E for Aging Aircraft	05	37,404	26,490	17,021	U
95	0605807F	Test and Evaluation Support	05			3,044	U
96	0207434F	Link-16 Support and Sustainment	05	156,851	173,216	199,363	U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
97	0207443F	Family of Interoperable Operational Pictures (FIOP)	05	35,067			U
98	0207450F	E-10 Squadrons	05	378,871	366,012	39,703	U
99	0207451F	Single Integrated Air Picture (SIAP)	05		39,973	4,976	U
100	0207701F	Full Combat Mission Training	05	25,723	35,010	87,096	U
101	0305176F	Combat Survivor Evader Locator	05	16,817			U
102	0401138F	Joint Cargo Aircraft (JCA)	05	1,400	15,723	42,368	U
103	0401318F	CV-22	05	33,672	26,501	16,688	U
		System Development & Demonstration		4,592,979	4,671,927	4,319,233	
104	0604256F	Threat Simulator Development	06	31,387	37,987	39,892	U
105	0604759F	Major T&E Investment	06	62,753	61,671	59,064	U
106	0605101F	RAND Project Air Force	06	33,098	26,510	30,999	U
107	0605306F	Ranch Hand II Epidemiology Study	06	4,024			U
108	0605502F	Small Business Innovation Research	06	339,887			U
109	0605712F	Initial Operational Test & Evaluation	06	28,184	34,670	30,203	U
110	0605807F	Test and Evaluation Support	06	701,064	739,708	737,558	U
111	0605860F	Rocket Systems Launch Program (SPACE)	06	25,365	26,005	15,145	U
112	0605864F	Space Test Program (STP)	06	49,315	46,135	47,430	U
113	0605976F	Facilities Restoration and Modernization - Test and Evaluation Support	06	65,494	55,472	59,131	U
114	0605978F	Facilities Sustainment - Test and Evaluation Support	06	31,697	28,072	30,865	U
115	0804731F	General Skill Training	06	309	304		U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
116	0909999F	Financing for Cancelled Account Adjustments	06	96			U
117	1001004F	International Activities	06	3,582	3,896	4,041	U
	RDT&E Management Support			1,376,255	1,060,430	1,054,328	
118	0605024F	Anti-Tamper Technology Executive Agency	07	10,029	7,984	10,930	U
119	0605798F	Analysis Support Group	07				
120	0101113F	B-52 Squadrons	07	23,071	75,991	41,916	U
121	0101120F	Advanced Cruise Missile	07	2,712	6,957		U
122	0101122F	Air-Launched Cruise Missile (ALCM)	07	3,050	3,722	4,672	U
123	0101313F	Strat War Planning System - USSTRATCOM	07	28,869	28,577	20,340	U
124	0101314F	Night Fist - USSTRATCOM	07	4,803	5,107	5,296	U
125	0101815F	Advanced Strategic Programs	07				
126	0102326F	Region/Sector Operation Control Center Modernization Program	07	22,453	14,744	23,495	U
127	0203761F	Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund	07	22,130	30,469	14,245	U
128	0205219F	MQ-9 UAV	07			61,069	U
129	0207131F	A-10 Squadrons	07	55,713	31,850	1,963	U
130	0207133F	F-16 Squadrons	07	124,482	151,997	90,620	U
131	0207134F	F-15E Squadrons	07	135,009	137,541	101,251	U
132	0207136F	Manned Destructive Suppression	07	7,229	513		U
133	0207138F	F-22A Squadrons	07	341,789	472,475	743,593	U
134	0207141F	F-117A Squadrons	07	11,349	14,040		U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

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135	0207161F	Tactical AIM Missiles	07	14,974	8,817	7,927	U
136	0207163F	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	31,803	43,253	36,838	U
137	0207170F	Joint Helmet Mounted Cueing System (JHMCS)	07			5,338	U
138	0207224F	Combat Rescue and Recovery	07	50,672			U
139	0207247F	AF TENCAP	07	11,660	11,160	11,526	U
140	0207248F	Special Evaluation Program	07	286,451	527,588		U
141	0207253F	Compass Call	07	9,598	9,931	4,603	U
142	0207268F	Aircraft Engine Component Improvement Program	07	146,527	153,736	139,042	U
143	0207277F	CSAF Innovation Program	07	1,626	1,587		U
144	0207325F	Joint Air-to-Surface Standoff Missile (JASSM)	07	58,820	40,727	12,152	U
145	0207410F	Air & Space Operations Center (AOC)	07	51,796	76,849	111,557	U
146	0207412F	Control and Reporting Center (CRC)	07	26,746	8,743	16,505	U
147	0207417F	Airborne Warning and Control System (AWACS)	07	129,334	164,982	152,721	U
148	0207418F	Tactical Airborne Control Systems	07		2,303	3,387	U
149	0207423F	Advanced Communications Systems	07	22,166	42,905	33,584	U
150	0207424F	Evaluation and Analysis Program	07	5,992	2,590	650,608	U
151	0207433F	Advanced Program Technology	07	287,311	311,932		U
152	0207438F	Theater Battle Management (TBM) C4I	07	54,085	31,701	9,961	U
153	0207445F	Fighter Tactical Data Link	07	115,818	112,755	39,545	U
154	0207446F	Bomber Tactical Data Link	07	133,836	100,744	37,130	U

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155	0207448F	C2ISR Tactical Data Link	07	14,219	4,322	1,809	U
156	0207449F	Command and Control (C2) Constellation	07	39,123	43,686	45,049	U
157	0207581F	Joint Surveillance/Target Attack Radar System (JSTARS)	07	110,852	155,615	65,924	U
158	0207590F	Seek Eagle	07	19,108	16,364	22,969	U
159	0207591F	Advanced Program Evaluation	07	269,037	435,328		U
160	0207601F	USAF Modeling and Simulation	07	24,303	23,670	23,044	U
161	0207605F	Wargaming and Simulation Centers	07	6,087	6,570	6,490	U
162	0207697F	Distributed Training and Exercises	07	4,045	6,115	7,522	U
163	0208006F	Mission Planning Systems	07	115,002	129,259	105,371	U
164	0208021F	Information Warfare Support	07	14,250	20,657	12,111	U
165	0208161F	Special Evaluation System	07			760,312	U
166	0301310F	National Air Intelligence Center	07				
167	0301314F	COBRA BALL	07				
168	0301315F	Missile and Space Technical Collection	07				
169	0301324F	FOREST GREEN	07				
170	0301386F	GDIP Collection Management	07				
171	0302015F	E-4B National Airborne Operations Center (NAOC)	07	14,281	282	19,529	U
172	0303112F	Air Force Communications (AIRCOM)	07			2,022	U
173	0303131F	Minimum Essential Emergency Communications Network (MEECN)	07	48,234	63,765	103,846	U
174	0303140F	Information Systems Security Program	07	103,288	184,610	229,657	U

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175	0303141F	Global Combat Support System	07	22,696	19,820	10,631	U
176	0303150F	Global Command and Control System	07	3,358	3,290	3,397	U
177	0303158F	Joint Command and Control Program (JC2)	07	4,982	5,768	5,841	U
178	0303601F	MILSATCOM Terminals	07	254,052	269,926	388,491	U
179	0304111F	Special Activities	07				
180	0304260F	Airborne SIGINT Enterprise	07	87,762	117,390	139,627	U
181	0304311F	Selected Activities	07				
182	0304348F	Advanced Geospatial Intelligence (AGI)	07				
183	0305099F	Global Air Traffic Management (GATM)	07	6,760	6,595	6,681	U
184	0305110F	Satellite Control Network (SPACE)	07	24,609	19,783	27,256	U
185	0305111F	Weather Service	07	27,505	35,701	39,747	U
186	0305114F	Air Traffic Control, Approach, and Landing System (ATCALS)	07	5,908	3,467	4,672	U
187	0305116F	Aerial Targets	07	5,388	5,183	7,376	U
188	0305124F	Special Applications Program	07				
189	0305127F	Foreign Counterintelligence Activities	07				
190	0305128F	Security and Investigative Activities	07	470	507	829	U
191	0305142F	Applied Technology and Integration	07				
192	0305159F	Defense Reconnaissance Support Activities (SPACE)	07				
193	0305160F	Defense Meteorological Satellite Program (SPACE)	07	3,749	963		U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
194	0305164F	NAVSTAR Global Positioning System (User Equipment) (SPACE)	07	111,710	133,574	93,267	U
195	0305165F	NAVSTAR Global Positioning System (Space and Control Segments)	07	174,530	176,721	120,931	U
196	0305172F	Combined Advanced Applications	07				
197	0305173F	Space and Missile Test and Evaluation Center	07		4,657	3,089	U
198	0305174F	Space Warfare Center	07	383	723	1,678	U
199	0305182F	Spacelift Range System (SPACE)	07	49,515	38,509	27,300	U
200	0305193F	Intelligence Support to Information Operations (IO)	07	3,566	3,785	1,134	U
201	0305202F	Dragon U-2	07	10,012			U
202	0305206F	Airborne Reconnaissance Systems	07	55,711	52,624	64,869	U
203	0305207F	Manned Reconnaissance Systems	07	18,074	16,669	12,672	U
204	0305208F	Distributed Common Ground/Surface Systems	07	36,550	125,267	107,117	U
205	0305219F	MQ-1 Predator A UAV	07	54,100	67,885	22,296	U
206	0305220F	Global Hawk UAV	07	257,687	247,726	298,501	U
207	0305221F	Network-Centric Collaborative Targeting	07	8,508	8,467	8,641	U
208	0305887F	Intelligence Support to Information Warfare	07	944	5,144	5,362	U
209	0305906F	NCMC - TW/AA System	07	55,306	43,271	11,882	U
210	0305910F	SPACETRACK (SPACE)	07	182,779			U
211	0305913F	NUDET Detection System (SPACE)	07	32,265	59,917	38,974	U
212	0305917F	Space Architect	07	12,331			U
213	0305924F	National Security Space Office	07		13,365	10,821	U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
214	0305940F	Space Situation Awareness Operations	07		31,282	23,980	U
215	0307141F	NASS, IO Technology Integration & Tool Dev	07	14,507	15,391	15,681	U
216	0308699F	Shared Early Warning (SEW)	07	2,959	2,975	3,152	U
217	0401115F	C-130 Airlift Squadron	07	232,342	230,709	188,069	U
218	0401119F	C-5 Airlift Squadrons (IF)	07	225,730	150,638	203,585	U
219	0401130F	C-17 Aircraft (IF)	07	160,608	173,125	181,734	U
220	0401132F	C-130J Program	07	11,401	40,389	74,223	U
221	0401133F	Aeromedical Evacuation	07	1,989			U
222	0401134F	Large Aircraft IR Countermeasures (LAIRCM)	07	49,951	40,463	19,324	U
223	0401218F	KC-135s	07	1,456	1,122	8,766	U
224	0401219F	KC-10s	07	12,907	4,763	36,790	U
225	0401221F	KC-135 Tanker Replacement	07	24,095	69,632	314,454	U
226	0401314F	Operational Support Airlift	07			4,868	U
227	0401839F	Air Mobility Tactical Data Link	07		22,000		U
228	0408011F	Special Tactics / Combat Control	07	2,065	2,013	5,225	U
229	0702207F	Depot Maintenance (Non-IF)	07	1,349	1,452	1,510	U
230	0702806F	Acquisition and Management Support	07	10,739	17,614	22,317	U
231	0708011F	Industrial Preparedness	07	56,683	66,122	39,906	U
232	0708012F	Logistics Support Activities	07	2,682	1,295		U
233	0708610F	Logistics Information Technology (LOGIT)	07	32,837	120,851	114,176	U
234	0708611F	Support Systems Development	07	23,063	32,755	11,076	U

DEPARTMENT OF THE AIR FORCE
FY 2008 RDT&E PROGRAM

EXHIBIT R-1

APPROPRIATION: 3600F Research, Development, Test & Eval, AF

Date: 22 JAN 2007

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2006	FY 2007	FY 2008	SEC
235	0804757F	Joint National Training Center	07	2,801	3,050	3,128	U
236	0808716F	Other Personnel Activities	07	106	113	115	U
237	0901202F	Joint Personnel Recovery Agency	07	931	988	5,377	U
238	0901212F	Service-Wide Support (Not Otherwise Accounted For)	07			6,495	U
239	0901218F	Civilian Compensation Program	07	13,759	7,750	8,070	U
240	0901220F	Personnel Administration	07	15,078	18,193	16,832	U
241	0901538F	Financial Management Information Systems Development	07	12,797	27,425	47,105	U
		Operational Systems Development		11,654,712	13,546,997	16,436,127	
		Total Research, Development, Test & Eval, AF		22,190,943	24,420,623	26,711,940	

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (By BUDGET ACTIVITY)

BUDGET ACTIVITY #1: BASIC RESEARCH (Volume 1)		**REMARKS**
0601102F	Defense Research Sciences	In FY 2008, Space environment effort from Project 2311 and physical mathematics effort from Project 2304 will be moved to this Project in FY 2008 to more accuratley align basic research efforts in Physics.
BUDGET ACTIVITY #2: APPLIED RESEARCH (Volume 1)		
0602605F	Directed Energy Technology	In FY 2008, relay mirror technology efforts in Project 55SP, Laser and Imaging Space Technology, will transfer to Project 4866, Lasers and Imaging Technology, within this PE in order to more effectively manage the efforts.
BUDGET ACTIVITY #3: ADVANCED TECHNOLOGY DEVELOPMENT (Volume 1)		
0603211F	Aerospace Technology Dev/Demo	In FY 2008, the remaining efforts in Project 6399SP were transferred into Project 4920 within this PE, as the planned efforts were not space unique.
0603216F	Aerospace Propulsion and Power Technology	In FY 2008, the funding in this PE has been increased in FY 2008 and out due to emphasis on component development in support of adaptive cycle demonstrations, highly efficient embedded turbine engines, and small heavy fueled engines.
0603605F	Advanced Weapons Technology	In FY 2008, funds for the FY 2006 Congressionally-directed Aerospace Relay Mirror System in the amount of $2.100 million were transferred to PE 0603605F, Advanced Weapons Technology, from PE 0603500F, Multi-Disciplinary Advanced Development, for execution. Also in FY 2008, this effort moves into Project 3151 in this program element.
BUDGET ACTIVITY #4: ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPE (Volume 2)		
0603430F	Advanced (EHF MILSATCOM (Space))	In FY 2008, funds for qualification and productization of radiation-hardened components for USAF/DOD space programs have been transferred from PE 63430F, Advanced MILSATCOM (Space), to PE 63845F, Transformational SATCOM.
0603845F	Transformational SATCOM (TSAT)	In FY 2008, funds for qualification and productization of radiation-hardened components for USAF/DOD space programs have been transferred from PE 63430F, Advanced MILSATCOM (Space), to PE 63845F, Transformational SATCOM.
0603851F	ICBM - DEM/VAL	In FY 2008 and beyond, Project 1024 ICBM Command & Control (C2) Applications is discontinued.
BUDGET ACTIVITY #5: SYSTEM DEVELOPMENT AND DEMONSTRATION (SDD) (Volume 2)		

0207434F	Link 16 Support and Sustainment	In FY 2008, Project 655262 was established to consolidate gateway efforts within the Link 16 Support & Sustainment program element. Beginning in FY08, all TDL funding for gateway programs moved from Project 655050 to new Project 655262, Family of Gateways.
0207701F	Full Combat Mission Training	In FY 2008, funding previously documented in BPAC 4673 is consolidated in BPAC 5012
0401138F	Joint Cargo Aircraft	In FY 2008, FY10-FY13: Final AF JCA requirements and procurement quantities are still being defined. These requirements will be validated by early FY08. The AF intends to transfer a portion of APAF funds to RDT&E in the FY10 POM to support any resulting aircraft, training system, test, and support system development requirements that remain.
0604261F	Personnel Recovery Systems	In FY 2008, Project Number 5249, HC-130 Recap, includes new start efforts. Procurement funding for CSAR-X and HC-130 Recap remains in PE 0207224F and is reported in P-Docs.
0604425F	Space Situation Awareness Systems	In FY 2008, this project 65A008 was renamed from Space Situation Awareness Initiatives to its present name.
0604602F	Armament/Ordnance Development	In FY 2008, moved all funds and activities from the other 2 project to project 3133 Armament Subsystems (new name, old name was Bombs & Fuzes). This is done to consolidate and simplify the program element.
0604604F	Submunitions	In FY 2008, for this PE, the T&E funding alignment begins in FY08.
0604617F	Agile Combat Support	In FY 2008, Project 2895, Civil Engineering Readiness (CE), includes two new-start efforts.
0604708F	Civil, Fire, Environmental, Shelter	In FY 2008, the Air Force is in the process of consolidating three small dollar Civil Engineer (CE) readiness R&D programs (PE64617f - Agile Combat Support; PE64708f - Civil , Fire, Environmental, Shelters; and the 3600 portion of PE28031f - War Reserve Material) under PE 64617. This will meet the intent of the House action to eliminate smaller PEs and provide a more cohesive, manageable CE Readiness modernization effort.
0207450F	E-10 Squadrons	In FY 2008, 1 E-10A Testbed Aircraft (Commercial 767-400ER delivered in FY 2008) 1 GH DU radar for radar lab mode checkout and troubleshooting
BUDGET ACTIVITY #6:	**RDT&E MANAGEMENT SUPPORT (Volume 2)**	
0604759F	Major T&E Investment	In FY 2008, Project 4597, Air Force Test Investments, includes new start efforts
BUDGET ACTIVITY #7:	**OPERATIONAL SYSTEM DEVELOPMENT (Volume 3)**	
0205219F	MQ-9 Development and Fielding	In FY 2008, This program moved from PE 0305219F.

0207410F	Air and Space Operations Center - Weapon System	In FY 2008, Space C2 funds were transferred to the 674372 project line in the AOC PE to consolidate and unify Air Force air and space C2 development and integration. Starting in FY08 Project 674790 in PE 0207438F (Theater Battle Management Core Systems) was transferred to PE 0207410F (AOC WS) and placed into Projects 675218 (Applications Development) and 675220 (Unit Level).
0207438F	Theater Battle Management (TBM) C4I	In FY 2008, Project 674790 (Theater Battle Management Core Systems) was transferred to PE 0207410F (Air and Space Operations Center Weapon System), Projects 675218 (Applications Development) and 675220 (Unit Level).
0208021F	Information Warfare Support	In FY 2008, Funding for the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transferred to JFCOM's PE 33166D beginning in FY08. FY08 - 13 funding decrease in BPAC 670374 as a result of alignment and correction of IW Support to JFCOM's PE 33166D.
0303112F	Aircomm	In FY 2008, this is a new start effort.
0305193F	Intel SPT to Info Ops	In FY 2008, the funding for the Joint Integrative Analysis and Planning Capability (JIAPC) was transferred to PE 33166D managed by JFCOM
0305219F	Predator Development/Fielding	In FY 2008, the MQ-9 Program moves to PE 0205219F. Historical MQ-9 accomplishments remain in this document.
0708611F	Support Systems Development	In FY 2008, the small amount of funds remaining for project 5044 (FY 2010) will be realigned during the FY 2008 budget cycle.

In accordance with the President's Management Agenda, Budget and Performance Integration initiative, these programs have been assessed using the Program Assessment Rating Tool (PART). Remarks regarding program performance and plans for performance improvement can be located at the Expectmore.gov website.

The Following are Program Elements not providing RDT&E exhibits due to classification:

No.	Title
0603801F	Special Programs
0605798F	Analysis Support Group
0101815F	Advanced Strategic Program
0207248F	Special Evaluation Program
0207433F	Advanced Program Technology
0207424F	Evaluation and Analysis Program
0207591F	Advance Program Evaluation
0208160F	Technical Evaluation System
0208161F	Special Evaluation System
0301310F	National Air Intelligence Center
0301314F	COBRA BALL
0301315F	Missile and Space Technical Collection
0301324F	FOREST GREEN
0301386F	GDIP Collection Management
0304111F	Special Activities
0304311F	Selected Activities
0304312F	Special Applications Program
0304348F	Advanced Geospatial Intelligence (AGI)
0305124F	Special Applications Program
0305127F	Foreign Counterintelligence Activities
0305142F	Applied Technology and Integration
0305159F	Defense Reconnaissance Support Activities (SPACE)
0305172F	Combined Advanced Applications
0101314F	Night Fist

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PE NUMBER: 0605024F
PE TITLE: Anti-Tamper Technology Executive Agent

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	10.029	7.984	10.930	11.161	15.634	15.756	15.975	16.143	Continuing	TBD
5066	Anti-Tamper Technology Executive Agent	10.029	7.984	10.930	11.161	15.634	15.756	15.975	16.143	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force is the DoD Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development, establishing and maintaining a data bank/library, providing proper security mechanisms, conducting effective validation and assessing AT implementations. The purpose of developing AT techniques is to protect critical technologies in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT technology will permit the U.S. to preserve its critical weapons systems lead while also satisfying customer needs. Furthermore, AT will add longevity to critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component.

As the DoD Anti-Tamper Executive Agent, the Air Force will coordinate the technology development enhancement among the Services, DoD Agencies, and laboratories, and with industry. The DoD ATEA will not issue contracts for AT technology development but will plus-up existing Anti-Tamper technology projects to increase their technology readiness level. Priorities will be given to technologies that benefit the majority of the AT community. The Anti-Tamper technology enhancement will occur in the following areas: advanced sensor hardware, generic electronic hardware, signature control, access detection & denial, software, and effectiveness. The program management activities will coordinate the technology development and establish the Anti-Tamper data bank/library.

Anti-Tamper validation is a significant responsibility assigned to the Air Force from OSD. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to ramp-up in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand.

A new thrust for the DoD Anti-Tamper Executive Agent, starting in FY06, is Anti -Tamper assessments. Anti-Tamper assessments involve the process of evaluating how well AT is implemented on weapon systems. Tri-Service reverse engineers and other government agencies will conduct the assessments. Assessments will answer the question as to how well the DoD Anti-Tamper community is doing in designing and implementing AT protection on DoD systems. Conducting Anti-Tamper assessments will also benefit the Anti-Tamper government community as a training tool for new AT reverse engineers.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0605024F Anti-Tamper Technology Executive Agent

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	7.529			
(U)	Current PBR/President's Budget	10.029	7.984	10.930	11.161
(U)	Total Adjustments	2.500			
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings	2.500			
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				
	None				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5066	Anti-Tamper Technology Executive Agent	10.029	7.984	10.930	11.161	15.634	15.756	15.975	16.143	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force is the DoD Anti-Tamper Executive Agent (ATEA). The ATEA is responsible for implementing Anti-Tamper (AT) policy, coordinating and providing financial support for AT technology development, establishing and maintaining a data bank/library, providing proper security mechanisms, conducting effective validation and assessing AT implementations. The purpose of developing AT techniques is to protect critical technologies in U.S. weapon systems that may be sold to foreign governments or that could possibly fall into enemy hands. AT technology will permit the U.S. to preserve its critical weapons systems lead while also satisfying customer needs. Furthermore, AT will add longevity to critical technologies by deterring efforts to reverse engineer or develop weapon countermeasures against a system or system component.

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Anti-Tamper validation is a significant responsibility assigned to the Air Force from OSD. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to ramp-up in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand.

A new thrust for the DoD Anti-Tamper Executive Agent, starting in FY06, is Anti -Tamper assessments. Anti-Tamper assessments involve the process of evaluating how well AT is implemented on weapon systems. Tri-Service reverse engineers and other government agencies will conduct the assessments. Assessments will answer the question as to how well the DoD Anti-Tamper community is doing in designing and implementing AT protection on DoD systems. Conducting Anti-Tamper assessments will also benefit the Anti-Tamper government community as a training tool for new AT reverse engineers.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Program	0.000	0.000		
(U)	Anti-Tamper Technology Development	1.815	0.632	2.000	2.100
(U)	Anti-Tamper Verification & Validation	3.827	3.119	3.500	3.556
(U)	Education, Out-Reach and other Support	0.472	1.053	0.577	0.636

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Anti-Tamper Assessments	3.247	1.714	3.436	3.436
(U) AFRL/SNT Management	0.668	1.466	1.417	1.433
(U) Total Cost	10.029	7.984	10.930	11.161

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) N/A										

(U) D. Acquisition Strategy

The DoD ATEA technology development enhancement funding will be used to support existing AT technology development contracts. This funding will be used to increase the technology readiness level for that particular AT technology so as to reduce the risk to programs wanting to implement this AT technology. The DoD ATEA conducts yearly evaluations of technologies, provided by the AT Tri-Service community.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0605024F Anti-Tamper Technology Executive Agent**

PROJECT NUMBER AND TITLE: **5066 Anti-Tamper Technology Executive Agent**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Anti-Tamper Technology Development														
(U) Enhancements														
AFRL/AT-SPI	PRDA			0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Sandia National Lab	MIPR			0.000		0.000						Continuing	TBD	TBD
Technology Contract Activities				1.815		0.632		2.000		2.100		Continuing	TBD	TBD
Subtotal Anti-Tamper Technology Development Enhancements			0.000	1.815		0.632		2.000		2.100		Continuing	TBD	TBD
Remarks:														
(U) Anti-Tamper Verification & Validation														
Air Force AT Field Agent (412 TW/EWF)	MIPR			0.450		0.600		0.800		0.800		Continuing	TBD	TBD
Navy AT Field Agent (PMR-51)	MIPR			0.600		0.600		0.800		0.800		Continuing	TBD	TBD
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR			1.000		0.600		0.800		0.800		Continuing	TBD	TBD
DoD Executive Agent Field Agent (AFRL/AT-SPI)	Allot			1.427		0.519		0.200		0.241		Continuing	TBD	TBD
Sandia National Lab	MIPR			0.350		0.400		0.700		0.715		Continuing	TBD	TBD
Contingency Planning				0.000		0.400		0.200		0.200		Continuing	TBD	TBD
Subtotal Anti-Tamper Verification & Validation			0.000	3.827		3.119		3.500		3.556		Continuing	TBD	TBD
Remarks:														
(U) Education, Out-Reach, and other support														
AFMC/A9S				0.000		0.000						Continuing	TBD	TBD
AFRL/AT-SPI	Allot			0.352		0.548		0.551		0.580		Continuing	TBD	TBD
AT Course				0.000		0.400		0.001		0.001		Continuing	TBD	TBD
DAU Course				0.050		0.025		0.025		0.025		Continuing	TBD	TBD
Sandia National Lab				0.070		0.080				0.030		Continuing	TBD	TBD
Subtotal Education, Out-Reach, and other support			0.000	0.472		1.053		0.577		0.636		Continuing	TBD	TBD
Remarks:														
(U) Anti-Tamper Assessments														
Air Force AT Field Agent (412 TW/EWF)	MIPR											Continuing	TBD	TBD
AFRL/SND				0.150								Continuing	TBD	TBD
Navy AT Field Agent (PMR-51)	MIPR			0.275								Continuing	TBD	TBD
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR											Continuing	TBD	TBD
DoD Executive Agent Field Agent (AFRL/AT-SPI)	Allot											Continuing	TBD	TBD
Sandia National Lab	MIPR			2.700								Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0605024F Anti-Tamper Technology Executive Agent**	**5066 Anti-Tamper Technology Executive Agent**

Assessment Contract Activities		0.122	1.714	3.436	3.436	Continuing	TBD	TBD
Subtotal Anti-Tamper Assessments	0.000	3.247	1.714	3.436	3.436	Continuing	TBD	TBD
Remarks:								
(U) AFRL/SNT Management								
Program Oversight		0.668	0.823	0.805	0.810	Continuing	TBD	TBD
Security/Infrastructure			0.255	0.256	0.260	Continuing	TBD	TBD
Databases and websight			0.348	0.316	0.323	Continuing	TBD	TBD
Conference			0.040	0.040	0.040	Continuing	TBD	TBD
Subtotal AFRL/SNT Management	0.000	0.668	1.466	1.417	1.433	Continuing	TBD	TBD
Remarks:								
(U) Total Cost	0.000	10.029	7.984	10.930	11.161	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE 5066 Anti-Tamper Technology Executive Agent

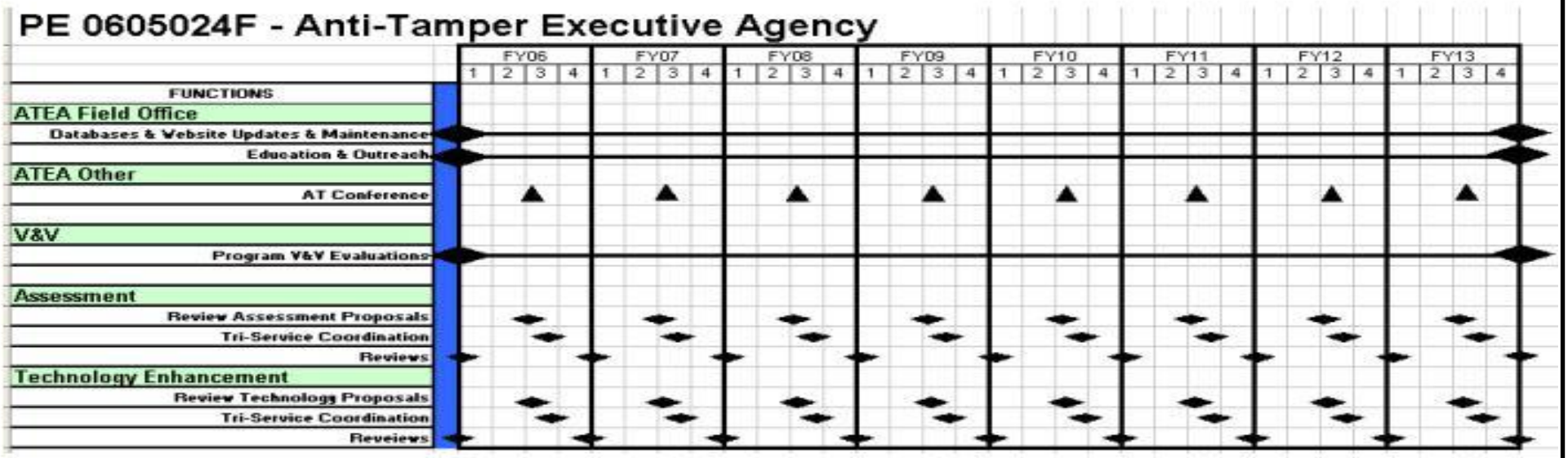

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) ATEA Field Office	1-4Q	1-4Q	1-4Q	1-4Q
(U) Database and Website Updates & Maintenance	1-4Q	1-4Q	1-4Q	1-4Q
(U) Education & Outreach	1-4Q	1-4Q	1-4Q	1-4Q
(U) AT Conference	2-3Q	2-3Q	2-3Q	2-3Q
(U) Program V&V Evaluations	1-4Q	1-4Q	1-4Q	1-4Q
(U) Assessments	2-3Q	2-3Q	2-3Q	2-3Q
(U) --Assessment Proposal Reviews	2Q	2Q	2Q	2Q
(U) --Assessment Tri-Service Coordination	3Q	3Q	3Q	3Q
(U) Anti-Tamper Technology Development Enhancement	1-4Q	1-4Q	1-4Q	1-4Q
(U) --Tech. Proposal Reviews	2Q	2Q	2Q	2Q
(U) --Technology Tri-Service Coordination	3Q	3Q	3Q	3Q
(U) --Tech Reviews	4Q	4Q	4Q	4Q

PE NUMBER: 0101113F
PE TITLE: B-52 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	23.071	75.991	41.916	48.607	59.164	56.292	34.638	15.790	Continuing	TBD
4876	B-52 Global Air Traffic Management (GATM)	0.000	0.000	0.000	0.000	8.426	6.386	0.000	0.000	14.812	14.812
5039	B-52 Modernization	23.071	75.991	41.916	48.607	50.738	49.906	34.638	15.790	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

B-52 Modernization is a comprehensive program to assure B-52 viability to perform future wartime missions. B-52 modernization (initiated in FY05) integrates and adds both tactical and global data link communications for real time command and control, targeting, and intelligence. Modernization also upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and fully integrates advanced targeting pods with the offensive avionics system.

CONECT

The Combat Network Communication Technology (CONECT) Program is an evolutionary acquisition program to develop, study, integrate, test, and field several capabilities into the B-52 weapon system. CONECT will upgrade the B-52 fleet with digital and voice communications capabilities and improved situational awareness to support participation in network centric operations and interoperability with the Global Information grid (GIG). CONECT capabilities will be implemented in a phased approach. Phase A, Conventional In-flight Beyond Line-of-Sight (BLOS) Rapid Re-tasking (CIBRR), will upgrade digital and voice communication capabilities, on-board client/server networked architecture supporting distributed processing and control functions, integration of the Intel Broadcast System/Receiver (IBS/R) and new Multi-Functional Color Displays (MFCDs). This phase will provide the B-52 fleet with a machine-to-machine capability supporting aircraft retasking and weapons retargeting of CALCM and J-series weapons, a limited Internet Protocol (IP)-based UHF BLOS capability, and improved situational awareness. Phase B will integrate the Family of Advanced BLOS Terminals (FAB-T) system hardware to support Extremely High Frequency (EHF) Satellite Communications (SATCOM). This will provide the B-52 fleet with a survivable SATCOM link for emergency action messages (EAMs) to meet STRATCOM requirements as well as a high bandwidth BLOS data link communication capability supporting IP based Global Information Grid (GIG) interoperability. In addition, two remaining legacy crew station displays will be replaced with MFCDs.

Trainers & CONECT

B-52 aircrew and maintenance training devices are a mix of 1970's and '80's technology. Most have reached their design capacity and must be upgraded to remain useful training tools. Upgrades to some of the training systems must occur prior to incorporating CONECT functionality. This planned approach will enable the trainers to maintain currency with the latest aircraft configuration. The CONECT program will upgrade existing trainers, establish a system integration laboratory for development of aircrew trainers, and add CONECT CIBRR and FAB-T functionality to meet user-training requirements.

Weapons Improvements

B-52 Modernization also includes improvement to conventional warfare capability. This effort provides development and testing to rapidly integrate weapons with a

large array of properties, but not limited to: stealth, hard target penetration, standoff, adverse weather, precision strike, loiter, decoy, defense suppression, post-release/launch re-target capability, area denial, mobile targets, and multiple simultaneous attack. These capabilities will be provided through the integration of advanced weapons both internally (MIL-STD-1760 in the bomb bay) and externally.

Advanced Targeting Pod Functionality

The B-52 Modernization program will fully integrate the Advanced Targeting Pod by linking ATP control, display and target geo-location with the B-52 offensive avionics system. The B-52 Advanced Targeting Pod (ATP) effort is the integration of the ATP (Sniper or Litening AT) which will begin in '08. The Targeting Pod effort will develop software updates to add and incorporate the advanced pod functionality. This effort will upgrade the software functions of the Alternate Mission Equipment (AME) (Multi Function Display and Integrated Hand Controller) and be backwards compatible with existing AME. This effort will enable all wired aircraft to utilize Litening Pod, Litening AT or Sniper.

GATM Phase II

GATM, or more accurately, Communication Navigation Surveillance/Air Traffic Management (CNS/ATM), will develop and integrate modern technology into the B-52 to enable it to operate in the evolving Air Traffic environment. This evolution is being driven by International Civil Aviation Organization (ICAO) and Federal Aviation Administration (FAA) mandates to comply with performance standards to allow the B-52 to operate in controlled airspaces safely. A benefit of this program will yield significant savings through more fuel efficient flight routes and altitudes. Functions requiring updated technology in the B-52 are communications, navigation, and surveillance. More specifically the capabilities that will be realized under CNS/ATM include: FM Immunity, Digital Communications (voice to data), navigation accuracy such as Required Navigation Performance (RNP-4) or Global Positioning System (GPS) enhancements, Reduced Vertical Separation Minimum (RVSM), Traffic Alert and Collision Avoidance System (TCAS), enhanced situational awareness such as Mode S/Mode 5 Identify Friend or Foe (IFF), Communications Management Unit, HF Data Link, 8.33 VHF, Auto Dependent Surveillance (both address and broadcast), and any follow-on activity to associated components/systems resulting from modifications to CNS/ATM systems.

Test & Evaluation

Additionally, B-52 Modernization funds test activities at the Air Force Flight Test Center (AFFTC); engineering and planning studies for potential future weapon system enhancements (weapons, sensors, and avionics); and weapon system operational/safety, supportability, reliability, and Total Ownership Cost (TOC) improvements.

Additional Efforts

Examples include upgrades to avionics computers, mission planning interface to the Air Force Mission Support System (AFMSS) and upgrades to the Electronic Countermeasures (ECM) suite.

The B-52 is an operational system resulting in this program being budget activity 7 - Operational System

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	26.748	71.379	45.138	30.230
(U)	Current PBR/President's Budget	23.071	75.991	41.916	48.607
(U)	Total Adjustments	-3.677	4.612		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.289		
	Congressional Increases		4.900		
	Reprogrammings	-3.000			
	SBIR/STTR Transfer	-0.677			

(U) Significant Program Changes:

The CONECT program restructured based on the Family of Beyond Line-Of-Sight Terminals (FAB-T) technology development delays, loss of Joint Tactical Radio Systems (JTRS) procurement funding and Bomber Tactical Data Link (TDL) RDT&E adjustments.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5039 B-52 Modernization	23.071	75.991	41.916	48.607	50.738	49.906	34.638	15.790	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

B-52 Modernization is a comprehensive program to assure B-52 viability to perform future wartime missions. B-52 modernization (initiated in FY05) integrates and adds both tactical and global data link communications for real time command and control, targeting, and intelligence. Modernization also upgrades training devices to support aircrew and maintenance training with the latest B-52 capability. In addition, modernization improves conventional warfare capability with additional MIL-STD-1760 smart weapons and fully integrates advanced targeting pods with the offensive avionics system.

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Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE 5039 B-52 Modernization

Advanced Targeting Pod Functionality

The B-52 Modernization program will fully integrate the Advanced Targeting Pod by linking ATP control, display and target geo-location with the B-52 offensive avionics system. The B-52 Advanced Targeting Pod (ATP) effort is the integration of the ATP (Sniper or Litening AT) which will begin in '08. The Targeting Pod effort will develop software updates to add and incorporate the advanced pod functionality. This effort will upgrade the software functions of the Alternate Mission Equipment (AME) (Multi Function Display and Integrated Hand Controller) and be backwards compatible with existing AME. This effort will enable all wired aircraft to utilize Litening Pod, Litening AT or Sniper.

GATM Phase II

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Additional Efforts

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The B-52 is an operational system resulting in this program being budget activity 7 - Operational System.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Product Development	12.820	45.583	27.032	15.561
(U)	MIL-STD-1760	4.180	3.700		
(U)	Common Reconfigurable Advanced Thermal Management System		1.000		
(U)	GBU-38	1.000			
(U)	Advanced Pod Functions			4.132	3.500
(U)	Pod Lab & Simulator Upgrades			1.068	

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Simulation/Trainer Development		17.480	3.000	22.813
(U) Government Test	0.141	2.242	3.125	2.754
(U) Program Support/Modeling and Simulation/Studies and Analysis	3.021	3.431	1.151	1.186
(U) Management Support	1.909	2.555	2.408	2.793
(U) Total Cost	23.071	75.991	41.916	48.607

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Appn 28, PE 0207446F, Bomber TDL Core	33.900	20.700								54.600
(U) Other APPN										TBD
(U) Appn 10, PE 0101113F, B52 Squadrons, Aircraft Procurement BP11, Mods	128.478	69.890	18.091	81.601	63.417	70.875	85.327	75.307	90.444	683.430

RDT&E funding provided by PE 0207446F, Bombers Tactical Data Link to implement Joint Range Extension (JRE) solution (JREAP A protocol) to send/receive theater-wide J-Series messages and integration of Common Link Integration Processing (CLIP) software

(U) D. Acquisition Strategy

B-52 modernization is a development program that will be sole sourced to Boeing. Boeing will be developing the architecture for a system to process the information; procuring information processing equipment from their subcontractors; and developing drawings, data, and time compliance technical order (TCTO) for installation on the B-52.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS

PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

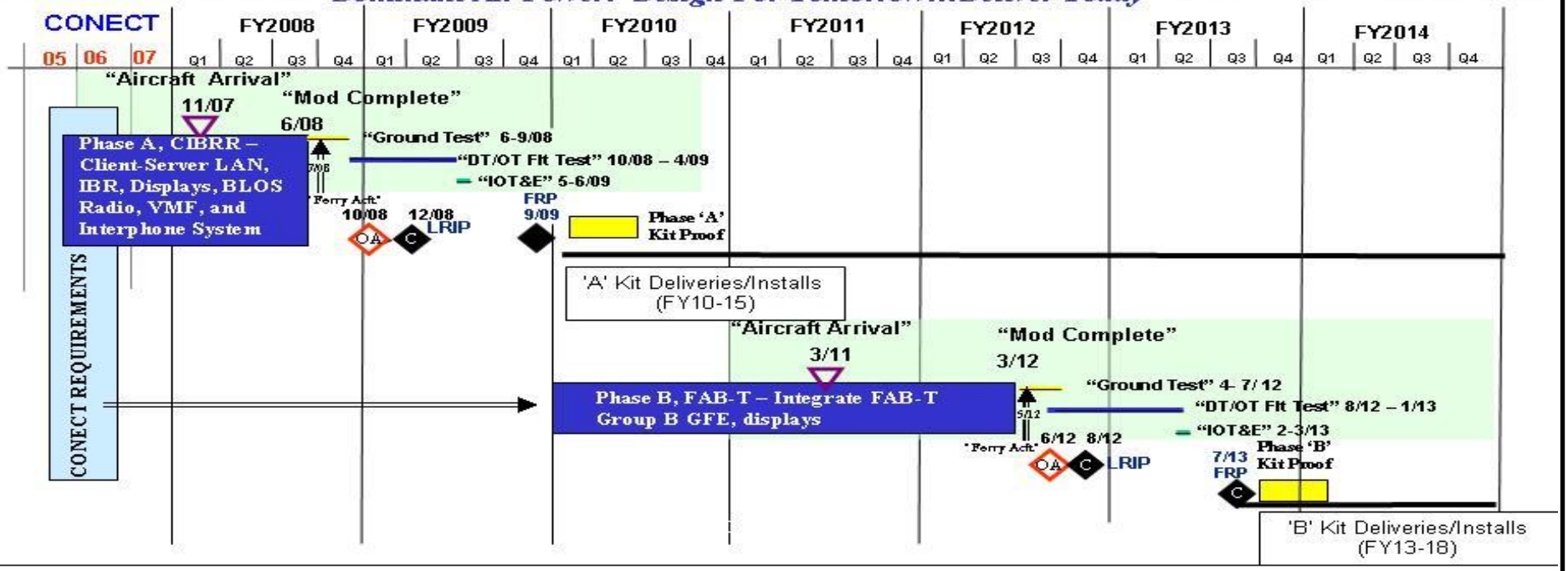
(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
CONECT SDD	CPFF	Boeing, Wichita KS		12.820	Dec-05	45.671		27.032		15.561		Continuing	TBD	
1760 Studies and Analysis	Contract	Boeing, Wichita KS		4.180	Apr-06	3.612	Jan-07						7.792	
Advanced Pod Functions	Contract	Boeing, Wichita KS						4.132		3.500			7.632	
GBU-38	Contract	Boeing, Wichita KS		1.000									1.000	
CommonReconfigurable Advanced Thermal Management System						1.000							1.000	
Subtotal Product Development			0.000	18.000		50.283		31.164		19.061		Continuing	TBD	0.000
Remarks:														
(U) Support														
Simulator/Trainer	616	509 MASSG, OO-ALC, UT				17.480		3.000		22.813		Continuing	TBD	
CONECT Program Support, Studies & Analysis	Various			0.541		2.558		0.265		0.273		Continuing	TBD	
OC-ALC Studies & Analysis	Various	Boeing, Wichita KS											0.000	
System Integration Lab Pod Software Upgrades	Contract	Boeing, Wichita KS						0.168					0.168	
Pod Software Trainer Upgrades	Contract	OO-ALC						0.900					0.900	
Subtotal Support			0.000	0.541		20.038		4.333		23.086		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
419 FLTS	Project Order			0.100		1.992		2.760		2.389		Continuing	TBD	
JITC	MIPR			0.041		0.250		0.365		0.365			1.021	
Subtotal Test & Evaluation			0.000	0.141		2.242		3.125		2.754		Continuing	TBD	0.000
Remarks:														
(U) Management														
AEASS		Wright-Patterson AFB, OH		3.378		2.678		2.535		2.925		Continuing	TBD	
327 BMSG		Tinker AFB, OK		1.011		0.750		0.759		0.781		Continuing	TBD	
Subtotal Management			0.000	4.389		3.428		3.294		3.706		Continuing	TBD	0.000
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis						DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development			PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS			PROJECT NUMBER AND TITLE: 5039 B-52 Modernization		
(U) Total Cost	0.000	23.071	75.991	41.916	48.607	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

B-52 CONECT
CIBRR / FAB-T

Dominant Air Power: Design For Tomorrow...Deliver Today



Phase A: CIBRR: Client Server LAN, Intel Broadcast Receiver (IBR), MFDs, BLOS Warrior Radio, VMF, Interphone
Phase B: FAB-T: Integrate FAB-T Group B GFE (LDR & XDR capability) and remaining MFDs
FAB-T XDR / JREAP C + Internet Protocol based Beyond Line-of-Sight (IP-based BLOS)

As of 4 Oct 06

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) CONECT Phase A SDD	1-4Q	1-4Q	1-4Q	1-4Q
(U) CONECT Phase A Flight Test			4Q	1-3Q
(U) CONECT LRIP Milestone C			1Q	
(U) CONECT Full Rate Production				4Q
CONECT Phase B SDD (FY 10)				

PE NUMBER: 0101120F
PE TITLE: ADVANCED CRUISE MISSILE

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.712	6.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4798 Life Extension Program	2.712	6.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

AGM-129, The Advanced Cruise Missile (ACM), is a low-observable air-launched, strategic missile with significant improvements over the Air Launched Cruise Missile B version (ALCM-B) in range, accuracy, and survivability. Armed with a W-80 warhead, it is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within any enemy's territory. The ACM is designed for B-52H external carriage and there are currently 394 ACM in the inventory. The ACM fleet design service life expires between the years 2003 and 2008.

Cruise Missile Functional Ground Testing (FGT) is required to provide the capability to non-destructively accomplish functional flight simulation of a full-up missile flight profile on the ground to obtain additional reliability data. This capability will provide critical reliability data without the cost of flight test mission and will also retain the missiles in the inventory. This effort will develop the software and hardware for an existing test facility for accomplishment of the ground tests.

The W-80 LEP replaces warhead components to extend its service life. The National Nuclear Security Administration (NNSA) is responsible for most of the refurbishment costs associated with the W-80 Warhead. The Air force is responsible for funding ACM/W-80 integration. Integration includes evaluation of interface control changes as part of the Initial Concept Design, missile testing and logistics requirements necessary to support a First Production Unit (FPU) delivery.

These programs are in Budget Activity 7, Operational System Development, due to efforts supporting a fielded, post Milestone III weapon system.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	1.960	6.983	3.060	0.395
(U) Current PBR/President's Budget	2.712	6.957	0.000	0.000
(U) Total Adjustments	0.752	-0.026		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.026		
Congressional Increases				
Reprogrammings	0.807			
SBIR/STTR Transfer	-0.055			

(U) Significant Program Changes:

FY08-13 funding was zeroed out for higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4798 Life Extension Program	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4798 Life Extension Program	2.712	6.957	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue ACM/W80 integration and data development support	0.185			
(U) Conduct ACM/W80 Development Flight Testing	1.196			
(U) ACM/W-80 interface compatability testing	0.534			
(U) Compile and reduce ACM/W80 interface data for archiving		1.429		
(U) Develop final report for ACM/W80 interface/tests to establish a baseline of all accomplishments and data points.		1.620		
(U) Develop planning documentation to address program restart requirements.		0.893		
(U) Conduct Cruise Missile Functional Ground Test (FGT) Integration Testing and Verification	0.797	0.937		
(U) Developmental Test in FGT Facility		1.200		
(U) Develop FGT Supportability Plan		0.878		
(U) Total Cost	2.712	6.957	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4798 Life Extension Program

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (WSC 20ACMA, P-21)	3.207	1.293	0.000	0.000	0.000	0.000	0.000	0.000		4.500
(U) MPAF, Replenishment Spares (BA04, PE 0101120F, P-16)	6.238	1.938	0.000	0.000	0.000	0.000	0.000	0.000	0.000	8.176
(U) MPAF, Missile Modification Initial Spares (BA04, PE 0101120F, P-16)	0.308	0.248	0.000	0.000	0.000	0.000	0.000	0.000		0.556

(U) D. Acquisition Strategy

ACM has no FY08 Acquisition Activity.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0101120F ADVANCED CRUISE MISSILE**

PROJECT NUMBER AND TITLE: **4798 Life Extension Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Support														
None													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
FGT Support	Fund cite/MIPR	49TES, Barksdale AK				1.000	Jul-07						1.000	1.000
W80 Support	Fund cite/MIPR	419 FTS, Edwards AFB CA	1.469	1.196	Aug-06								2.665	2.665
Subtotal Test & Evaluation			1.469	1.196		1.000		0.000		0.000		0.000	3.665	3.665
Remarks: None														
(U) Product Development														
Functional Ground Test (FGT) Development	FFP,CPFF, and T&M	Raytheon, Tucson AZ	5.000	0.797	Jun-06	2.015	Feb-07					0.000	7.812	7.812
W80 Life Extension Program (LEP) Integration & Support	T&M	Raytheon, Tucson AZ	4.050	0.719	Jan-06	3.942	Jan-07					0.000	8.711	8.711
W80 LEP Support, Service STAR upgrade	FFP	E-Spectrum, San Antonio TX	1.000										1.000	1.000
Subtotal Product Development			10.050	1.516		5.957		0.000		0.000		0.000	17.523	17.523
Remarks:														
(U) Management														
None													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			11.519	2.712		6.957		0.000		0.000		0.000	21.188	21.188

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE 4798 Life Extension Program

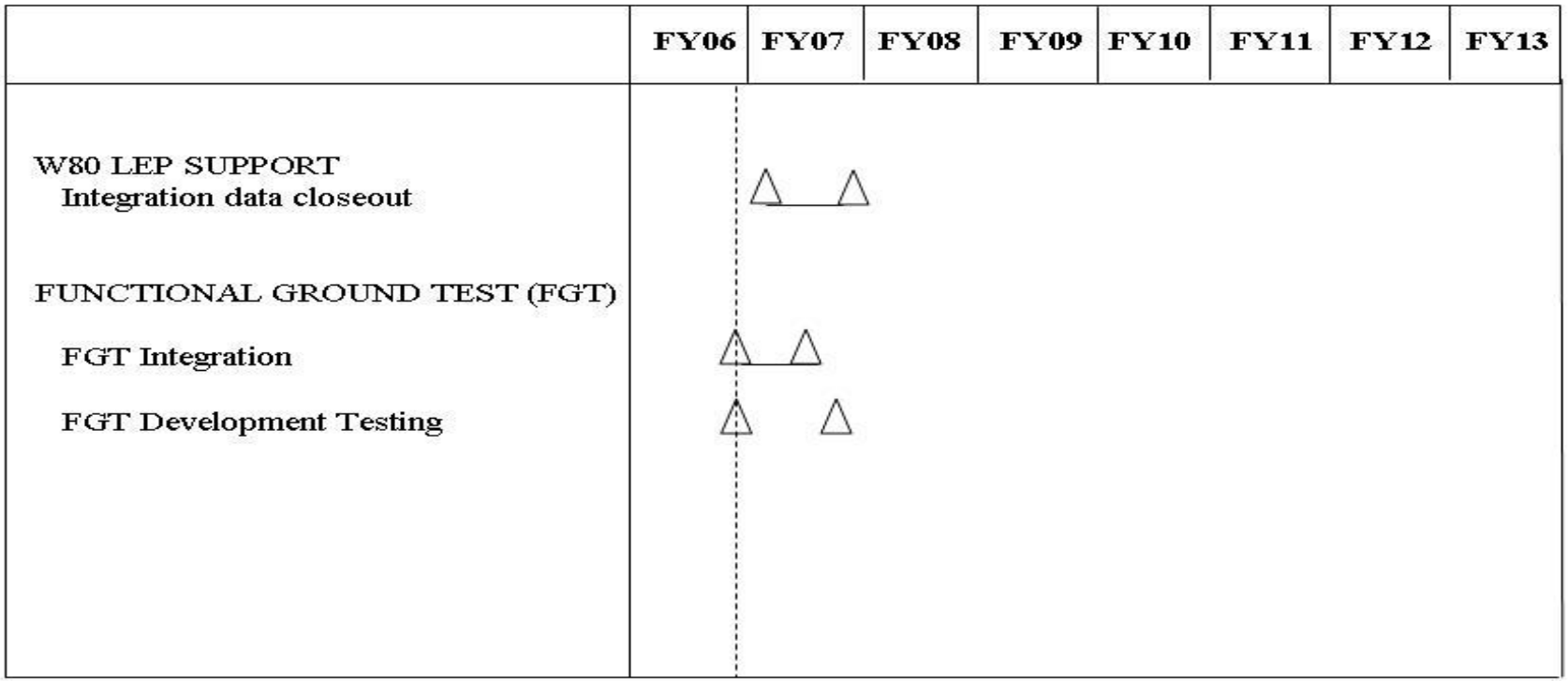

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4798 Life Extension Program

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FGT Integration	1-4Q	1-2Q		
(U) FGT Development Testing	4Q	3Q		
(U) ACM/W-80 Interface Control Changes/Documentation (Support)	1-3Q			
(U) ACM/W-80 Ground Test (Support)	3-4Q			
(U) ACM/W-80 Flight Test (Support)	4Q			
(U) Compile and reduce ACM/W80 interface data for archiving		1-4Q		
(U) Develop final report for ACM/W80 interface/tests		1-4Q		
(U) Develop planning documentation to address program restart requirements.		1-4Q		

PE NUMBER: 0101122F
PE TITLE: AIR LAUNCHED CRUISE MISSILE

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	3.050	3.722	4.672	0.400	0.418	0.434	0.442	0.451	Continuing	TBD
4797	Flight Testing & Navigation Enhancement	3.050	3.722	4.672	0.400	0.418	0.434	0.442	0.451	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The AGM-86B, Air Launched Cruise Missile (ALCM), is a subsonic, air-to-surface strategic nuclear missile, operational since 1982. Armed with a W-80 warhead, it is designed to evade air and ground-based defenses in order to strike targets at any location within any enemy's territory. The ALCM is designed for B-52H internal and external carriage.

A Service Life Extension Plan (SLEP) was developed to meet an AF Long Range Plan requirement to extend ALCM Service Life to FY30. The results of Service Life Extension Program (SLEP) studies identified system components that cannot be sustained beyond the standard service life. The current system is experiencing obsolescence of parts/components. Missile components and support equipment are becoming non-supportable. Service Life Extension of this critical weapon is essential to meet Air Combat Command (ACC) and United States Strategic Command (USSTRATCOM) commitments (also known as OPLAN 8044).

The W-80 LEP replaces warhead components to extend its service life. The National Nuclear Security Administration (NNSA) is responsible for most of the refurbishment costs associated with the W-80 warhead. The Air Force is responsible for funding ALCM W-80 integration. Integration includes evaluation of interface control changes as part of the Initial Concept Design (ICD), missile testing, and logistics requirements necessary to support a First Production Unit (FPU) delivery of 2008.

Joint Test Assembly (JTA-1) Replacement Support: The W80-1 JTA (warhead flight test configuration) is becoming unsupportable with sunset technology. Update of this JTA was to be addressed within the W80 Life Extension Program (LEP). With the cancellation of the W80 LEP, the JTA replacement still needs to be accomplished, which will be lead by NNSA. Air Force support is required to evaluate the interface changes, revise the W80-1 Interface Control Documents (ICDs), provide integration support, and flight test qualification.

Aging and surveillance program for ALCM critical components such as those in the safe arm and fuze subsystem, navigation/guidance system, and electrical/power distribution system. This is needed to identify aging trends prior to failures in fielded components that would result in fleet-wide reliability and supportability problems.

These programs are in Budget Activity 7, Operational System Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101122F AIR LAUNCHED CRUISE MISSILE

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.218	3.736	5.822	0.395
(U)	Current PBR/President's Budget	3.050	3.722	4.672	0.400
(U)	Total Adjustments	0.832	-0.014		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.032	-0.014		
	Congressional Increases	0.926			
	Reprogrammings				
	SBIR/STTR Transfer	-0.062			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4797	Flight Testing & Navigation Enhancement	3.050	3.722	4.672	0.400	0.418	0.434	0.442	0.451	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue ALCM/W80 interface change evaluations/changes and contractor ICD support for W80 LEP	1.040			
(U)	Continue ALCM integration data development	0.085			
(U)	Continue ALCM W-80 integration ground test and flight test support, Environmental Flight Test and Developlmental Flight Test	1.925	0.500		
(U)	W80 Joint Test Assembly (JTA-1) Replacement Support, revise the W80-1 Interface Control Documents (ICDs), provide integration support, and flight test qualification. Continuation of W80 efforts - not a New Start.			2.102	0.170
(U)	Develop aging and surveillance program for ALCM critical components such as those in the safe arm and fuze subsystem, navigation/guidance system, and electrical/power distribution systemto identify aging trends prior to failures in fielded components.		3.222	2.570	0.230
(U)	Total Cost	3.050	3.722	4.672	0.400

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	MPAF, Missile Modifications (BA 03, PE 0101122F, P-15)	24.432	9.669	10.111	10.216	0.000	0.000	0.000	0.000		54.428
(U)	MPAF, Missile Modifications Initial Spares (BA 04 PE 0101122F, P-16)	0.177	0.185	0.192	0.195	0.000	0.000	0.000	0.000		0.749
(U)	MPAF, Replenishment Spares (BA 04, PE 0101122F, P-16)	4.248	0.287	0.297	0.302	11.156	11.437	11.657	11.905	Continuing	TBD
(U)	OPAF, Electronics and Telecommunications Equipment (BP83) (BA 03, PE 0101122F, P-18)	1.364	1.415	1.471	1.509	1.575	1.634	1.665	1.699	Continuing	TBD

(U) D. Acquisition Strategy

The ALCM/W-80 LEP integration is being performed by the prime contractor utilizing a Time and Materials (T&M) engineering assignment on an existing sustainment contract.

The ALCM JTA-1 Replacement Support will be performed utilizing a Firm Fixed Price (FFP) contract.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

The ALCM Aging and Surveillance Program will be developed by the prime contractor utilizing a Time and Materials (T&M) engineering assignment.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0101122F AIR LAUNCHED CRUISE MISSILE**

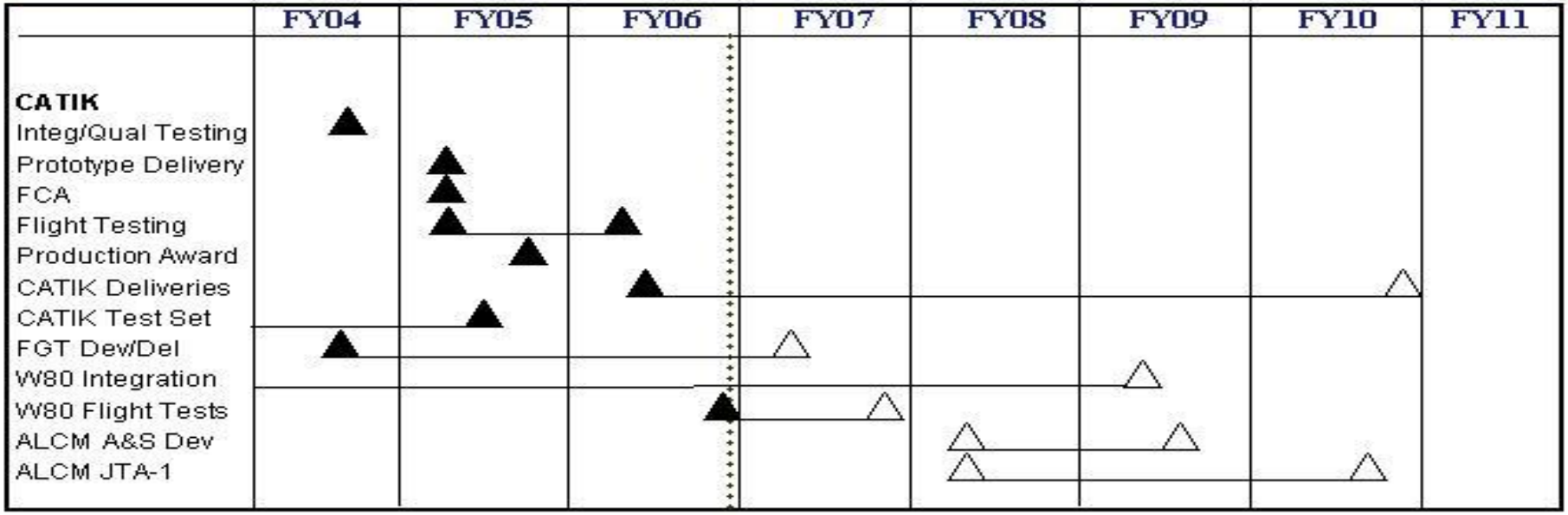
PROJECT NUMBER AND TITLE: **4797 Flight Testing & Navigation Enhancement**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
W80 LEP Support	Eng Asgn/T&M	Boeing, Seattle, WA.		1.040	Feb-06	0.500	Jan-07					1.420	2.960	
JTA-1 Replacement Support	FFP	ESpectrum, San Antonio, TX						2.102	Jan-08	0.170	Jan-09		2.272	
Subtotal Product Development			0.000	1.040		0.500		2.102		0.170		1.420	5.232	0.000
Remarks:														
(U) Support														
OC-ALC/PSM												0.652	0.652	
W80 Support/PSM				0.085	Jan-06							0.000	0.085	
ALCM Aging and Surveillance Program						3.222	Jan-07	2.570	Jan-08	0.230	Jan-09		6.022	
Subtotal Support			0.000	0.085		3.222		2.570		0.230		0.652	6.759	0.000
Remarks:														
(U) Test & Evaluation														
Utah Test Range	MIPR											0.475	0.475	
49th Test Wing	MIPR											0.450	0.450	
Responsible Test Org	TBD											0.025	0.025	
Eglin AFB	MIPR											0.000	0.000	
49th Test Wing (W-80 LEP)	MIPR			1.925	Jul-06							4.685	6.610	
None													0.000	
Subtotal Test & Evaluation			0.000	1.925		0.000		0.000		0.000		5.635	7.560	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	3.050		3.722		4.672		0.400		7.707	19.551	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

U.S. AIR FORCE

ALCM Schedule



Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Flight Testing	3Q			
(U) FGT CDR	1Q			
(U) ALCM/W-80 Contract Award	2Q			
(U) ALCM/W-80 Ground Test Support	2Q			
(U) ALCM W80 Flight Test Support	2Q			
(U) ALCM JTA-1 Support			2Q	2Q
(U) ALCM Aging & Surveillance Program development		3Q	2Q	3Q

PE NUMBER: 0101313F
PE TITLE: STRAT WAR PLANNING SYS - USSTRATCOM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101313F STRAT WAR PLANNING SYS - USSTRATCOM

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	28.869	28.577	20.340	18.999	21.500	23.474	23.853	24.360	Continuing	TBD
5059	Strategic War Planning System (SWPS)	28.869	28.577	20.340	18.999	21.500	23.474	23.853	24.360	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The mission of USSTRATCOM is to establish and provide full-spectrum global strike, coordinated space and information operations capabilities to meet both deterrent and decisive national security objectives, and to provide operational space support, integrated missile defense, Global Command Control Communications and Computers Intelligence Surveillance and Reconnaissance (C4ISR), and specialized planning expertise to the joint warfighter. This mission has been defined by the 2002 Unified Command Plan (UCP) changes 1 and 2. To enable these missions, the Integrated Strategic Planning and Analysis Network (ISPAN) (formerly known as SWPS) must be capable of both deliberate and adaptive planning employing the full spectrum of kinetic and non-kinetic weapons. The planning system will continue to evolve as weapon systems are matured, new systems are developed, and the threat changes, particularly in the area of worldwide proliferation of Weapons of Mass Destruction (WMD).

In FY05, the ISPAN Modernization effort established a redesigned software architecture through requirements definition, and early design and developmental test activities. FY07 efforts expand on the early development efforts to meet USSTRATCOM requirements for existing and expanded UCP missions. This includes software coding, integration of multiple internal and external planning applications, significant developmental test activities, and early operational test activities. The ISPAN modernization program is comprised of three development blocks, which will provide capability throughout the blocks via spiral releases. Block 1 will include initiation of optimization, workflow and decision support development and conventional mission planning integration. Block 2 will see the continuation of optimization, workflow and decision support development, and conventional mission planning integration. Block 3 is beyond the timeframe of this budget report and will be captured in subsequent budget reports. ISPAN also includes automated data processing equipment (ADPE), software, facilities support, manpower, and training to support the mission objectives of ISPAN, associated deployable and distributed data processing nodes, and subsidiary systems.

USSTRATCOM is also required to provide the Combatant Commanders with nuclear and conventional planning, targeting, analysis, and mission planning support and option packages. ISPAN helps accomplish this mission by developing and providing Theater Combatant Commanders with a Decision Support Document called the Theater Planning Support Document (TPSD). Theater planning support needs are also expected to grow 10 fold above current capacity by 2007. As a result, improvements in existing planning tools and interfaces are necessary to increase productivity and meet these growing commitments without increasing manpower. To accomplish this task the ISPAN program will modernize existing software applications for the Air Vehicle Planning System (APS), the Missile Graphics Planning System (MGPS) and Targeting. FY07 completes this effort and culminates with achievement of Full Operational Capability (FOC) for Theater Planning Support.

Navigation Warfare (NAVWAR) is a warfighting application of electronic warfare (EW) and space control (SC) employing various techniques and technologies to negate or prevent hostile use of positioning, navigation, and timing (PNT) information and protect unimpeded use of PNT information by U.S., Allied, and Coalition Forces while not unduly disrupting peaceful use outside an area of operation. The Joint Navigation Warfare Center (JNWC) was established to integrate and

coordinate NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, and space control. In recent years, the Global Positioning System (GPS) has become one of the most critical enablers of modern, advanced technology warfare. In an era where everything from advanced weapons systems to basic goods and services are tracked or guided by navigation systems such as GPS, Navigation Warfare is an interest and concern, especially if those systems are interrupted or lost. The primary mission of NAVWAR is to provide joint warfighter support through four broad mission areas:

a. Warfighter Operational Support - applies knowledge of PNT vulnerabilities, prevention capabilities, and system operations to integrate NAVWAR as an element of warfighting operations. It will provide reach-back capabilities to assist in resolving NAVWAR issues, address situations involving degradation or denial of PNT capabilities, and recommend actions to mitigate effects of both hostile and non-hostile events. NAVWAR develops and maintains current information for the warfighter and theater commanders to include assessments of adversary capabilities, assessments of coalition capabilities and limitations, and other topics of special interest.

b. Test, Training, Exercises, and Experiments - conducts annual NAVWAR field test events, and provides NAVWAR technical assistance for training, exercises and experiments. The JNWC, as part of this effort, maintains the Single Integrated Joint NAVWAR Test Roadmap and the Single Integrated Coalition NAVWAR Test Roadmap under various international agreements. The annual field test event focuses on fielded operational systems and capabilities to baseline current electronic protection, support, and attack capabilities to optimize and deconflict theater/tactical assets. The test, training, exercise and experiment activities: 1) prepare the joint warfighter for operations in current and rapidly evolving NAVWAR threat environments; 2) establish priorities, standardized operational procedures for tactics, techniques, and procedures; 3) test electronic attack CONOPs to endure deconfliction and optimization with other operations to mitigate blue force fratricide; and 4) evolve standardized test methods.

c. Modeling, Simulation, Tools, and Methods - develops and maintains methods, standards, models and simulations used in NAVWAR analysis. NAVWAR evaluates new models for accuracy and applicability to specific situations and rapidly evolving threat environments. It will also develop and maintain standard test methodologies created solely by the U.S. as well as test methods developed in collaboration with coalition partners. These standard methodologies ensure data sharing is efficient and effective, and ensures accurate feedback to the operational communities. The JNWC, as part of this effort, manages the GPS EA Frequency Clearance process and conducts independent analysis and verification of EA frequency clearance requests. It also maintains and upgrades the GPS-RPM as required and conducts modeling and simulation exercises on GPS interference to include test and exercise threat laydowns for DoD organizations unable to perform their own modeling.

d. Navigation Warfare Information Analysis Center (IAC) - The NAVWAR IAC serves as a source of NAVWAR information and technical expertise for DoD researchers, engineers, program managers, warfighters, testers, and others. It will collect, analyze, synthesize, and disseminate scientific and technical information in clearly defined specialized subject areas. It promotes standardization by: 1) providing in-depth analyses; 2) creating products that respond to technical inquiries; 3) preparing state-of-the-art reports, handbooks, and databases; 4) conducting technology assessments; and 5) supporting the exchange of information within the NAVWAR community.

SWPS is in budget activity 7, Operational System Development, because its systems are operational, and currently support capabilities to create, verify, and produce OPLAN 8044, meet new UCP taskings, and produce other products.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101313F STRAT WAR PLANNING SYS - USSTRATCOM

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	29.705	27.285	13.322	10.146
(U)	Current PBR/President's Budget	28.869	28.577	20.340	18.999
(U)	Total Adjustments	-0.836			
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.108		
	Congressional Increases		1.400		
	Reprogrammings				
	SBIR/STTR Transfer	-0.836			

(U) Significant Program Changes:

In FY07 ISPAN received a $1.4M Congressional increase to continue USSTRATCOM's Global Command and Control Development Center

Increases in FY08 ($6.8M) and FY09 ($8.6M) are to continue Positioning, Navigation, and Timing (PNT) RDT&E efforts. These Navigation Warfare efforts were funded in FY07 and prior years through congressional increases in other Program Elements (most recently PE 0305164 - NAVSTAR GPS User Equipment)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5059	Strategic War Planning System (SWPS)	28.869	28.577	20.340	18.999	21.500	23.474	23.853	24.360	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

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Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE 5059 Strategic War Planning System (SWPS)

coordinate NAVWAR PNT capabilities across the mission areas of intelligence, surveillance, reconnaissance, information operations, electronic warfare, and space control. In recent years, the Global Positioning System (GPS) has become one of the most critical enablers of modern, advanced technology warfare. In an era where everything from advanced weapons systems to basic goods and services are tracked or guided by navigation systems such as GPS, Navigation Warfare is an interest and concern, especially if those systems are interrupted or lost. The primary mission of NAVWAR is to provide joint warfighter support through four broad mission areas:

a. Warfighter Operational Support - applies knowledge of PNT vulnerabilities, prevention capabilities, and system operations to integrate NAVWAR as an element of warfighting operations. It will provide reach-back capabilities to assist in resolving NAVWAR issues, address situations involving degradation or denial of PNT capabilities, and recommend actions to mitigate effects of both hostile and non-hostile events. NAVWAR develops and maintains current information for the warfighter and theater commanders to include assessments of adversary capabilities, assessments of coalition capabilities and limitations, and other topics of special interest.

b. Test, Training, Exercises, and Experiments - conducts annual NAVWAR field test events, and provides NAVWAR technical assistance for training, exercises and experiments. The JNWC, as part of this effort, maintains the Single Integrated Joint NAVWAR Test Roadmap and the Single Integrated Coalition NAVWAR Test Roadmap under various international agreements. The annual field test event focuses on fielded operational systems and capabilities to baseline current electronic protection, support, and attack capabilities to optimize and deconflict theater/tactical assets. The test, training, exercise and experiment activities: 1) prepare the joint warfighter for operations in current and rapidly evolving NAVWAR threat environments; 2) establish priorities, standardized operational procedures for tactics, techniques, and procedures; 3) test electronic attack CONOPs to endure deconfliction and optimization with other operations to mitigate blue force fratricide; and 4) evolve standardized test methods.

c. Modeling, Simulation, Tools, and Methods - develops and maintains methods, standards, models and simulations used in NAVWAR analysis. NAVWAR evaluates new models for accuracy and applicability to specific situations and rapidly evolving threat environments. It will also develop and maintain standard test methodologies created solely by the U.S. as well as test methods developed in collaboration with coalition partners. These standard methodologies ensure data sharing is efficient and effective, and ensures accurate feedback to the operational communities. The JNWC, as part of this effort, manages the GPS EA Frequency Clearance process and conducts independent analysis and verification of EA frequency clearance requests. It also maintains and upgrades the GPS-RPM as required and conducts modeling and simulation exercises on GPS interference to include test and exercise threat laydowns for DoD organizations unable to perform their own modeling.

d. Navigation Warfare Information Analysis Center (IAC) - The NAVWAR IAC serves as a source of NAVWAR information and technical expertise for DoD researchers, engineers, program managers, warfighters, testers, and others. It will collect, analyze, synthesize, and disseminate scientific and technical information in clearly defined specialized subject areas. It promotes standardization by: 1) providing in-depth analyses; 2) creating products that respond to technical inquiries; 3) preparing state-of-the-art reports, handbooks, and databases; 4) conducting technology assessments; and 5) supporting the exchange of information within the NAVWAR community.

SWPS is in budget activity 7, Operational System Development, because its systems are operational, and currently support capabilities to create, verify, and produce

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101313F STRAT WAR PLANNING SYS - USSTRATCOM**	PROJECT NUMBER AND TITLE **5059 Strategic War Planning System (SWPS)**

OPLAN 8044, meet new UCP taskings, and produce other products.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Program				
(U)	Theater Planning Support continues the modernization of software applications for Air Vehicle Planning System (APS), Missile Graphics Planning System (MGPS) and Targeting in support of the Theater Planning Support Document for Combatant Commanders.	1.556	1.716		
(U)	Block 1 will modernize, integrate and test ISPAN planning tools. This includes, but is not limited to, completing required System Engineering, developing new tools as required, and modifying existing software tools to interface with newly developed ISPAN tools. The primary focus of Block 1 is to establish a service oriented N-Tier architecture for the ISPAN applications to use.	26.313	25.505		
(U)	Block 2 continues to build on the framework and capabilities developed in Block 1. Continued development of a service oriented architecture focused on net-centric capabilities, data exposure, continued component and COCOM collaboration efforts. Additionally, Block 2 will focus on fulfilling the following capabilities: develop a fully collaborative planning and analysis capability that provides a common operational picture and is capable of predictive analysis, target system analysis, weapon selection analysis, attack consequences analysis, and global network analysis. Block 2 will also focus on improving the capabilities of the Fielded Operational Systems to meet Global Strike objectives in the adaptive planning and analysis environment. The need for speed, thoroughness, and continuity of operations in decision-making will drive investments in six principal areas; 1) Distributed Operations, 2) Data Survivability, 3) Net Centricity, 4) Data Visualization and Support, 5) Effects-based Planning, and 6) Future Air Vehicle Planning			13.540	10.399
(U)	Global C2 Development Center will provide timely analysis of technologies and processes and identify innovative approaches to facilitate effective and timely integration of Net Centric capabilities. This effort was an FY06 and FY07 congressional add.	1.000	1.356		
(U)	NAVWAR Warfighter Operational Support - COCOM reachback analysis, threat assessments, adversary assessments, intel assessments	0.000	0.000	1.600	1.700
(U)	NAVWAR Test, Training, Exercises, & Experiments - Field Tests, NATO Exercises, Trials & Demonstrations, U.S. Exercises	0.000	0.000	3.600	4.500
(U)	NAVWAR Modeling, Simulation, Tools, & Methods - Global Positioning System Reliabili ty Prediction Model (GPS-RPM) Upgrades, GPS EA frequency clearance evaluations, modeling and simulation exercises	0.000	0.000	1.600	1.600
(U)	NAVWAR Information Analysis Center (IAC) - data collection, analysis, archiving, and dissemination	0.000	0.000	0.000	0.800

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Total Cost	28.869	28.577	20.340	18.999

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF WSC 833140 Strategic Command and Control (Program Element 0101313F)	6.640	9.977	9.928	13.233	13.553	13.768	14.039	14.317	Continuing	TBD

(U) D. Acquisition Strategy

ISPAN will develop and modernize strategic planning tools for the combatant commanders using an evolutionary acquisition strategy with spiral development contracts that are negotiated and awarded in a competitive environment.

NAVWAR will investigate, test, and simulate potential threats and mitigation strategies for preventing the hostile use of Positioning, Navigation and Timing (PNT) information through the use of competitive contracts and selective employment of government agencies.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0101313F STRAT WAR PLANNING SYS - USSTRATCOM**

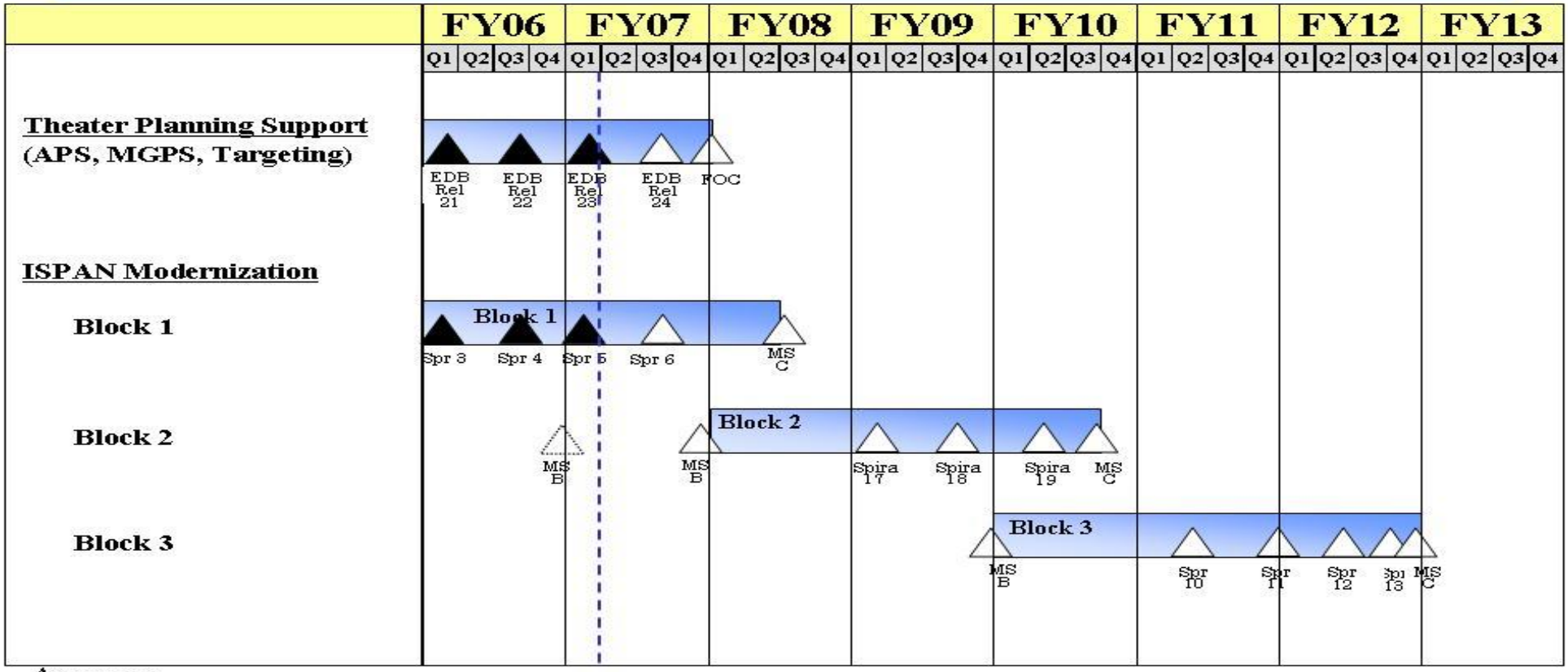
PROJECT NUMBER AND TITLE: **5059 Strategic War Planning System (SWPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
BAE (Air Vehicle Planning System (APS))	TM	San Diego, CA	2.997	1.893	Oct-05							0.000	4.890	TBD
Northrop Grumman (Missile Graphics Planning System (MGPS)	TMAF	Bellevue, NE	1.286	0.000								0.000	1.286	1.286
Northrop Grumman (MGPS)	CPAF	Bellevue, NE	0.648	2.505	Oct-05	2.052	Oct-06	2.019	Oct-07	1.405	Oct-08	Continuing	TBD	TBD
SAIC (Targeting)	TMAF	San Diego, Ca	0.800	0.000								0.000	0.800	0.800
SAIC (Targeting)	CPAF	San Diego, Ca	0.661	0.928	Oct-05	0.613	Oct-06	0.500	Oct-07			0.000	2.702	TBD
Lockheed Martin Integrated Systems (ISPAN Modernization)	CPAF	Bellevue, NE	13.024	19.373	Oct-05	23.312	Oct-06	9.390	Oct-07	7.644	Oct-08	Continuing	TBD	TBD
Miscellaneous Contracts	CPAF	Pending	2.793	4.170	Jan-06	2.600	Oct-06	1.631	Oct-07	1.350	Oct-08	Continuing	TBD	TBD
NAVWAR Modeling, Simulation, Tools & Methods	TBD	TBD	0.000	0.000		0.000		1.600	Oct-07	1.600	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			22.209	28.869		28.577		15.140		11.999		Continuing	0.000 TBD	TBD
Remarks:														
(U) Support														
NAVWAR Warfighter Operational Support	FFP	TBD	0.000	0.000		0.000		1.600	Oct-07	1.700	Oct-08	Continuing	TBD	TBD
NAVWAR Informtion Analysis Center (IAC)	FFP	TBD	0.000	0.000		0.000		0.000		0.800	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		1.600		2.500		Continuing	0.000 TBD	TBD
Remarks:														
(U) (U) Test & Evaluation														
JNWC Field Tests	Various	Various	0.000	0.000		0.000		3.600	Oct-07	4.500	Oct-08	Continuing	TBD	TBD
Subtotal (U) Test & Evaluation			0.000	0.000		0.000		3.600		4.500		Continuing	0.000 TBD	TBD
Remarks:														
(U) Total Cost			22.209	28.869		28.577		20.340		18.999		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

U.S. AIR FORCE

ISPAN Schedule



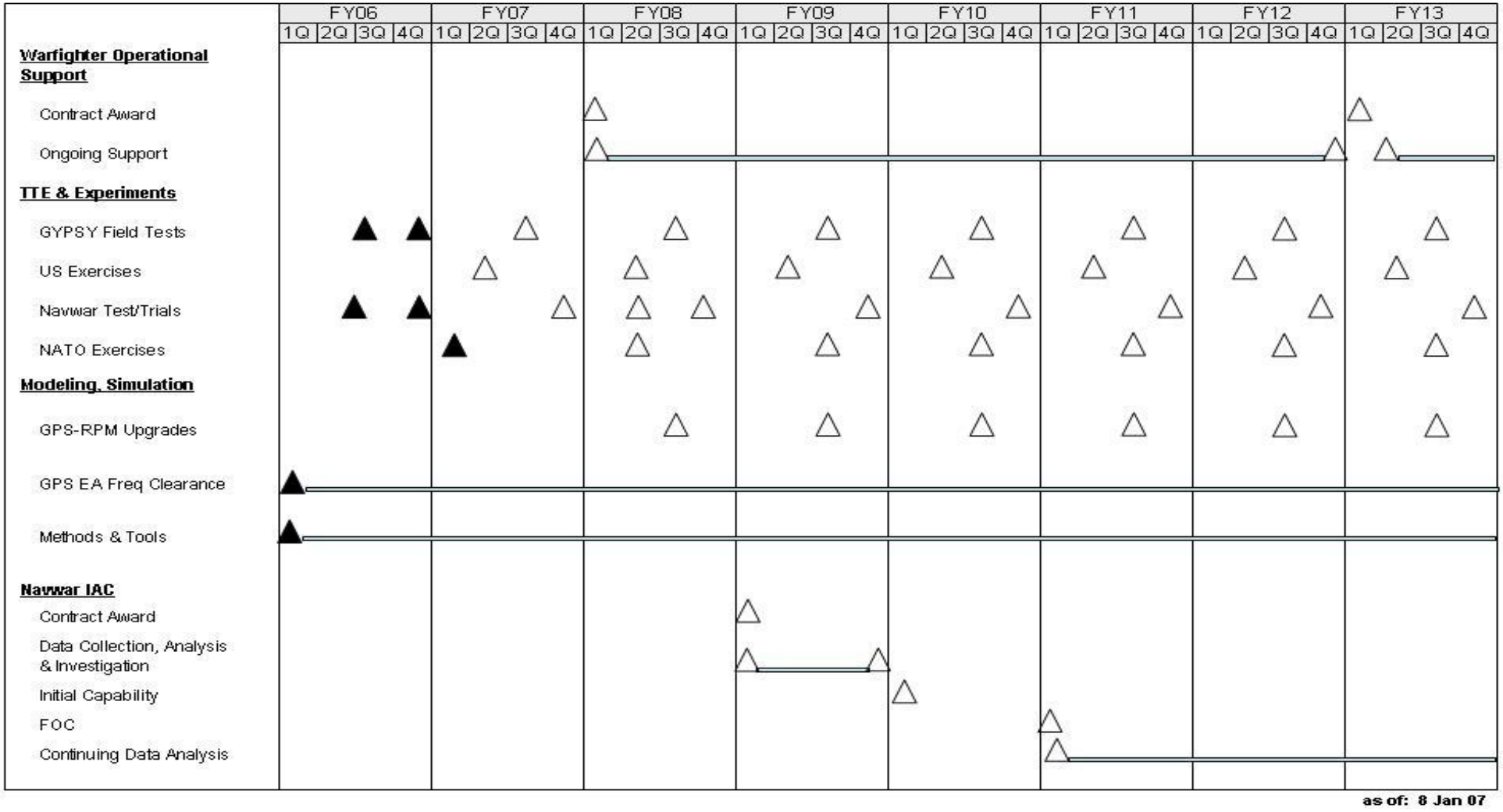
Acronyms:

EDB - Enterprise Database
MS B - Milestone B
FOC - Full Operational Capability
MS C - Milestone C

As of: 5 Jan 07

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

NavWar Schedule



as of: 8 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Theater Planning Support (APS, MGPS, Targeting)	1-4Q	1-4Q		
(U) Theater Planning Support FOC		4Q		
(U) ISPAN Modernization Block 1	1-4Q	1-4Q	1-2Q	
(U) ISPAN Modernization Block 1 MS C			2Q	
(U) ISPAN Modernization Block 2 MS B		4Q		
(U) ISPAN Modernization Block 2			1-4Q	1-4Q
(U) ISPAN Modernization Block 3 MS B				1Q
(U) ISPAN Modernization Block 3				1-4Q
(U) NAVWAR Operational Support Contract Award			1Q	
(U) NAVWAR Test, Training, Exercises & Experiments - GYPSY Field Test			3Q	3Q
(U) NAVWAR Test, Training, Exercises & Experiments - US Exercises			2Q	2Q
(U) NAVWAR Test, Training, Exercises & Experiments - Tests/Trials			2-3Q	4Q
(U) NAVWAR Test, Training, Exercises & Experiments - NATO Trials/ Exercises			2Q	3Q
(U) Modeling, Simulation, Tools & Methods - Upgrade Release			3Q	3Q
(U) GPS Frequency Clearance			1-4Q	1-4Q
(U) NAVWAR Information Analysis Center (IAC) - Initial Capability				1Q

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PE NUMBER: 0102326F
PE TITLE: REGION/ SECTOR OPERATIONS CONTROL CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	22.453	14.744	23.495	29.358	26.803	27.818	19.002	19.397	Continuing	TBD
4592	Region/Sector Operations Modernization Center (R/SAOC)	22.453	14.744	23.495	29.358	26.803	27.818	19.002	19.397	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS).

The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

The R/SAOC legacy system has reached saturation in its capability to receive, process, display, exchange, and employ air surveillance data from current sensor and communication systems, thus contributing to delays in the kill chain. The outdated technology has become increasingly difficult and costly to sustain and provides no opportunity for application enhancement. The BCS-F system is the replacement for this antiquated system.

This program is in Budget Activity 7 - Operational System Development because it provides funding for the replacement of a currently existing and operating system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	17.937	14.853	23.149	23.785
(U)	Current PBR/President's Budget	22.453	14.744	23.495	29.358
(U)	Total Adjustments	4.516	-0.109		
(U)	Congressional Program Reductions		-0.053		
	Congressional Rescissions		-0.056		
	Congressional Increases				
	Reprogrammings	5.000			
	SBIR/STTR Transfer	-0.484			

(U) Significant Program Changes:

- Funding increases from FY07 to FY08 and out because of parallel common software development activities.
- Funding ($4.0M) reduced in FY05 to support higher AF priorities; restored in FY06.
- Funding ($1.0M) added in FY06 to support National Capital Region-Integrated Air Defense System (NCR-IADS).

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4592	Region/Sector Operations Modernization Center (R/SAOC)	22.453	14.744	23.495	29.358	26.803	27.818	19.002	19.397	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS).

The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture and National Capital Region/Integrated Air Defense System (NCR/IADS). This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

The R/SAOC legacy system has reached saturation in its capability to receive, process, display, exchange, and employ air surveillance data from current sensor and communication systems, thus contributing to delays in the kill chain. The outdated technology has become increasingly difficult and costly to sustain and provides no opportunity for application enhancement. The BCS-F system is the replacement for this antiquated system.

This program is in Budget Activity 7 - Operational System Development because it provides funding for the replacement of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Continue Acquisition Activities associated with System Development of the BCS-F, to include but not limited to Software Development, System Integration, Purchase of Government Furnished Equipment, Production Representative Hardware, NCR/IADS, Test and Certification Support.	19.697	11.468	19.987	25.677
(U) Continue Program Management/Systems Engineering	2.383	2.168	2.224	2.273
(U) Continue Program Support (i.e. travel, supplies, equipment, misc)	0.373	1.108	1.284	1.408

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Total Cost	22.453	14.744	23.495	29.358

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
(U) OPAF PE 0102326F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	11.115	18.170	11.232	12.401	11.420	11.909	20.408	20.814	Continuing	TBD

(U) D. Acquisition Strategy

The BCS-Fixed program is utilizing a spiral development acquisition strategy that leverages hardware and software commonality with BCS-Mobile to further advance tactical Battle Management C2 capabilities while promoting increased interoperability between systems.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

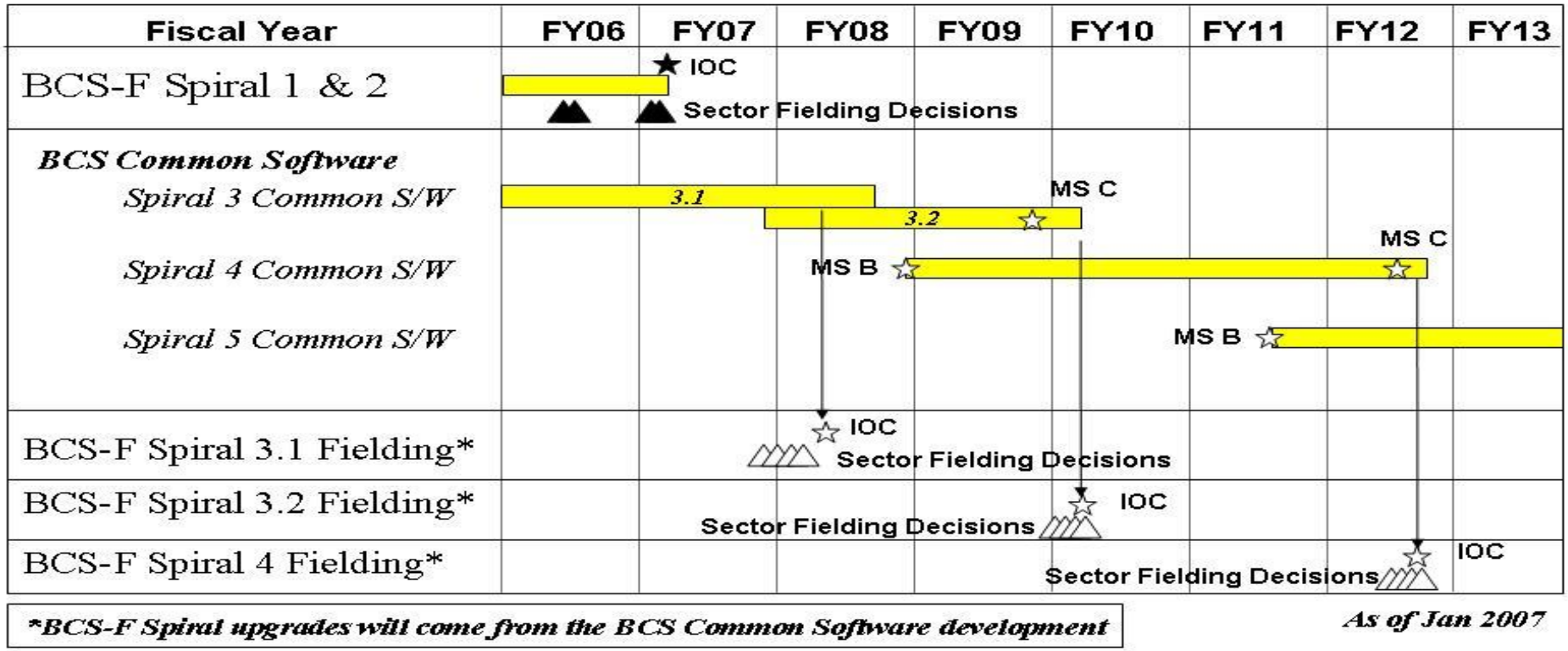
BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER**

PROJECT NUMBER AND TITLE: **4592 Region/Sector Operations Modernization Center (R/SAOC)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
THALES RAYTHEON	CPAF	Fullerton, CA		18.466	Dec-05	10.038	Oct-06	18.338	Oct-07	24.021	Oct-08	Continuing	TBD	TBD
Various	Various	Various		0.281	Jan-06	0.877	Jan-07	1.052	Jan-08	1.060	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	18.747		10.915		19.390		25.081		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Management Tech Spt	T&M	A&AS Bedford, MA		0.312	Oct-05	0.740	Jan-07	0.762	Jan-08	0.785	Jan-09	Continuing	TBD	TBD
System Engineering	FFP	Mitre, Bedford, MA		2.152	Oct-05	1.379	Oct-06	1.421	Oct-07	1.463	Oct-08	Continuing	TBD	TBD
Program Office Support	Various	Various		0.060	Nov-05	0.368	Nov-06	0.522	Nov-07	0.623	Nov-08	Continuing	TBD	TBD
Subtotal Support			0.000	2.524		2.487		2.705		2.871		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
46th Test Wing/Other Test Act	Various	Various		1.182	Nov-05	1.342	Nov-06	1.400	Nov-07	1.406	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	1.182		1.342		1.400		1.406		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	22.453		14.744		23.495		29.358		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)



*BCS-F Spiral upgrades will come from the BCS Common Software development

As of Jan 2007

☆ *Major Event or Milestone*
▭ *Ongoing Activity*
▲ *Completed Event*
△ *Planned Task(s)*

IOC: Initial Operational Capability
FOC: Full Operational Capability
MS: Milestone
Inc: Increment
S/W: Software

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) BCS-F Spiral 1 & 2 IOC		1Q		
(U) BCS-F Spiral 3.1 Fielding Decision			2Q	
(U) BCS Common Software Spiral 4 MS B			4Q	
(U) BCS Common Software Spiral 3 MS C				4Q

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PE NUMBER: 0102823F
PE TITLE: STRAT AEROSPACE INTEL SYS ACTIVITIES

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	0.000	0.015	0.018	0.015	0.015	0.016	Continuing	TBD
5011 Space Situational Awareness Initiatives	0.000	0.000	0.000	0.015	0.018	0.015	0.015	0.016	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

In the 2006 Strategic Master Plan, the AFSPC/CC identified a need to provide timely, accurate, relevant intelligence data to support Space Superiority operations - Offensive Counterspace (OCS), Defense Counterspace (DCS), and Space Situational Awareness (SSA). USSTRATCOM further stated the need for such a requirement in its February 2006 Space Control JCD. The SIPB HMMI is AFPSC/A2's response to those requirements. The SIPB HMMI is an information technology that links intelligence analysts to space operators, enabling them to share in the production, dissemination and visualization of predictive and highly graphic decision-making products - SIPBs. The SIPB HMMI gives the JSpOC, JFCCs, and COCOM J2/J3/J5s an Adaptive Planning tool to obtain adversary space and counterspace tactics, centers of gravity, and courses of action. Linking existing space operational and intelligence data, databases, and products, the SIPB HMMI becomes the integral effort for a space intelligence TCPED capability that influences the kill chain.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget				
(U) Current PBR/President's Budget	0.000			0.015
(U) Total Adjustments	0.000			
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES	PROJECT NUMBER AND TITLE: 5011 Space Situational Awareness Initiatives

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5011	Space Situational Awareness Initiatives	0.000	0.000	0.000	0.015	0.018	0.015	0.015	0.016	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

In the 2006 Strategic Master Plan, the AFSPC/CC identified a need to provide timely, accurate, relevant intelligence data to support Space Superiority operations - Offensive Counterspace (OCS), Defense Counterspace (DCS), and Space Situational Awareness (SSA). USSTRATCOM further stated the need for such a requirement in its February 2006 Space Control JCD. The SIPB HMMI is AFPSC/A2's response to those requirements. The SIPB HMMI is an information technology that links intelligence analysts to space operators, enabling them to share in the production, dissemination and visualization of predictive and highly graphic decision-making products - SIPBs. The SIPB HMMI gives the JSpOC, JFCCs, and COCOM J2/J3/J5s an Adaptive Planning tool to obtain adversary space and counterspace tactics, centers of gravity, and courses of action. Linking existing space operational and intelligence data, databases, and products, the SIPB HMMI becomes the integral effort for a space intelligence TCPED capability that influences the kill chain.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Develop net-centric capability for Space IPB data owners and subscribers across the space and non-space intelligence communities to rapidly update Space IPB doctrinal templates and underlying data				0.007
(U) Supports integration into Single Integrated Space Picture (SISP)				0.004
(U) Enable near-real-time intelligence support to space battle management, space combat assessment, and adversary space trending and pattern analysis				0.004
(U) Total Cost	0.000	0.000	0.000	0.015

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) N/A										

(U) D. Acquisition Strategy

Spiral 2 (June 2007 - May 2009): Transform Space IPB registered and tagged service oriented architecture data into a display of adversary space and counterspace situation. Provide capability to drill down to underlying specific threat data. Develop capability to rapidly updates Space IPB doctrinal templates and underlying data through immediate discovery, manipulation and posting of revised data by Space IPB data owners and subscribers across the space and non-space intelligence communities.

Spiral 3 (June 2007 - June 2009): Further refine the Space IPB HMMI concept by adding RAIDRS, Counter-ISR, and other data feeds to existing Space IPB data

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

sources.

Spiral 4 (October 2009 - October 2016): Transition from Space IPB data and content management to architectures, hardware, and software that enable NRT intelligence support to space battle management, space combat assessment, and adversary space trending and pattern analysis. Establish an intelligence-influenced visualization tasking of global space surveillance and theater ISR assets as well as decision aids to interpret the delivery of recent combat effects.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES**

PROJECT NUMBER AND TITLE: **5011 Space Situational Awareness Initiatives**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
	various	multiple								0.015		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		0.000		0.015		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		0.000		0.015		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES	PROJECT NUMBER AND TITLE 5011 Space Situational Awareness Initiatives

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102823F STRAT AEROSPACE INTEL SYS ACTIVITIES**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

(U) Schedule Profile

FY 2006	FY 2007	FY 2008	FY 2009

(U) TBD

PE NUMBER: 0203761F
PE TITLE: Warfighter Rapid Acquisition Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0203761F Warfighter Rapid Acquisition Program

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	22.130	30.469	14.245	26.430	27.081	27.477	28.123	28.809	Continuing	TBD
4936	Warfighter Rapid Acquisition Program	22.130	30.469	14.245	26.430	27.081	27.477	28.123	28.809	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Warfighter Rapid Acquisition Process (WRAP) provides rapid transition funding for the development and fielding of highly successful competitive experiments, demonstrations, and innovative approaches to support the Expeditionary Air Force (EAF) and other warfighters. WRAP supports the specific DoD goal of significantly shortening the acquisition response time and acquisition cycle times. This process is expected to shorten the project decision/initiation time by 2-5 years for selected projects due to the integrated headquarters review and immediate availability of transition funding. The WRAP process is specifically designed to deal with initiatives throughout the fiscal year as they arise resulting in a sequential distribution of WRAP funding over the course of that entire execution year. Although analogous to major investment programs WRAP's process allows the Air Force the flexibility to acquire innovative concepts and initiatives and transition them to the warfighter annually in a manner that coincides with Air Forces' development of the President's Budget. Candidate projects will compete for WRAP approval and funds based on business case analyses, identified and demonstrated operational impact, cost savings, project development, production, lifecycle costs, project risk and cost of delay. The WRAP will nominate projects to the Chief of Staff of the Air Force (CSAF) for final approval. Potential sources of projects include, but are not limited to, JEFX, Battlelabs, Joint Experimentation, Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs), Science & Technology, and Independent R&D efforts. MAJCOM/Agencies must commit full project funding in the subsequent programming cycle. The Air Force will ensure CSAF selected projects are incorporated in the future annual planning and programming guidance or Program Objective Memorandum (POM) preparation instructions.

This effort is Budget Activity 7, Operational System Development, because the program provides a vehicle for developing operational concepts and attendant new technologies for enhancing capabilities of the 21st century aerospace force.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0203761F Warfighter Rapid Acquisition Program

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	22.130	30.584	30.934	31.078
(U)	Current PBR/President's Budget	22.130	30.469	14.245	26.430
(U)	Total Adjustments	0.000	0.098		
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer		0.098		

(U) Significant Program Changes:

In FY 08 PB PE reduced by $5.0M across FYDP to fund higher priority Air Force requirements. Addtional reduction in FY 08 is the result of OSD reprioritization.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0203761F Warfighter Rapid Acquisition Program	PROJECT NUMBER AND TITLE: 4936 Warfighter Rapid Acquisition Program

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4936	Warfighter Rapid Acquisition Program	22.130	30.469	14.245	26.430	27.081	27.477	28.123	28.809	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Warfighter Rapid Acquisition Process (WRAP) provides rapid transition funding for the development and fielding of highly successful competitive experiments, demonstrations, and innovative approaches to support the Expeditionary Air Force (EAF) and other warfighters. WRAP supports the specific DoD goal of significantly shortening the acquisition response time and acquisition cycle times. This process is expected to shorten the project decision/initiation time by 2-5 years for selected projects due to the integrated headquarters review and immediate availability of transition funding. The WRAP process is specifically designed to deal with initiatives throughout the fiscal year as they arise resulting in a sequential distribution of WRAP funding over the course of that entire execution year. Although analogous to major investment programs WRAP's process allows the Air Force the flexibility to acquire innovative concepts and initiatives and transition them to the warfighter annually in a manner that coincides with Air Forces' development of the President's Budget. Candidate projects will compete for WRAP approval and funds based on business case analyses, identified and demonstrated operational impact, cost savings, project development, production, lifecycle costs, project risk and cost of delay. The WRAP will nominate projects to the Chief of Staff of the Air Force (CSAF) for final approval. Potential sources of projects include, but are not limited to, JEFX, Battlelabs, Joint Experimentation, Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs), Science & Technology, and Independent R&D efforts. MAJCOM/Agencies must commit full project funding in the subsequent programming cycle. The Air Force will ensure CSAF selected projects are incorporated in the future annual planning and programming guidance or Program Objective Memorandum (POM) preparation instructions.

This effort is Budget Activity 7, Operational System Development, because the program provides a vehicle for developing operational concepts and attendant new technologies for enhancing capabilities of the 21st century aerospace force.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Planned WRAP project selection and project initiation	22.130	30.469	14.245	26.430
(U) Total Cost	22.130	30.469	14.245	26.430

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not Applicable

(U) D. Acquisition Strategy

WRAP enables Air Force innovation including experimentation and spiral development processes to decrease fielding timelines and allows development, fielding, or upgrading of systems until the sponsoring MAJCOM/Agency can incorporate them into their subsequent submission. The Air Force, through appropriate program

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**	PROJECT NUMBER AND TITLE **4936 Warfighter Rapid Acquisition Program**

offices, will manage the acquisition and development process for the integration and fielding of WRAP approved projects. Each project will have a complete acquisition plan defined and approved as a criterion for project selection and subsequent funding. The Air Staff and the Air Force corporate structure will complete an Operations and Acquisition Review to ensure project affordability and appropriateness within the Air Force Overall program. In order to rapidly acquire warfighting capabilities the WRAP process nominates projects directly to the VCSAF, CSAF and SECAF for final approval.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0203761F Warfighter Rapid Acquisition Program**

PROJECT NUMBER AND TITLE: **4936 Warfighter Rapid Acquisition Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
													0.000	TBD
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
	Various	Multiple		22.130	Jan-06	30.469	Jan-07	14.245	Jan-08	26.430	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	22.130		30.469		14.245		26.430		Continuing	TBD	TBD
Remarks: WRAP funds are distributed to initiatives capable of utilizing 3600 monies.														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Various														
(U) Total Cost			0.000	22.130		30.469		14.245		26.430		Continuing	TBD	TBD
Remarks:														

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0203761F Warfighter Rapid Acquisition Program	PROJECT NUMBER AND TITLE 4936 Warfighter Rapid Acquisition Program

Warfighting Rapid Acquisition Program PE 23761F

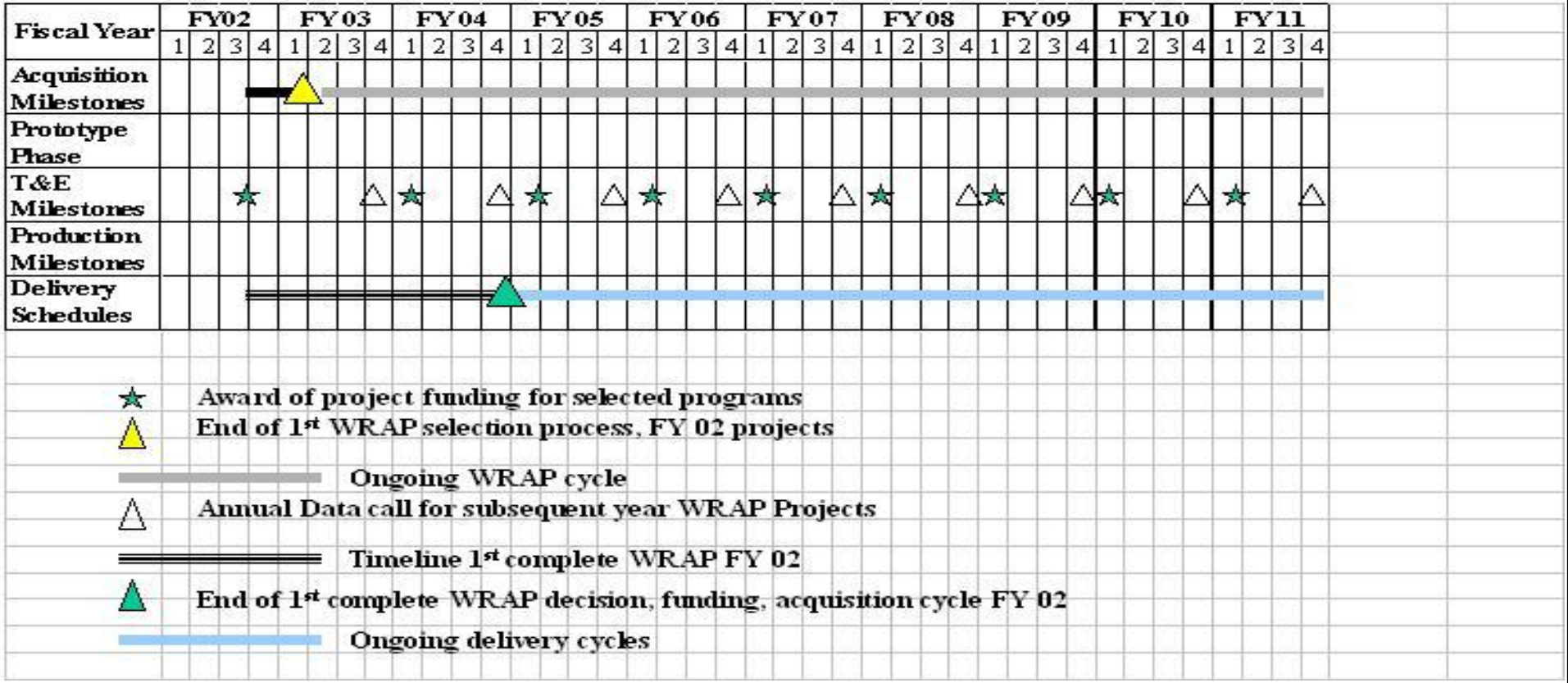

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0203761F Warfighter Rapid Acquisition Program	PROJECT NUMBER AND TITLE: 4936 Warfighter Rapid Acquisition Program

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FY 06 WRAP Project Initiation	2-3Q			
(U) FY 06 WRAP Project Approval/Projects funded	3-4Q			
(U) FY 07 WRAP Project Initiation		1Q		
(U) FY 07 WRAP Project Approval/Project funding (Anticipated)		2Q		
(U) FY 08 WRAP Project Initiation (Planned)			1Q	
(U) FY08 WRAP Project Approval/Project funding (Planned)			2Q	
(U) FY 09 WRAP Project Initiation (Planned)				1Q

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PE NUMBER: 0205219F
PE TITLE: MQ-9 Development and Fielding

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0205219F MQ-9 Development and Fielding

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	61.069	49.866	33.078	37.587	19.927	20.335	Continuing	TBD
5246 MQ-9 Development and Fielding	0.000	0.000	61.069	49.866	33.078	37.587	19.927	20.335	Continuing	TBD

This program moved from PE 0305219F in FY08.

(U) A. Mission Description and Budget Item Justification

The basic MQ-9 Reaper system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-9 Reaper aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging Time Sensitive Targets (TSTs) as a radar-based attack asset with on-board hard-kill capability (hunter-killer) and also perform Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA) as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC), Target Location Accuracy (TLA), Metric Sensor and other capabilities) and assess post-strike results. The MQ-9 will also explore and if appropriate develop and integrate Signals Intelligence (SIGINT) Sensors capabilities. The MQ-9 is in continuing development and will field capability through incremental upgrades. The baseline development includes both a risk reduction phase, FY04 & FY05 Quick Reaction/ Interim Combat Capabilities (ICC), and a System Development & Demonstration (SDD) phase. Risk reduction started in FY03 and includes system design, drawings, specifications, and initial standardized (MIL-STD-1760) advanced weapons data bus efforts. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability and preliminary technical orders. Capabilities in development include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard "precision" weapons (GBU-12/38/49); hardware and software upgrades to the ground control station for MQ-9 operations; completing airworthiness certification; weapons system certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent investments will continue to evolve the MQ-9's capabilities to meet new requirements (which may include SIGINT, communications, and other sensor packages), and address reliability and maintainability and safety issues.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support

functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-9 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide essential operational capabilities.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000		61.069	49.866
(U)	Total Adjustments	0.000			
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

MQ-9 program efforts were included in PE 0305219F prior to FY08.

Exhibit R-2a, RDT&E Project Justification			DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE 5246 MQ-9 Development and Fielding	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5246 MQ-9 Development and Fielding	0.000	0.000	61.069	49.866	33.078	37.587	19.927	20.335	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

This program moved from PE 0305219F in FY08.

(U) A. Mission Description and Budget Item Justification

The basic MQ-9 Reaper system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-9 Reaper aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging Time Sensitive Targets (TSTs) as a radar-based attack asset with on-board hard-kill capability (hunter-killer) and also perform Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA) as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC), Target Location Accuracy (TLA), Metric Sensor and other capabilities) and assess post-strike results. The MQ-9 will also explore and if appropriate develop and integrate Signals Intelligence (SIGINT) Sensors capabilities. The MQ-9 is in continuing development and will field capability through incremental upgrades. The baseline development includes both a risk reduction phase, FY04 & FY05 Quick Reaction/ Interim Combat Capabilities (ICC), and a System Development & Demonstration (SDD) phase. Risk reduction started in FY03 and includes system design, drawings, specifications, and initial standardized (MIL-STD-1760) advanced weapons data bus efforts. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability and preliminary technical orders. Capabilities in development include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard "precision" weapons (GBU-12/38/49); hardware and software upgrades to the ground control station for MQ-9 operations; completing airworthiness certification; weapons system certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent investments will continue to evolve the MQ-9's capabilities to meet new requirements (which may include SIGINT, communications, and other sensor packages), and address reliability and maintainability and safety issues.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0205219F MQ-9 Development and Fielding**	PROJECT NUMBER AND TITLE **5246 MQ-9 Development and Fielding**

control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-9 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide essential operational capabilities.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	MQ-9 System Development and Demonstration (SDD). Includes aircraft/GCS/Communication system improvements, development and integration of follow-on sensors, weapon and payload integration, test and training capability, technical data.			30.528	39.414
(U)	EO/IR Development			0.625	0.625
(U)	MQ-9 TLA Development			23.000	4.000
(U)	Other Government Costs, including Developmental and Operational Test support, SATCOM, Urgent Services			6.416	4.327
(U)	Operator Simulator			0.500	0.500
(U)	SAR Upgrade				1.000
(U)	Total Cost	0.000	0.000	61.069	49.866

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN										
(U)	Aircraft Procurement, AF (PE 0205219F)			58.470	162.055	196.083	193.115	147.498	150.431	Continuing	TBD
(U)	Aircraft Modification, AF (PE 0205219F)			20.578	24.847	30.475	31.816	31.305	31.817	Continuing	TBD

(U) D. Acquisition Strategy

The MQ-9 Reaper system will be acquired sole-source with General Atomics-ASI as the prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0205219F MQ-9 Development and Fielding**

PROJECT NUMBER AND TITLE: **5246 MQ-9 Development and Fielding**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
MQ-9 System Development and Demonstration	SS/CPIF/ CPFF	GA-ASI, Rancho Bernardo CA						30.528	Feb-08	40.414	Feb-09	Continuing	TBD	TBD
MTS-B Development	MIPR	Raytheon, McKinney TX						0.625	Feb-08	0.625	Feb-09	Continuing	TBD	TBD
Operator Simulator Development	CPFF	677 AESG, Wright-Patterson AFB OH						0.500	Feb-08	0.500	Feb-09	Continuing	TBD	TBD
MQ-9 TLA	Various	Raytheon, McKinney TX						23.000	Apr-08	4.000	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		54.653		45.539		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Program Support	Various	Various						6.416	Feb-08	4.327	Feb-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		6.416		4.327		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.000		61.069		49.866		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE 5246 MQ-9 Development and Fielding

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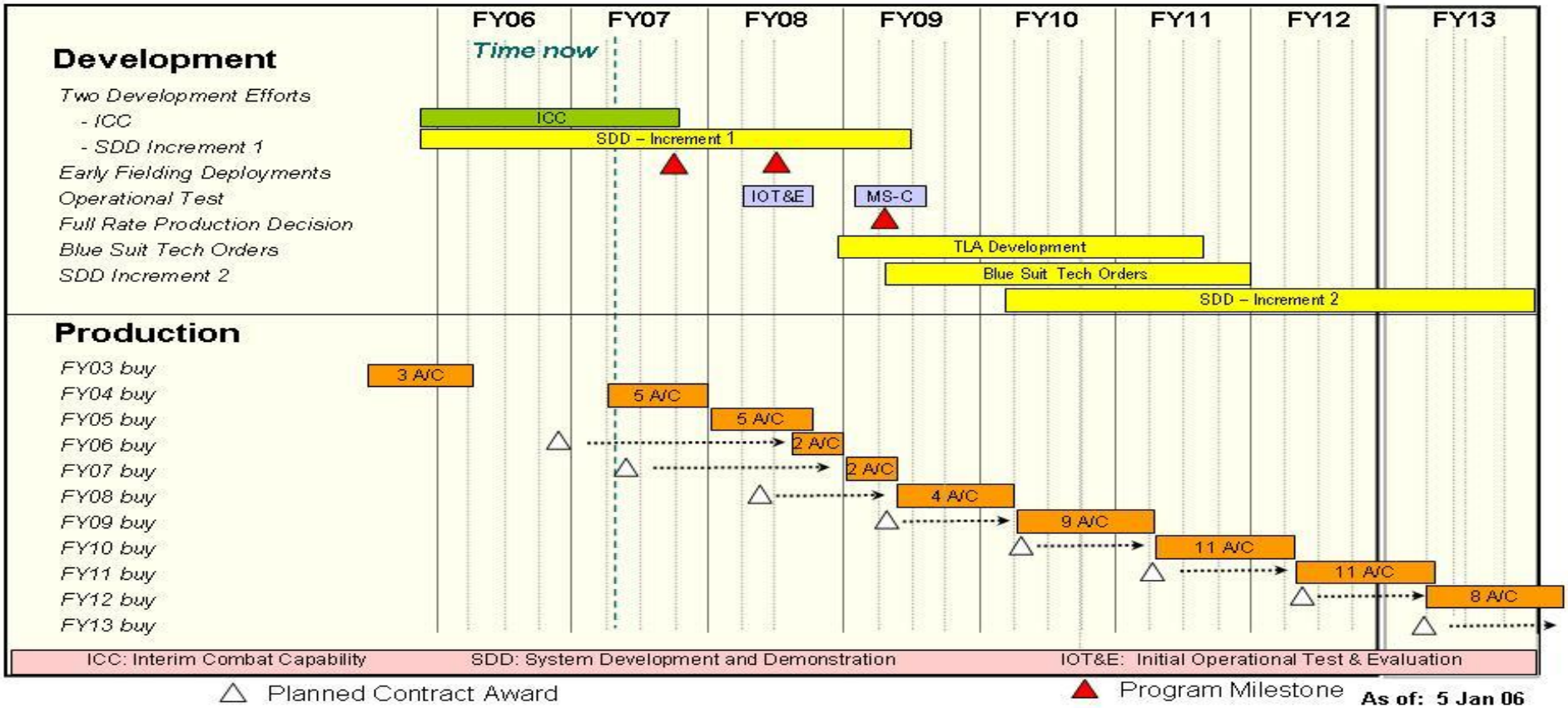
MQ-9 Schedule

Dominant Air Power: Design For Tomorrow…Deliver Today



As of: 5 Jan 06

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0205219F MQ-9 Development and Fielding	PROJECT NUMBER AND TITLE: 5246 MQ-9 Development and Fielding

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) MQ-9 ICC Complete		4Q		
(U) MQ-9 SDD Increment I Complete				2Q
(U) IOT&E			3Q	
(U) MQ-9 Milestone C				2Q
(U) Improved Target Location Accuracy Development			4Q	
(U) Blue Suit Tech Order Development Start				2Q

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PE NUMBER: 0207131F
PE TITLE: A-10 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	55.713	31.850	1.963	0.000	3.046	0.000	0.000	0.000	Continuing	TBD
4809 A-10 Squadrons	55.713	31.850	1.963	0.000	3.046	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The concept of operations for the A/OA-10 requires an agile and survivable weapon system that provides close-air support, combat search and rescue, and special operations support.

The high operations tempo maintained by the Expeditionary Air Force requires that each combat platform exhibit the flexibility to effectively perform in a variety of operational roles. To implement these strategies, Combat Air Forces (CAF) must be able to conduct air operations around-the-clock under various weather conditions against numerous enemy threats employing a full spectrum of air defense systems to include countermeasures.

The A/OA-10 is an essential component of successful air operations, and represents a significant percentage of the CAF force structure with 356 aircraft in service. The weapon system's attributes include excellent low speed maneuverability, high weapons payload, long loiter time, very high tolerance to battle damage, and the lowest cost per flying hour of any CAF fighter. As demonstrated during the Persian Gulf War, it is the Air Force's most effective Close Air Support (CAS) and anti-armor platform.

Planned developmental and modernization actions will correct the current shortcomings of the A/OA-10 weapon system and add new capabilities to ensure continued viability throughout its projected service life. These developmental modernization programs will provide the A/OA-10 with new combat capabilities to employ a variety of smart weapons plus improved situational awareness, increased service life to the wing and fuselage/empennage, and enhanced target identification and designation capability. The A/OA-10 retains current capability and is adding systems such as the Precision Engagement (PE) Program (MN-9805), the Wing Replacement Program (MN-9804), the Three-Dimensional (3-D) Modeling, Design, and Engineering Assessment, the Airborne Radio Communication ARC-210 Warrior Radio (MN-9803), and the Mode S / Mode 5 Equipment Program (MN-7856). Within the PE Program, projects such as a fieldable 4-channel data recorder are included in the funding profile.

The Situational Awareness Datalink (SADL) and the Improved Data Modem (IDM) efforts are also included as part of the PE program. Funding is provided under Program Element Code (PEC) 0207445F (Fighter Tactical Data Link) and PEC 0207423F (Advanced Communication Systems). Since the SADL modification will be run concurrent with the PE modification, the development timeline and subsequent kit procurement mirror PE's program schedule.

The ARC-210 Warrior Radio program received $1.4M FY06 funding from Warfighter Rapid Acquisition Program (WRAP) under PEC 0203761F along with a Congressional Global War On Terrorism (GWOT) add of $1.2M to PEC 0207131F to begin development of an A/OA-10 BLOS capability to satisfy a USCENTCOM urgent need.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	56.025	80.771	59.942	0.000
(U)	Current PBR/President's Budget	55.713	31.850	1.963	0.000
(U)	Total Adjustments	-0.312	-48.921		
(U)	Congressional Program Reductions		-48.800		
	Congressional Rescissions	-0.001	-0.121		
	Congressional Increases				
	Reprogrammings	1.200			
	SBIR/STTR Transfer	-1.511			
(U)	Significant Program Changes:				

FY07 & FY08:

- Termination of Propulsion Upgrade Program (PUP)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4809 A-10 Squadrons	55.713	31.850	1.963	0.000	3.046	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The concept of operations for the A/OA-10 requires an agile and survivable weapon system that provides close-air support, combat search and rescue, and special operations support.

The high operations tempo maintained by the Expeditionary Air Force requires that each combat platform exhibit the flexibility to effectively perform in a variety of operational roles. To implement these strategies, Combat Air Forces (CAF) must be able to conduct air operations around-the-clock under various weather conditions against numerous enemy threats employing a full spectrum of air defense systems to include countermeasures.

The A/OA-10 is an essential component of successful air operations, and represents a significant percentage of the CAF force structure with 356 aircraft in service. The weapon system's attributes include excellent low speed maneuverability, high weapons payload, long loiter time, very high tolerance to battle damage, and the lowest cost per flying hour of any CAF fighter. As demonstrated during the Persian Gulf War, it is the Air Force's most effective Close Air Support (CAS) and anti-armor platform.

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The Situational Awareness Datalink (SADL) and the Improved Data Modem (IDM) efforts are also included as part of the PE program. Funding is provided under Program Element Code (PEC) 0207445F (Fighter Tactical Data Link) and PEC 0207423F (Advanced Communication Systems). Since the SADL modification will be run concurrent with the PE modification, the development timeline and subsequent kit procurement mirror PE's program schedule.

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Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE 4809 A-10 Squadrons

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Precision Engagement (PE) development/integration efforts.	32.853	26.155	1.963	
(U) PUP Risk Reduction/System Design and Demonstration (SDD) efforts.	19.505			
(U) Three Dimensional (3-D) Modeling, Design, and Engineering Assessment.	2.155			
(U) Wing Replacement Program development efforts.		5.695		
(U) Airborn Radio Communication ARC-210 Warrior Radio	1.200			
(U) Total Cost	55.713	31.850	1.963	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) A-10 Squadrons (PE 0207131F)-APAF	63.362	106.940	144.295	139.719	296.849	273.807	268.156			
(U) Fighter Tactical Data Link (PE 0207445F)-RDT&E	18.089	23.870	2.980							TBD
(U) Fighter Tactical Data Link (PE 0207445F)-APAF	8.639	0.000	22.812	5.865	9.194	0.706	0.704			TBD
(U) Advanced Communication Systems (PE 0207423F)-APAF	8.950									
(U) Warfighter Rapid Acquisition Program (WRAP) (PE 0203761F) - RDT&E	1.390									

(U) D. Acquisition Strategy

- Development efforts will be conducted under the A-10 Prime Contract, which was awarded to Lockheed Martin Systems Integration (LMSI) in Dec 1997 through a full-and-open competition. Both Time and Materials (T&M) and Cost Plus Incentive Fee (CPIF) contracts will be awarded for specific modernization requirements under the Prime Contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS

PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Precision Engagement Development	T&M/CPIF	Lockheed Martin Systems Integration--Owego NY		31.951	Jan-06	24.794	Jan-07	1.963	Jan-08			Continuing	TBD	
Propulsion Upgrade Study	FP	Whitney Bradley & Brown Inc--Vienna VA		4.190	Dec-05								4.190	
Propulsion Upgrade	SS/CPFF	General Electric, Lynn MA		8.893	Dec-05								8.893	
Airframe Integration	CPFF	Lockheed Martin Systems Integration--Owego NY		4.238	Feb-06								4.238	
													0.000	
Three-Dimensional (3D) Modeling, Design, and Engineering Assessment	CPFF	Aerospace Engineering Spectrum (AES)--Ogden UT		2.155	Feb-06								2.155	
A-10 Wing Replacement Program	TBD	TBD				5.695	Dec-06						5.695	
ARC-210 Warrior Radio	T&M	Lockheed Martin Systems Integration--Owego NY		1.200	Aug-06								1.200	
Mode S / Mode 5	TBD	TBD										Continuing	TBD	
Subtotal Product Development			0.000	52.627		30.489		1.963		0.000		Continuing	TBD	0.000
Remarks:														
(U) Support														
USAF (Multiple) PE				0.902	Oct-05	1.361	Oct-06					Continuing	TBD	
USAF (Multiple) Propulsion				2.184	Oct-05								2.184	
Subtotal Support			0.000	3.086		1.361		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207131F A-10 SQUADRONS	4809 A-10 Squadrons

	USAF (40th FTS) PE								0.000	
	USAF (Multiple) Propulsion							Continuing	TBD	3.601
	Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000		Continuing	TBD	3.601
	Remarks: Test and Evaluation costs are included in the "Support" line									
(U)	Management									
									0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000		0.000	0.000
	Remarks: Management costs are included in the "Support" line									
(U)	Total Cost	0.000	55.713	31.850	1.963	0.000		Continuing	TBD	3.601

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE 4809 A-10 Squadrons

PE/Suite 3 Master Schedule

Dominant Air Power: Design For Tomorrow...Deliver Today

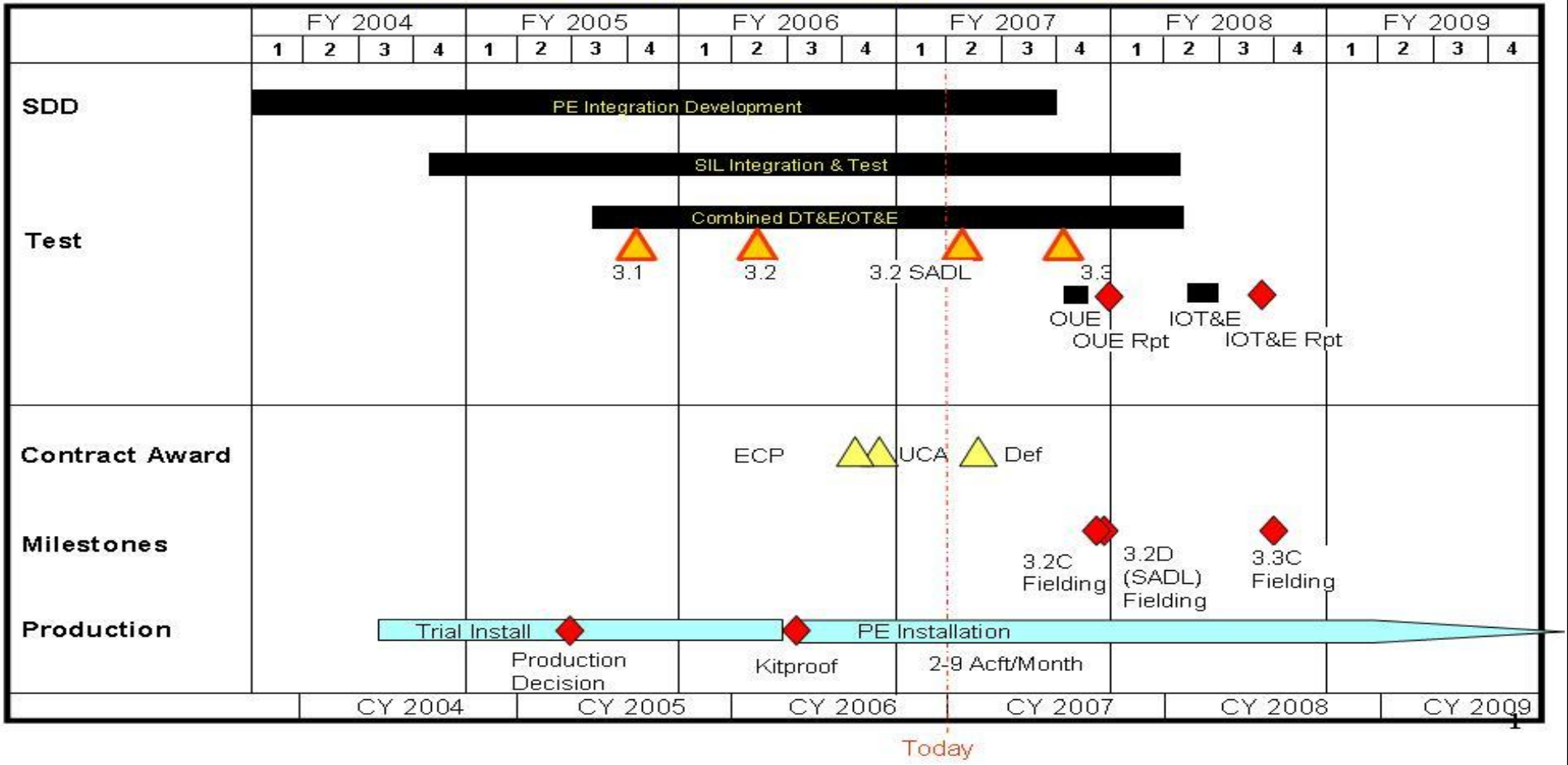

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Precision Engagement Developmental Test / Operational Test	1-4Q	1-4Q	1-3Q	
(U) Precision Engagement Initial Operating Capability (IOC)			3Q	
(U) Precision Engagement Production / Installation	3-4Q	1-4Q	1-4Q	1-4Q

PE NUMBER: 0207133F
PE TITLE: F-16 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	124.482	151.997	90.620	113.843	117.613	108.562	110.668	112.928	Continuing	TBD
2671 F-16 Squadrons	124.482	151.997	90.620	113.843	117.613	108.562	110.668	112.928	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 28-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world and foreign military sales production continues in the 21st century. The 312th Aeronautical Systems Group (312 AESG, the F-16 Development Management Office) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

Enhancements which are being or will be developed during the FYDP include:

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM, AIM-9X and updates to existing weapons into the F-16. This activity includes tasks such as performing risk reduction activities on advanced weapon integration, developing/integrating of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as includes nuclear surety, safety and compatibility tasks.

b. The AN/APG-68(V)10 radar program is in the process of being terminated.

c. The Mode S program develops the on-aircraft kit required to integrate and certify a Mode S capable Identification Friend or Foe (IFF) Transponder on Blk 40/42 aircraft to meet Global Air Traffic requirements in Europe.

d. The Mode 5 program provides secure, encrypted IFF capability to meet OSD mandates. This program will add Mode 5 capability to the Blk 40/42 IFF Transponder installed in the Mode S program through software-only activities. The program modifies the Blk 50/52 Air-to-Air Interrogator (AAI) system through integration of a Mode 5 capable Combined Interrogator/Transponder (CIT) and associated software updates.

e. The Sniper and LITENING targeting pods will be integrated and the HARM Targeting System (HTS) pod will be transitioned to the left inlet hard point. This will allow the F-16 to perform the Destruction of Enemy Air Defenses (DEAD) mission and includes integration of future pod upgrades.

f. The F-16 development efforts are complemented by comprehensive operational flight program (OFP) upgrades including Hardware and Group A development associated with OFP software candidates. Integration efforts include manned fighter reconnaissance capabilities and Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. Advanced weapons integration moves under the OFP updates line starting in FY08 and includes Joint Air-to-Surface Stand-off Missile (JASSM) and Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM and updates to existing weapons into the F-16. Integration with the high angle off-bore sight AIM-9X missile provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, development and integration of advanced racks, pylons, adapters, and the

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

Universal Armament Interface, as well as includes nuclear surety, safety and compatibility tasks. Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other combat aircraft, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI) systems will provide improved targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Starting with M6/M6+ OFP, LM Aero will start transfer of OFP workload and maintenance of M-series OFP tapes to OO-ALC and assumes a "leader/follower" transition where LM Aero will produce M6/M6+ OFP as OO-ALC builds up capability (personnel, special test equipment, OFP development tools & processes, and training). OO-ALC will then assume system lead responsibility for the next M-series OFP program (M7/M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of special test equipment and personnel since OFP tape developments overlap. This funding is broken out for clarity to separate these transition efforts from OFP Development.

g. The EMD Hardware Development line provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirements changes, Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. EMD solutions include but are not limited to MMC upgrade, digital video recorder, Advanced Data Transfer Cartridge/Unit (ADTC/DTU), display upgrades, radio and communication enhancements and other hardware development activities. The MMC upgrade is broken out for clarity

h. The ALR-56M line provides for upgrades to the ALR-56M Radar Warning Receiver software.

i. Blk 30 JHMCS is added as part of congressional plus up starting in FY07

j. The F16 Secure Line of Sight (SLOS) communication mod is in response to CENTCOM Urgent Operational Need for secure line-of-sight/single channel ground and airborne radio system (SINCGARS) communication capabilities which can be upgraded to secure beyond line of sight (BLOS) capability in the future. The F16 needs SLOS to communicate with many rotary wing and ground maneuver units in the theater of operations.

Since the development activities in this PE support an operational aircraft, these development activities are funded in the operational system development budget activity 7.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	154.533	148.373	108.888	106.710
(U)	Current PBR/President's Budget	124.482	151.997	90.620	113.843
(U)	Total Adjustments	-30.051	3.624		
(U)	Congressional Program Reductions	-0.010			
	Congressional Rescissions		-0.576		
	Congressional Increases		4.200		
	Reprogrammings	-25.872			
	SBIR/STTR Transfer	-4.169			

(U) Significant Program Changes:

FY06 Omnibus (-$15.97M), Higher AF priorites (-$9.9M)

FY07 Congressional plus up $4.2M ($1.6M JHMCS Blk 30, $2.6M (v)10 radar)

FY08 reductions due to (v)10 radar (-$8M), higher AF priorities (-$10.12M); inflation + $970K

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2671 F-16 Squadrons	124.482	151.997	90.620	113.843	117.613	108.562	110.668	112.928	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 28-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world and foreign military sales production continues in the 21st century. The 312th Aeronautical Systems Group (312 AESG, the F-16 Development Management Office) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

Enhancements which are being or will be developed during the FYDP include:

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM, AIM-9X and updates to existing weapons into the F-16. This activity includes tasks such as performing risk reduction activities on advanced weapon integration, developing/integrating of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as includes nuclear surety, safety and compatibility tasks.

b. The AN/APG-68(V)10 radar program is in the process of being terminated.

c. The Mode S program develops the on-aircraft kit required to integrate and certify a Mode S capable Identification Friend or Foe (IFF) Transponder on Blk 40/42 aircraft to meet Global Air Traffic requirements in Europe.

d. The Mode 5 program provides secure, encrypted IFF capability to meet OSD mandates. This program will add Mode 5 capability to the Blk 40/42 IFF Transponder installed in the Mode S program through software-only activities. The program modifies the Blk 50/52 Air-to-Air Interrogator (AAI) system through integration of a Mode 5 capable Combined Interrogator/Transponder (CIT) and associated software updates.

e. The Sniper and LITENING targeting pods will be integrated and the HARM Targeting System (HTS) pod will be transitioned to the left inlet hard point. This will allow the F-16 to perform the Destruction of Enemy Air Defenses (DEAD) mission and includes integration of future pod upgrades.

f. The F-16 development efforts are complemented by comprehensive operational flight program (OFP) upgrades including Hardware and Group A development associated with OFP software candidates. Integration efforts include manned fighter reconnaissance capabilities and Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. Advanced weapons integration moves under the OFP updates line starting in FY08 and includes Joint Air-to-Surface Stand-off Missile (JASSM) and Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), Small Diameter Bomb (SDB), AMRAAM and updates to existing weapons into the F-16. Integration with the high angle off-bore sight AIM-9X missile provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Weapons integration also includes tasks such as performing risk reduction activities on advanced weapon integration, development and integration of advanced racks, pylons, adapters, and the Universal Armament Interface, as well as includes nuclear surety, safety and compatibility tasks. Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other combat aircraft, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI) systems will

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

provide improved targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Starting with M6/M6+ OFP, LM Aero will start transfer of OFP workload and maintenance of M-series OFP tapes to OO-ALC and assumes a "leader/follower" transition where LM Aero will produce M6/M6+ OFP as OO-ALC builds up capability (personnel, special test equipment, OFP development tools & processes, and training). OO-ALC will then assume system lead responsibility for the next M-series OFP program (M7/M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of special test equipment and personnel since OFP tape developments overlap. This funding is broken out for clarity to separate these transition efforts from OFP Development.

g. The EMD Hardware Development line provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirements changes, Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. EMD solutions include but are not limited to MMC upgrade, digital video recorder, Advanced Data Transfer Cartridge/Unit (ADTC/DTU), display upgrades, radio and communication enhancements and other hardware development activities. The MMC upgrade is broken out for clarity

h. The ALR-56M line provides for upgrades to the ALR-56M Radar Warning Receiver software.

i. Blk 30 JHMCS is added as part of congressional plus up starting in FY07

j. The F16 Secure Line of Sight (SLOS) communication mod is in response to CENTCOM Urgent Operational Need for secure line-of-sight/single channel ground and airborne radio system (SINCGARS) communication capabilities which can be upgraded to secure beyond line of sight (BLOS) capability in the future. The F16 needs SLOS to communicate with many rotary wing and ground maneuver units in the theater of operations.

Since the development activities in this PE support an operational aircraft, these development activities are funded in the operational system development budget activity 7.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	AN/APG-68(V)10	5.829			
(U)	Continue OFP Updates	55.131	87.771	49.963	61.969
(U)	ALR-56M	0.463	0.463	0.500	0.500
(U)	Continue Flight Tests DT&E	22.725	24.802	25.399	30.149
(U)	Weapons Integration	0.230	0.460		
(U)	Mode S IFF for CAF Aircraft	2.800	6.696	2.870	
(U)	Mode 5 IFF for CAF Aircraft			2.130	6.000
(U)	MMC Upgrade Development	10.057	5.507	1.651	1.572
(U)	EMD HW	0.750	0.100	0.500	0.500
(U)	EGI/INS Development	3.693	3.190	0.910	0.303
(U)	OFP Transition	12.204	7.950	6.697	12.850
(U)	Blk 30 JHMCS		1.600		
(U)	Secure Line of Sight (SLOS) (New start notification submitted)	9.500			
(U)	Withhold (Includes (v)10 radar plus ups - FY06 $1.1M, FY07 $2.6M)	1.100	13.458		
(U)	Total Cost	124.482	151.997	90.620	113.843

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement (3010), Line Item 35, F-16 Mods	418.200	366.314	329.370	292.472	234.365	202.662	72.268	41.234		TBD
(U) Aircraft Procurement (3010), Line Item 80, Post Production Support	17.594	12.200	19.454	20.758	20.510	20.812	21.224	21.644		TBD

(U) D. Acquisition Strategy

RDT&E funds will primarily be executed in developing improved capability, maintenance and safety mods. Operational Flight Program (OFP) software will be continuously updated to complement mod development efforts. OFP updates will transition to OO-ALC starting in FY06. The EMD Hardware Development line provides funding to test, qualify, and field aircraft subsystems replaced or modified due to requirement changes, Pre-Planned Product Improvements (P3I), radio and communications upgrades as well as Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. Lockheed Martin Aeronautics Company (LM Aero) is the prime contractor on all systems except the 110 Engines (General Electric), and the 229 Engines (Pratt & Whitney). Contract types are T&M, CPIF, CPFF and FFP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS

PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
OFP Updates	CPIF, T&M	LM Aero		55.131	Jan-06	87.771	Nov-06	49.963	Jan-08	61.969	Jan-09	Continuing	TBD	
OFP Transition	T&M, Organic	LM Aero, OO-ALC		12.204	Feb-06	7.950	Feb-07	6.697	Feb-08	12.850	Feb-09	Continuing	TBD	
ALR-56M	Organic	WRALC/LN		0.463	Jan-06	0.463	Dec-06	0.500	Dec-07	0.500	Dec-08	Continuing	TBD	
Weapons Integration	T&M/FFP	LM Aero		0.230	Jan-06	0.460	Jan-07	0.000				Continuing	TBD	
AN/APG-68(V)10	T&M/CPFF	Northrup Grumman / LM Aero		5.829	Feb-06							Continuing	TBD	
Mode S IFF for CAF Aircraft (Blk 40/42)	CPIF	LM Aero		2.800	Jun-06	6.696	Jan-07	2.870	Jan-08			Continuing	TBD	
Mode 5 IFF for CAF Aircraft (Blk 50/52)	CPIF	LM AERO					Jan-07	2.130	Jan-08	6.000	Jan-09	Continuing	TBD	
MMC Upgrade Development	FFP/CPIF	LM Aero		10.057	Mar-06	5.507	Jan-07	1.651	Jan-08	1.572	Jan-09	Continuing	TBD	
EMD HW	T&M, FFP	LM Aero		0.750	Sep-06	0.100	Mar-07	0.500	Mar-08	0.500	Mar-09	Continuing	TBD	
EGI/INS Development	FFP	Northrop Grumman		3.693	Jan-06	3.190	Jan-07	0.910	Jan-08	0.303	Jan-09	Continuing	TBD	
Secure Line of Sight	FFP/CPIF	LM Aero		9.500									9.500	
Blk 30 JHMCS	FFP/CPIF	LM Aero				1.600	Mar-07						1.600	
Reprogramming for OSD OMNIBUS				1.100		13.458							14.558	
Subtotal Product Development			0.000	101.757		127.195		65.221		83.694		Continuing	TBD	0.000
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Flight Tests	T&M/CPFF, Organic	LM Aero/ Edwards AFB		22.725	Jan-06	24.802	Dec-06	25.399	Dec-07	30.149	Dec-08	Continuing	TBD	
Subtotal Test & Evaluation			0.000	22.725		24.802		25.399		30.149		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Rescission														
(U) Total Cost			0.000	124.482		151.997		90.620		113.843		Continuing	TBD	0.000
Remarks:														

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

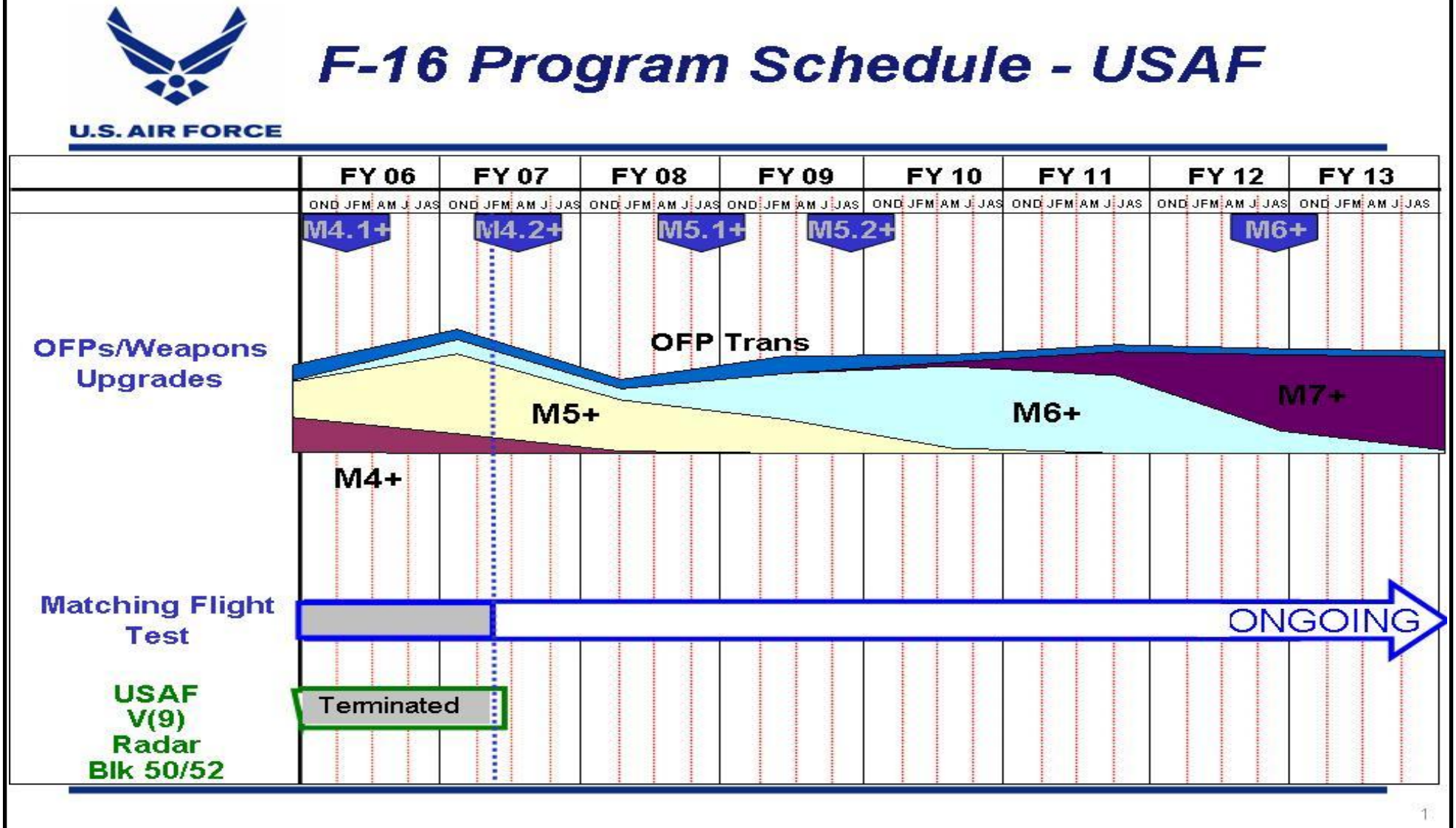

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS

PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Flight Test Continuous, no end date	1-4Q	1-4Q	1-4Q	1-4Q
(U) OFP Development, continuous	1-4Q	1-4Q	1-4Q	1-4Q
(U) OFP Transition, continuous	1-4Q	1-4Q	1-4Q	1-4Q
(U) ALR-56M, continous	1-4Q	1-4Q	1-4Q	1-4Q
(U) Weapons Integration, continous	1-4Q	1-4Q		
(U) AN/APG-68(V)10 (Terminated Notice, Negotiated)	1Q	2Q		
(U) Mode S IFF for CAF Aircraft	3-4Q	1-4Q	1-4Q	
(U) Mode 5 IFF for CAF Aircraft			2-4Q	1-4Q
(U) EMD Hardware (contiuous)/MMC Development Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) EGI/INS Development	1-4Q	1-4Q	1-4Q	1Q
(U) Secure Line of Sight (SLOS) Blk 50 development complete			1Q	
(U) Blk 30 JHMCS		2Q	1-4Q	

PE NUMBER: 0207134F
PE TITLE: F-15E SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD
0131	Initial Operational Test and Evaluation	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E deploys worldwide with minimal tanker support and arrives combat-ready. A mainstay in the War on Terror both domestically and abroad, upgrades to the F-15 (avionics, armament, airframe, and engines) are critical to maintaining combat viability (lethality, survivability, and supportability).

Projected to remain in service past 2030, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical studies (both internal to the Air Force and through outside contractors), forestalling obsolescence, exploiting proven technological advances, and leveraging new technology. Major avionics upgrades center around radar modernization (both hardware and software upgrades) and the exploitation of enhanced capability via wideband radome precision timing, data delivery and processing technology, precision registration systems, cockpit Head Up Display (HUD) and instrumentation digitization and modernization, central computer processing power increases, and digital mission event recording systems.

The proliferation of fourth generation enemy aircraft and sophisticated "double-digit" anti-aircraft missile systems pose a significant threat to F-15 survivability. A fully integrated electronic warfare suite holds the promise of providing survivability as well as expanded electronic attack capability.

Nearly all improvements are linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. These updates are a responsive way to increase the offensive and defensive capability and survivability of the F-15. Given the comprehensiveness of these changes, significant flight test which integrates these capabilities will be required. Incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability, and LRU throughput.

The F-15E program, PE 0207134F, is assigned budget activity (BA) code 07 because this developmental work upgrades an existing weapons system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	143.572	125.062	105.903	234.214
(U)	Current PBR/President's Budget	135.009	137.541	101.251	186.386
(U)	Total Adjustments	-8.563	12.479		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.521		
	Congressional Increases		13.000		
	Reprogrammings	-5.200			
	SBIR/STTR Transfer	-3.363			

(U) Significant Program Changes:

Funding (FY07):
FY 07 Congressional Increase from FY 07 PB to FY 08 PB in support of AESA Demonstration ($13.0M)

Funding (FY08):
FY 08 Air Force program increase from FY 07 PB to FY 08 PB in support of the F-15 TEWS Support System ($3.0M)

Funding (FY09):
FY 09 Air Force program reduction from the FY 07 PB to FY 08 PB affecting the F-15E Radar Modernization Program ($50.0M)

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0131	Initial Operational Test and Evaluation	135.009	137.541	101.251	186.386	165.614	119.979	120.756	123.223	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to provide air superiority with an undefeated and unmatched aerial combat record. The F-15E retains this air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E deploys worldwide with minimal tanker support and arrives combat-ready. A mainstay in the War on Terror both domestically and abroad, upgrades to the F-15 (avionics, armament, airframe, and engines) are critical to maintaining combat viability (lethality, survivability, and supportability).

Projected to remain in service past 2030, avionics modernization is key to long-term weapon system viability. This modernization is built on a foundation of technical studies (both internal to the Air Force and through outside contractors), forestalling obsolescence, exploiting proven technological advances, and leveraging new technology. Major avionics upgrades center around radar modernization (both hardware and software upgrades) and the exploitation of enhanced capability via wideband radome precision timing, data delivery and processing technology, precision registration systems, cockpit Head Up Display (HUD) and instrumentation digitization and modernization, central computer processing power increases, and digital mission event recording systems.

The proliferation of fourth generation enemy aircraft and sophisticated "double-digit" anti-aircraft missile systems pose a significant threat to F-15 survivability. A fully integrated electronic warfare suite holds the promise of providing survivability as well as expanded electronic attack capability.

Nearly all improvements are linked to an aircraft operational flight program update schedule that works to integrate new capabilities with the airframe. These updates are a responsive way to increase the offensive and defensive capability and survivability of the F-15. Given the comprehensiveness of these changes, significant flight test which integrates these capabilities will be required. Incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment, mission planning systems, and training device upgrades will improve performance, supportability, and LRU throughput.

The F-15E program, PE 0207134F, is assigned budget activity (BA) code 07 because this developmental work upgrades an existing weapons system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Operational Flight Program (OFP) development efforts.	64.898	81.314	52.676	80.993
(U)	Flight testing of improvements initiated in prior years.	14.278	15.781	12.950	19.968
(U)	Development of ADCP (formerly OFP effort).	1.483			
(U)	Development of Tactical Electronic Warfare System (TEWS) Intermediate Support System (TISS) Technology Insertion Program (TTIP)	7.320	1.543	3.000	2.390
(U)	Mode 5 Development Efforts	7.973	12.123	11.669	4.268
(U)	F-15 BOL PVI	9.500			

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE 0131 Initial Operational Test and Evaluation

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) F-15C/D APG-63(V)3 Radar Block Upgrade	22.828	13.594		
(U) F-15E Radar Modernization Program (RMP)	5.200	6.350	9.000	76.467
(U) F-15 ACU development efforts		4.557	10.086	
(U) Mission Support, Other Government Cost	1.529	2.279	1.870	2.300
(U) Total Cost	135.009	137.541	101.251	186.386

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN:										
(U) Aircraft Procurement (3010F), F-15E (PE0207134F) [BP 10]	0.036									0.036
(U) Total BP 10	0.036									
(U) Aircraft Procurement (3010F), F-15A-E (PEs 0207130F and 0207134F) [BP 11]	123.850	121.311	19.165	58.222	256.625	336.627	287.240	148.517	Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE0809731F) Training Support to Units [BP11]	2.072	1.301							Continuing	TBD
(U) Aircraft Procurement (3010F) F-15E (PE0207445F) Fighter Tactical Data Link [BP11]	66.869	41.688								108.557
(U) Total BP 11	192.791	164.300	19.165	58.222	256.625	336.627	287.240	148.517		
(U) Aircraft Replacement (3010F) F-15E (PE 27134F) Support Equipment [BP	16.978	7.214								
(U) Total BP 12	16.978	7.214								
(U) Aircraft Procurement (3010F), F-15A-E (PE0207134F) [BP 13]	12.993	10.702	5.615	13.372	16.186	22.431	2.701	2.754	Continuing	TBD
(U) Total BP 13	12.993	10.702	5.615	13.372	16.186	22.431	2.701	2.754		

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207134F F-15E SQUADRONS**	PROJECT NUMBER AND TITLE **0131 Initial Operational Test and Evaluation**

(U) D. Acquisition Strategy

Program is a continuation of effort which includes the development of all F-15 models. Funds are executed organically in support of equipment improvement, study, analysis, and test.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207134F F-15E SQUADRONS**

PROJECT NUMBER AND TITLE: **0131 Initial Operational Test and Evaluation**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
OFP Suite 4/5/6/7/8 Development and Test	CPAF	Boeing, St Louis		64.898		81.314		52.676		80.993		Continuing	TBD	
ADCP(E)	CPAF	Boeing, St Louis		1.483	Mar-06							0.000	1.483	
TISS TTIP	CPFF	Boeing, St. Louis		7.320	Dec-05	1.543	Dec-06	3.000	Dec-07	2.390	Dec-08	0.000	14.253	
F-15C/D APG-63(V)3 Radar Block Upgrade	CPFF	Boeing, St Louis		22.828	Jun-06	13.594	Apr-07					0.000	36.422	
F-15E RMP	CPFF	Boeing. St Louis		5.200	Apr-06	6.350	Jan-07	9.000	Mar-08	76.467	Feb-09	121.090	218.107	
Mode 5	CPFF	Boeing, St. Louis		7.973	Feb-06	12.123	Dec-06	11.669	Dec-07	4.268	Dec-08	0.000	36.033	
F-15 BOL PVI	CPFF	Boeing, St. Louis		9.500	May-06							0.980	10.480	
F-15 ACU	CPFF	Boeing, St. Louis				4.557	Jun-07	10.086	Jan-08			0.000	14.643	
Subtotal Product Development			0.000	119.202		119.481		86.431		164.118		Continuing	TBD	0.000
Remarks:														
(U) Support														
(Msn Spt) Misc.		WPAFB, OH		1.529		2.279		1.870		2.300		Continuing	TBD	
Subtotal Support			0.000	1.529		2.279		1.870		2.300		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Boeing (Contractor Test Team)	FFP	Boeing, St Louis		11.672	Apr-06	10.199	Oct-06	11.250	Oct-07	14.208	Oct-08	Continuing	TBD	
Edwards	PO	Edwards AFB, CA		0.306	Mar-06	0.030	Apr-07	0.000		0.030	Apr-09	Continuing	TBD	
Eglin (Flt Test)	PO	Eglin AFB, FL		2.300	Mar-06	5.552	Jun-07	1.700	Jun-08	5.730	Jun-09	Continuing	TBD	
Subtotal Test & Evaluation			0.000	14.278		15.781		12.950		19.968		Continuing	TBD	0.000
Remarks:														
(U) Management													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	135.009		137.541		101.251		186.386		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

F-15A-D Modifications

Dominant Air Power: Design For Tomorrow...Deliver Today

Program	Prior	FY2006	FY2007				FY2008	FY2009	FY2010	FY2011	FY2012	FY2013	Quantity
JHMCS													
Quantitiy includes three attritted systems	102	34	8	8	9	9							181+24G
GPS													
	128	32	14	14	12	12	55						178+54T
APG-63(V)3													
								5	8	2	11	23	35+14G
IFF													
		3	26	28	31	32	147	91					178+54T+126G
NVIS													
	1						152	25					178
OFP													
		S5						S6			S7		NA
Avionics Replacement													
								14	120	98			178+54T
DVR													
										54	178		178+54T
Mode 5													
									80	80	72		178+54T
		Development					Production		Installation				

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

F-15E Modifications

Dominant Air Power: Design For Tomorrow...Deliver Today

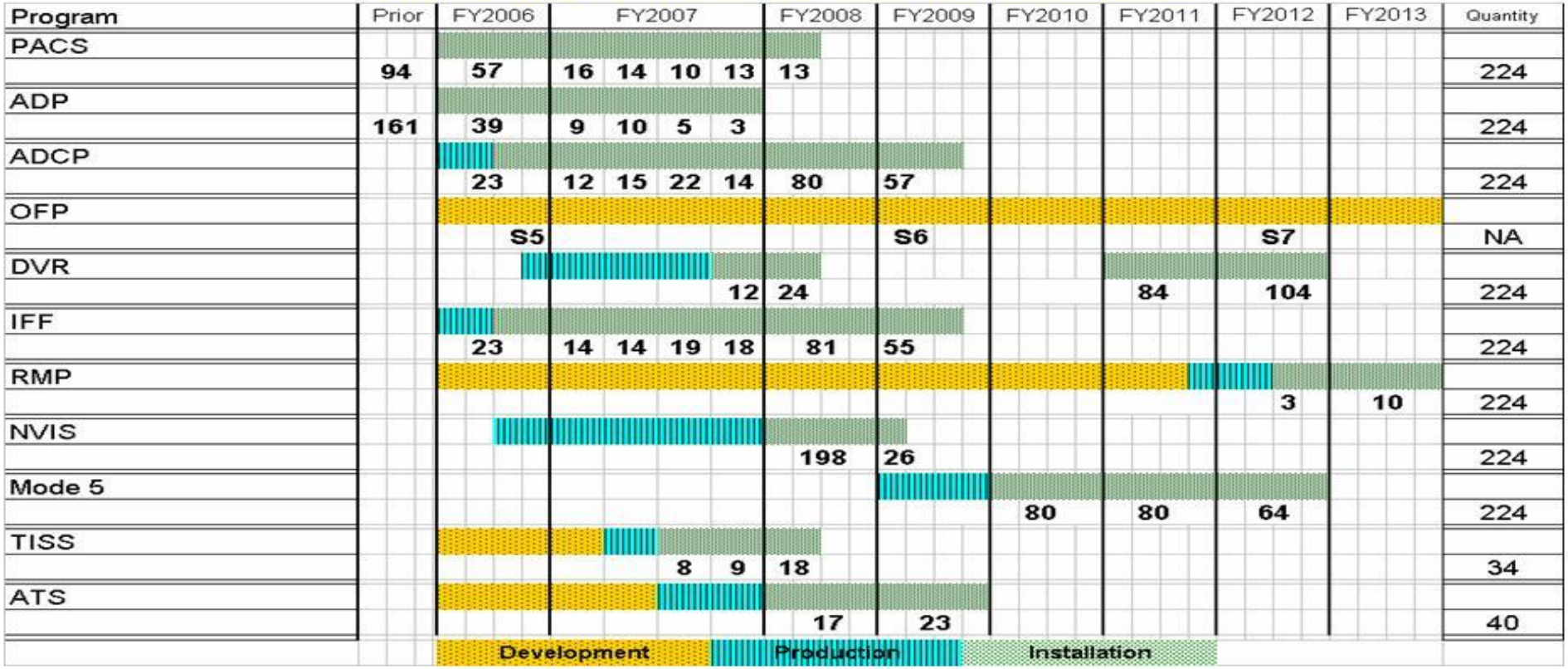

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207134F F-15E SQUADRONS**	PROJECT NUMBER AND TITLE **0131 Initial Operational Test and Evaluation**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) OFP Suite 5E Flight Test Complete	4Q			
(U) OFP Suite 5MSIP Flight Test Complete		1Q		
(U) OFP Suite 5E Fielding		1Q		
(U) OFP Suite 5MSIP Fielding		1Q		
(U) OFP Suite 6 Phase 1 Complete	2Q			
(U) OFP Suite 6 Phase II Start	2Q			
(U) OFP Suite 6 Phase II Complete				4Q
(U) OFP Suite 6 Phase II Flight Test Start		1Q		
(U) OFP Suite 6 Phase II Flight Test Complete				2Q
(U) ADCP F3I complete	2Q			
(U) Mode 5 - Start	2Q			
(U) Mode 5 - Complete				4Q
(U) ACU - Start		3Q		
(U) ACU - Complete				4Q
(U) F-15 E SDD (EMD radar orders) Start				1Q
(U) F-15 RMP SDD Start			4Q	
(U) F-15 C/D (V)3 Radar Block Upgrade Flight Test - Start	4Q			
(U) F-15 C/D (V)3 Radar Block Upgrade Flight Test - Complete		1Q		
(U) TISS Hardware/Software Integration - Complete	4Q			
(U) TISS System Compatibility Test - Complete		1Q		
(U) RWR - Lab Test Start	2Q			
(U) RWR - Lab Test Complete		3Q		

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PE NUMBER: 0207136F
PE TITLE: Manned Destructive Suppression

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	7.229	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	156.797
4595	F-16 Smart Targeting and Identification via Networked Geolocation (STING)	7.229	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	156.797

F-16 Smart Targeting and Identification via Networked Geolocation (STING) is the unofficial name for the HARM Targeting System Release 7 (R7). Because future HTS improvements (Releases R8 and R9) are being considered, use of the STING acronym is being discontinued to avoid confusion.

(U) A. Mission Description and Budget Item Justification

The overall Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program. In FY00, P3I development of HTS Revision 7 (HTS R7) began to address evolving threats and to incorporate into the AN/ASQ 213 Pod a precision geolocation capability to target Precision Guided Munitions (PGMs). In FY01, the R7 P3I Program Definition and Risk Reduction (PDRR) was completed and the contract was awarded for System Development and Demonstration (SDD). HTS R7 developed changes will also enable the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. These improvements represent the Air Force's near-term solution (capability can be transferred to F-35 or a yet defined system) for reactive time critical targeting for the DEAD mission. HTS R7 will target HARM and other PGMs to destroy fixed and mobile enemy air defense elements. HTS R7 precision coordinates will be available to all Joint Forces via Link-16. FY07 continues flight test activities and conducts investigation, studies, and preliminary design activities for future P3I. While the program currently has no RDT&E funding programmed after FY07, future upgrade efforts are being considered to improve system performance and counter evolving threats.

This PE is in Budget Activity 7 - Operational System Development because it supports preplanned product improvements and upgrade development of F-16 HTS (R6), a fielded system, to the HTS R7 configuration.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207136F Manned Destructive Suppression

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	9.260	0.513		
(U)	Current PBR/President's Budget	7.229	0.513		
(U)	Total Adjustments	-2.031	-0.002		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.002		
	Congressional Increases				
	Reprogrammings	-1.823			
	SBIR/STTR Transfer	-0.208			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression	PROJECT NUMBER AND TITLE: 4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4595	F-16 Smart Targeting and Identification via Networked Geolocation (STING)	7.229	0.513	0.000	0.000	0.000	0.000	0.000	0.000	0.000	156.797
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The overall Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program. In FY00, P3I development of HTS Revision 7 (HTS R7) began to address evolving threats and to incorporate into the AN/ASQ 213 Pod a precision geolocation capability to target Precision Guided Munitions (PGMs). In FY01, the R7 P3I Program Definition and Risk Reduction (PDRR) was completed and the contract was awarded for System Development and Demonstration (SDD). HTS R7 developed changes will also enable the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. These improvements represent the Air Force's near-term solution (capability can be transferred to F-35 or a yet defined system) for reactive time critical targeting for the DEAD mission. HTS R7 will target HARM and other PGMs to destroy fixed and mobile enemy air defense elements. HTS R7 precision coordinates will be available to all Joint Forces via Link-16. FY07 continues flight test activities and conducts investigation, studies, and preliminary design activities for future P3I. While the program currently has no RDT&E funding programmed after FY07, future upgrade efforts are being considered to improve system performance and counter evolving threats.

This PE is in Budget Activity 7 - Operational System Development because it supports preplanned product improvements and upgrade development of F-16 HTS (R6), a fielded system, to the HTS R7 configuration.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue HTS R7 Geolocation Upgrade Development/P3I related activities	5.002			
(U)	Continue HTS R7 Upgrade Test and Evaluation Support	1.530			
(U)	Continue Mission Support	0.697	0.513		
(U)	Total Cost	7.229	0.513	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) HTS Aircraft Procurement (BP11) APAF PE 0207136F	20.713	7.262	0.000	0.000						27.975
(U) HTS Aircraft Procurement (BP19) APAF PE 0207136F	16.917	8.634	10.129	10.216						45.896

(U) D. Acquisition Strategy

The HTS R7 included accomplishment of risk reduction studies and selection of appropriate contracting stratgeies for SDD and retrofit of HTS inventory.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207136F Manned Destructive Suppression**

PROJECT NUMBER AND TITLE: **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Raytheon Systems Co.	SS/Various		88.073	5.002									93.075	
Raytheon Systems Co.	SS/CPAF		31.331										31.331	
AFMSS	SS/CPIF		2.674										2.674	
Lockheed/Ft Worth	SS/FFP		2.400										2.400	
Subtotal Product Development			124.478	5.002		0.000		0.000		0.000		0.000	129.480	0.000
Remarks: HTS R7 SDD Contract awarded FY01 (on-going through FY07)														
(U) Support														
Mission Support	Various		8.741	0.697		0.513							9.951	
Subtotal Support			8.741	0.697		0.513		0.000		0.000		0.000	9.951	0.000
Remarks:														
(U) Test & Evaluation														
Eglin	PO		2.175										2.175	
Edwards	PO		12.739	1.530									14.269	
Light Defender			0.922										0.922	
Subtotal Test & Evaluation			15.836	1.530		0.000		0.000		0.000		0.000	17.366	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			149.055	7.229		0.513		0.000		0.000		0.000	156.797	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

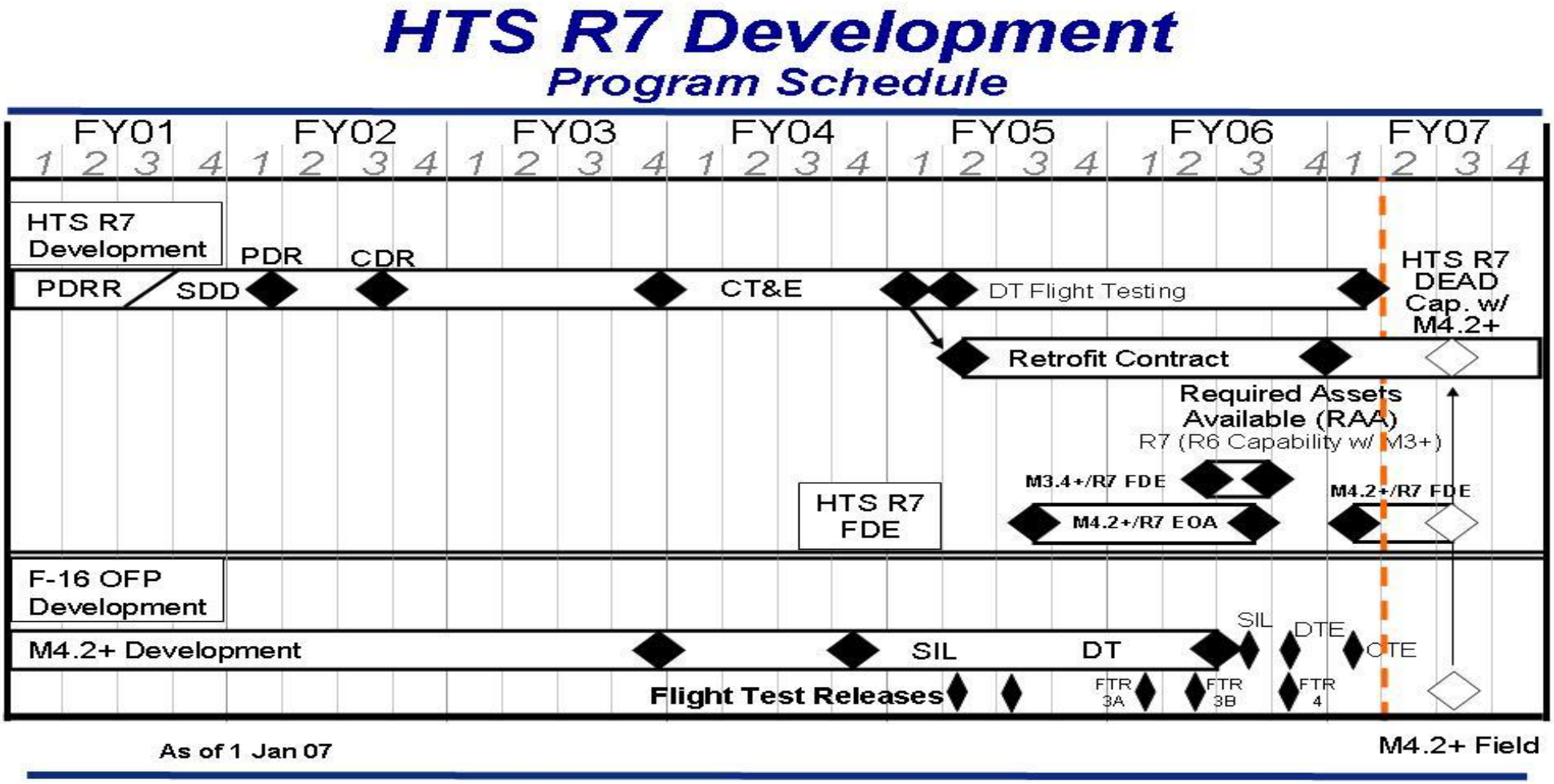

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE: **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Retrofit Kit Installation (83 Kits) -- Contract Awarded	1Q			
(U) Retrofit Kits -- Contract Awarded (117 Kits)	2Q			
(U) R7 RAA (R6 Capability w/ F-16 OFP M3+)	4Q			
(U) Retrofit Kit Installation (117 Kits) -- Contract Awarded		1Q		
(U) P3I Study - R7 Follow-on Study -- Contract Award		2Q		
(U) R7 Precision Targeting Capability (w/ F-16 OFP M4+)		3Q		

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PE NUMBER: 0207138F
PE TITLE: F-22 SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	341.789	472.475	743.593	666.848	510.330	417.268	520.979	495.848	Continuing	TBD
4785 F-22	341.789	472.475	743.593	666.848	510.330	417.268	520.979	495.848	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-22A Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22A is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The Engineering and Manufacturing Development (EMD) phase of F-22 acquisition closed out, and is now continuing the incremental-modernization phase. This exhibit completes the baseline capability planned for the F-22A and includes the modernization upgrades that further enhance the F-22A Global Strike capability.

The development program enhances the air vehicle, engine, and training system capabilities to improve F-22A weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

This program is in Budget Activity 7, Operational System Development, because the F-22A program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	373.124	584.290	645.556	563.901
(U) Current PBR/President's Budget	341.789	472.475	743.593	666.848
(U) Total Adjustments	-31.335	111.815		
(U) Congressional Program Reductions		-110.000		
Congressional Rescissions	-0.011	-1.815		
Congressional Increases				
Reprogrammings	-21.154			
SBIR/STTR Transfer	-10.170			

(U) Significant Program Changes:

FY07 Congressional Mark of negative $110M

FY08 increases are due to the Aircraft Structural Integrity Program (ASIP)(a New Start) and an additional requirement on F-22 test engines.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

PROJECT NUMBER AND TITLE: 4785 F-22

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4785 F-22	341.789	472.475	743.593	666.848	510.330	417.268	520.979	495.848	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-22A Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22A is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The Engineering and Manufacturing Development (EMD) phase of F-22 acquisition closed out, and is now continuing the incremental-modernization phase. This exhibit completes the baseline capability planned for the F-22A and includes the modernization upgrades that further enhance the F-22A Global Strike capability.

The development program enhances the air vehicle, engine, and training system capabilities to improve F-22A weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

This program is in Budget Activity 7, Operational System Development, because the F-22A program is developing the next-generation air dominance fighter for the USAF to counter emerging worldwide threats.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue requirements definition and increment development activities for planned hardware and software capability upgrades. (NSP) --Continue Increment 2 to develop Global Strike Conops basic capabilities. --Continue Increment 3 to develop Global Strike Conops enhanced capabilities.	170.961	314.474	422.847	456.126
(U) Continue Post-EMD System Engineering/Program Management Contract Support	8.179	16.760	17.469	18.699
(U) Continue Air Vehicle Instrumentation support (Training and Test Instrumentation)	15.189	8.000	17.300	2.600
(U) Continue Flight test and flight test support	49.446	96.690	159.975	120.811
(U) Continue Mission support of the SPO; travel, computer costs, misc contracts, etc.	10.108	10.751	10.945	11.142
(U) Continue F-22A Reliability and Maintainability Maturation Program (RAMMP)	13.931	25.800	38.000	18.000
(U) Initiate Aircraft Structural Integrity Program (ASIP)			38.930	11.860
(U) Replacement Test Aircraft (RTA) and Instrumentation	73.975	0.000	38.127	27.610
(U) Total Cost	341.789	472.475	743.593	666.848

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E (PE 64239F)	71.818	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	24,295.158
(U)	PRTV II (6)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1,580.580
(U)	F-22A Squadrons Procurement (3010) (PE 0207138F)*	100.116	188.537	396.402	475.752	421.442	545.565	434.013	425.968	Continuing	TBD
(U)	F-22A Squadrons Procurement (3080) (PE 027138F)	1.427	2.727	4.285	0.000	1.237	1.499	2.236	1.559	Continuing	TBD
(U)	Military Construction (PE 0604239F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	65.000
(U)	Military Construction (PE 0207219F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	96.018
(U)	Military Construction (PE 0207138F)	47.951	62.900	70.180	197.800	26.500	0.000	0.000	0.000	0.000	443.371
(U)	Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003**	3678.331	3433.079	3614.715	3708.927	47.892	48.804	1.942	1.938	Continuing	TBD
(U)	Munitions Procurement (PE 0207219F)	11.183	16.508	12.659	12.973	16.355	13.046	13.307	13.573	Continuing	TBD
(U)	Tactical Data Link RDT&E (PE 27445F)***	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	135.373	TBD

* NOTE: Includes BP10, 11, 12, 16, 19 (Depot Activation)

** NOTE: Includes BP10, 11, 19 and Advance Buy.

***NOTE: F-22A total budget is subset of 27445F TDL budget

(U) D. Acquisition Strategy

The Raptor Enhancement Development & Integration (REDI) contract is an Indefinite Delivery/Indefinite Quantity Ordering contract that maximizes flexibility to start, stop, accelerate and decelerate projects as required. The REDI contract was established to be more responsive to evolving war fighter requirements. The REDI contract allows the issuance of orders for the highest priority war fighter capabilities in operationally meaningful capability increments, requirements analysis, contractor cost estimates and studies, development and demonstration of capability enhancements, and unanticipated future war fighter requirements. Each increment

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

is broken into phases. Phase A is to initiate requirements analysis, Phase B is the design phase and Phases C, D, and E are the development, integration and verification phase of a specific incremental development effort. Separate delivery orders will be issued for each phase of an increment. These separate delivery orders at these predetermined breakpoints allow the modernization program to be tailored to the technology maturity, available funding and capability priority during the life of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

PROJECT NUMBER AND TITLE: 4785 F-22

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Increment development activities	Cost Plus		575.556	170.961	Dec-05	314.474	Dec-06	422.847	Dec-07	456.126	Dec-08	Continuing	TBD	
Air Vehicle Instrumentation support (Training and Test Instrumentation)	Cost Plus		3.601	15.189	May-06	8.000	Oct-06	17.300	Oct-07	2.600	Nov-08	Continuing	TBD	
System Engineering / Program Management	Cost Plus		100.188	8.179	Dec-05	16.760	Dec-06	17.469	Dec-07	18.699	Dec-08	Continuing	TBD	
F-22A Reliability and Maintainability Maturation Program (RAMMP)	Cost Plus			13.931	Apr-06	25.800	Dec-06	38.000	Dec-07	18.000	Dec-08	Continuing	TBD	
Aircraft Structural Integrity Program (ASIP)	Cost Plus							38.930	Dec-07	11.860	Dec-08	Continuing	TBD	
Not Applicable													0.000	
Subtotal Product Development			679.345	208.260		365.034		534.546		507.285		Continuing	TBD	0.000
Remarks:														
(U) Support														
Support Contracts	Various		13.439	10.108		10.751		10.945		11.142		Continuing	TBD	
In House Support												Continuing	TBD	
Not Applicable													0.000	
Subtotal Support			13.439	10.108		10.751		10.945		11.142		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
AFFTC and Contractor	Various	Edwards AFB, CA	18.272	49.446	Nov-05	96.690	Oct-06	159.975	Nov-07	120.811	Nov-08	Continuing	TBD	
Replacement Test Aircraft (RTA) and Instrumentation	Fixed Price		35.697	73.975	Feb-06	0.000		38.127	Dec-07	27.610	Dec-08	Continuing	TBD	
Not Applicable													0.000	
Subtotal Test & Evaluation			53.969	123.421		96.690		198.102		148.421		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			746.753	341.789		472.475		743.593		666.848		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

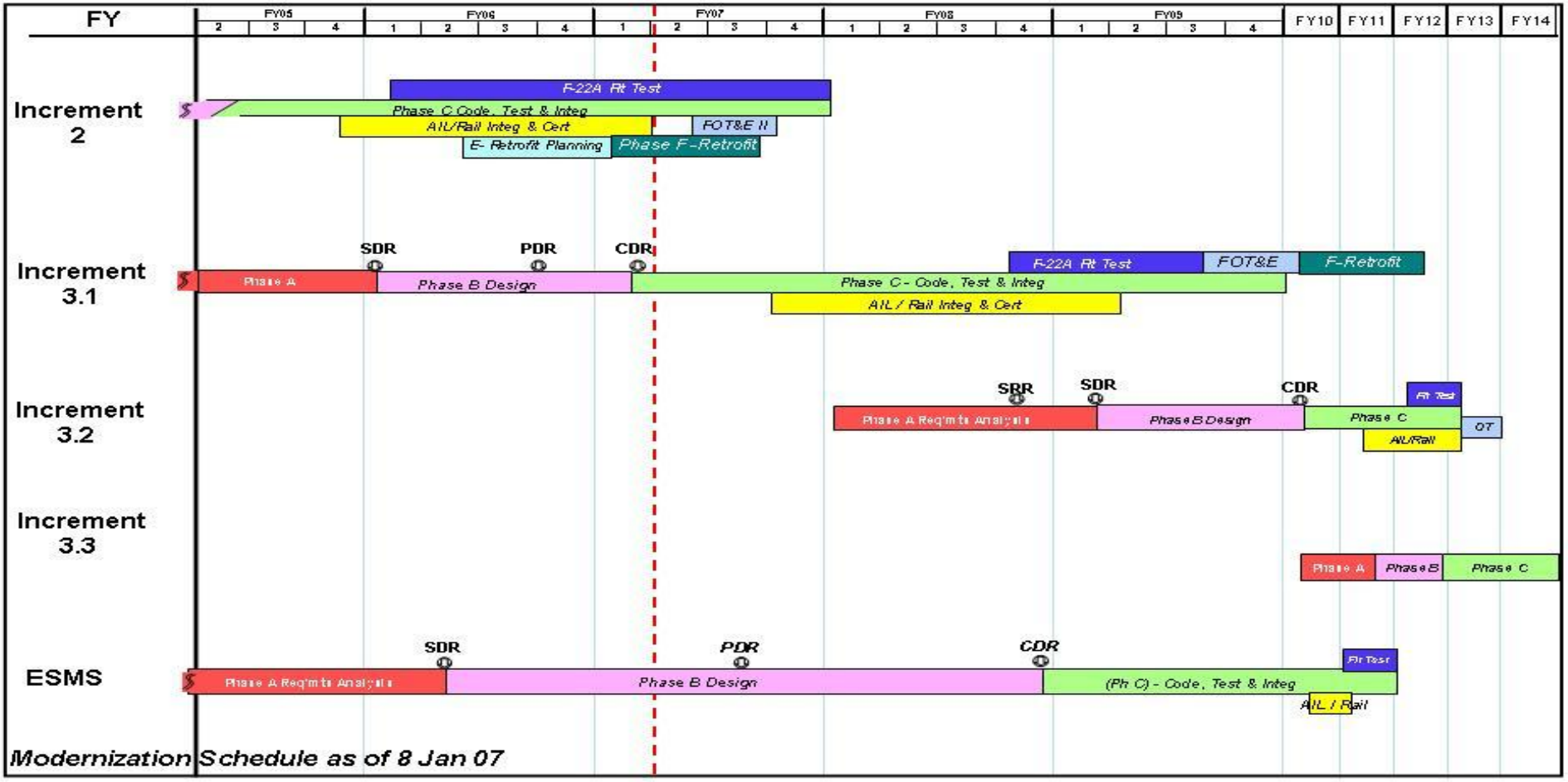

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete Increment 2 Phase C, D, &E (Development, Integration & Test)			1Q	
(U) Complete Increment 3.1 Phase A (Requirements Analysis)	1Q			
(U) --Increment 3.1 SDR	1Q			
(U) Initiate Increment 3.1 Phase B (Design)	1Q			
(U) --Increment 3.1 PDR	3Q			
(U) --Increment 3.1 CDR		1Q		
(U) Initiate Increment 3.2 Phase A (Requirements Analysis)			1Q	
(U) --Increment 3.2 SRR			4Q	
(U) --Increment 3.2 SDR				1Q
(U) Complete ESMS Phase A (Requirements Analysis)	2Q			
(U) --ESMS SDR	2Q			
(U) Initiate Enhanced Stores Management System (ESMS) Phase B (Design)	2Q			
(U) --ESMS PDR		3Q		
(U) --ESMS CDR			4Q	

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PE NUMBER: 0207141F
PE TITLE: F-117A SQUADRON

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207141F F-117A SQUADRON

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	11.349	14.040	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
3956 F-117A Stealth Fighter	11.349	14.040	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-117A is the world's first operational low-observable (LO) combat aircraft. Its combination of stealth and precision weapons delivery capability allows the USAF to hold even the most highly defended targets at risk. The program completed production in July 1990 with the delivery of the final F-117A. The single operational F-117A unit is the 49th Fighter Wing stationed at Holloman AFB, NM.

The Air Force will retire 10 F-117A aircraft in FY07 and the remaining aircraft in FY08.

- The F-117A Weapon System Trainer (WST) requires a replacement for the imagery computer/image generation system. The vendor of the current system, SGI, no longer manufactures replacement boards for the imagery computer. Furthermore, the vendor no longer supports the current maintenance requirements. Recently, the computer was responsible for 80% of the total WST downtime. The downtime associated with the computer will increase over time. By modifying the WST we can continue to train and certify pilots in the trainer through the F-117's remaining operational life, reducing overall training costs. The image generation system must be updated by 4Q FY07 to continue to certify pilots in take-offs and landings through FY08.

- The F-117A Mission Planning System (MPS) requires an operational system upgrade. The National Geospatial-Intelligence Agency (NGA) formerly National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117A MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. Required hardware has been developed and procured. In FY07 will complete software development, testing and fielding enabling F117A mission planning until fleet retirement in FY08. This is a critical upgrade requirement because security accreditation expires in October 2007. Without the MPS the F-117A cannot fly.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	13.406	14.093		
(U)	Current PBR/President's Budget	11.349	14.040		
(U)	Total Adjustments	-2.057			
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.053		
	Congressional Increases				
	Reprogrammings	-1.695			
	SBIR/STTR Transfer	-0.362			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207141F F-117A SQUADRON

PROJECT NUMBER AND TITLE: 3956 F-117A Stealth Fighter

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3956 F-117A Stealth Fighter	11.349	14.040	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-117A is the world's first operational low-observable (LO) combat aircraft. Its combination of stealth and precision weapons delivery capability allows the USAF to hold even the most highly defended targets at risk. The program completed production in July 1990 with the delivery of the final F-117A. The single operational F-117A unit is the 49th Fighter Wing stationed at Holloman AFB, NM.

The Air Force will retire 10 F-117A aircraft in FY07 and the remaining aircraft in FY08.

- The F-117A Weapon System Trainer (WST) requires a replacement for the imagery computer/image generation system. The vendor of the current system, SGI, no longer manufactures replacement boards for the imagery computer. Furthermore, the vendor no longer supports the current maintenance requirements. Recently, the computer was responsible for 80% of the total WST downtime. The downtime associated with the computer will increase over time. By modifying the WST we can continue to train and certify pilots in the trainer through the F-117's remaining operational life, reducing overall training costs. The image generation system must be updated by 4Q FY07 to continue to certify pilots in take-offs and landings through FY08.

- The F-117A Mission Planning System (MPS) requires an operational system upgrade. The National Geospatial-Intelligence Agency (NGA) formerly National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117A MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. Required hardware has been developed and procured. In FY07 will complete software development, testing and fielding enabling F117A mission planning until fleet retirement in FY08. This is a critical upgrade requirement because security accreditation expires in October 2007. Without the MPS the F-117A cannot fly.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) SDD for Smart Weapons Integration	3.489			
(U) SDD for Weapon System Trainer (WST) Image Generation System	1.894			
(U) Mission Planning System (MPS) Upgrade	1.000	2.460		
(U) Dual Radio SDD	2.098			
(U) SATCOM Antenna SDD	0.532			
(U) Retirement activity	2.336	11.580		
(U) Total Cost	11.349	14.040	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement (BA-5), Appn 3010/BP1100, AF F117A Squadrons, PE 0207141F	7.699	2.015							0.000	9.714

(U) D. Acquisition Strategy

RDT&E funds are executed to develop improved capability, reliability, maintenance and safety modifications. The contracting approach varies by individual effort and involves Cost Plus Fixed Fee (CPFF) and Cost Plus Award Fee (CPAF) contract types.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207141F F-117A SQUADRON

PROJECT NUMBER AND TITLE: 3956 F-117A Stealth Fighter

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Smart Weapon Integration SDD	CPAF	Lockheed Martin, Palmdale CA	24.451	3.489									27.940	
Weapon System Trainer Image Generation Sys Upgrd SDD	CPFF	Lockheed Martin, Palmdale CA	3.458	1.894									5.352	
Mission Planning System, Operating System Upgrade SDD	CPFF	Lockheed Martin, Palmdale CA	3.217	1.000		2.460							6.677	
Dual Radio SDD	CPFF	Lockheed Martin, Palmdale CA	2.200	2.098									4.298	
SATCOM Antenna SDD	CPFF	Lockheed Martin, Palmdale CA	3.300	0.532									3.832	
Retirement activity				2.336		11.580							13.916	
Subtotal Product Development			36.626	11.349		14.040		0.000		0.000		0.000	62.015	0.000
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			36.626	11.349		14.040		0.000		0.000		0.000	62.015	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

F-117 Program Appn 3600, P.E. 27141F

Description	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13
Smart Weapons Integration	Cmplt							
WST Image Generation SDD	Cnt	Cmplt						
MPS OS (AFMSS) SDD	Cnt	Cmpt FQT						

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207141F F-117A SQUADRON**	PROJECT NUMBER AND TITLE **3956 F-117A Stealth Fighter**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Smart Weapons Integration Completion	4Q			
(U) WST Image Generation IOC		2Q		
(U) MPS OS Upgrade Functional Qualification Testing (FQT)		3Q		

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PE NUMBER: 0207161F
PE TITLE: Tactical AIM Missiles

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.974	8.817	7.927	5.816	6.073	6.264	6.391	6.526	Continuing	TBD
4132 AIM-9 Product Improvement	14.974	8.817	7.927	5.816	6.073	6.264	6.391	6.526	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The AIM-9X is a long-term evolution of the AIM-9 series of fielded air-to-air missiles. The AIM-9X (Sidewinder) short range air-to-air missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short range air-to-air missile arena is essential and includes first-shot, first-kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common to the AIM-9M. Anti-Tamper features are incorporated to protect improvements inherent in the AIM-9X design. AIM-9X is an Acquisition Category 1C (ACAT 1C) joint-service program with Navy lead. As a natural course of program evolution, pre-planned product improvements (P3I) and hardware/software updates are being done to meet evolving threats and warfighter requirements.

The program is in full-rate production (FRP) with Lot 7 contract award Dec 06.

The program is currently in budget activity 7 - Operational System Development because it modifies an existing weapon system.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	15.416	8.850	7.897	5.805
(U) Current PBR/President's Budget	14.974	8.817	7.927	5.816
(U) Total Adjustments	-0.442	-0.033		
(U) Congressional Program Reductions				
Congressional Rescissions	-0.001	-0.033		
Congressional Increases				
Reprogrammings	-0.038			
SBIR/STTR Transfer	-0.403			

(U) Significant Program Changes:

None.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles

PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4132 AIM-9 Product Improvement	14.974	8.817	7.927	5.816	6.073	6.264	6.391	6.526	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The AIM-9X is a long-term evolution of the AIM-9 series of fielded air-to-air missiles. The AIM-9X (Sidewinder) short range air-to-air missile program provides a launch and leave, air combat munition that uses passive infrared (IR) energy for acquisition and tracking of enemy aircraft and complements the Advanced Medium Range Air-to-Air Missile (AMRAAM). Air superiority in the short range air-to-air missile arena is essential and includes first-shot, first-kill opportunity against an enemy employing IR countermeasures. The AIM-9X employs several components common to the AIM-9M. Anti-Tamper features are incorporated to protect improvements inherent in the AIM-9X design. AIM-9X is an Acquisition Category 1C (ACAT 1C) joint-service program with Navy lead. As a natural course of program evolution, pre-planned product improvements (P3I) and hardware/software updates are being done to meet evolving threats and warfighter requirements.

The program is in full-rate production (FRP) with Lot 7 contract award Dec 06.

The program is currently in budget activity 7 - Operational System Development because it modifies an existing weapon system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Raytheon Missile Systems (RMS) P3I Contract	11.097	5.381	1.284	1.222
(U) Software/OFP Upgrade	2.300	1.030	1.611	1.162
(U) DT&E/OT&E for P3I software updates and FOT&E efforts	1.127	1.956	4.569	2.961
(U) In-house/CSS Support	0.450	0.450	0.463	0.471
(U) Total Cost	14.974	8.817	7.927	5.816

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) DOD PE (0603715D)										25.000
(U) Tactical AIM Missile Modification (BP21)										30.817
(U) Tactical AIM Missile Procurement	50.228	49.727	58.920	80.409	80.586	63.355	64.581	65.952	Continuing	TBD
(U) SEEK EAGLE (PE_0207590F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.028

Congressional language directed the program to report as a missile procurement, starting in FY02, and not as a missile modification.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE 4132 AIM-9 Product Improvement

(U) D. Acquisition Strategy

After a full and open competition, a Cost Plus Incentive Fee/Award Fee contract was awarded to Hughes Missile Systems Company (now Raytheon Systems Corp (RSC)) to complete missile system development and prepare for production. This EMD contract included three Fixed Price Options for Low Rate Initial Production (LRIP) Lots 1, 2, and 3. Per an ADM signed in May 2003, FRP Lot 4 was changed to LRIP 4 which was awarded in Apr 2004. Milestone III decision with advice from the Air Force Acquisition Executive, was approved in May 04. FRP 1, Lot 5, was awarded in Nov 04; FRP 2, Lot 6 was awarded in Dec 05, and FRP 3 Lot 7 was awarded in Dec 06. It is a Firm Fixed Price (FFP) with incentives provided if the contractor meets or beats his Procurement Price Commitment Curve (PPCC), a quantity price curve provided by RSC with the EMD proposal. Lot 7 is the last lot under the current PPCC. FRP's 4-8, (Lots 8-12) will be procured under a new contract and a new PPCC.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207161F Tactical AIM Missiles**

PROJECT NUMBER AND TITLE: **4132 AIM-9 Product Improvement**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Hughes	C/CPIF											0.000	0.000	
Raytheon	C/CPIF											0.000	0.000	
Raytheon	C/CPIF											Continuing	TBD	
Raytheon Software/OFP Upgrades				2.300	Dec-05	1.030	Dec-06	1.611	Dec-07	1.162	Dec-08	Continuing	TBD	
Raytheon P3I Contract				11.097	Dec-05	5.381	Dec-06	1.284	Dec-07	1.222	Dec-08	Continuing	TBD	
Boeing	C/CPIF												0.000	
Engineering Services	Various											Continuing	TBD	
Program Management*	PO											Continuing	TBD	
Subtotal Product Development			0.000	13.397		6.411		2.895		2.384		Continuing	TBD	0.000
Remarks: Note*: Based on a Memorandum of Agreement, RDT&E program costs includes Navy PMA working capital funded personnel funded at 50%/50% ratio per Service.														
(U) Support														
Various Contracts	FFP											Continuing	TBD	
In House Support	N/A			0.450	Nov-05	0.450	Nov-06	0.463	Dec-07	0.471	Dec-08	Continuing	TBD	
Subtotal Support			0.000	0.450		0.450		0.463		0.471		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Field Activities	PO			1.127	Nov-05	1.956	Nov-06	4.569	Dec-07	2.961	Dec-08	Continuing	TBD	
Subtotal Test & Evaluation			0.000	1.127		1.956		4.569		2.961		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	14.974		8.817		7.927		5.816		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

AIM-9X Program Schedule

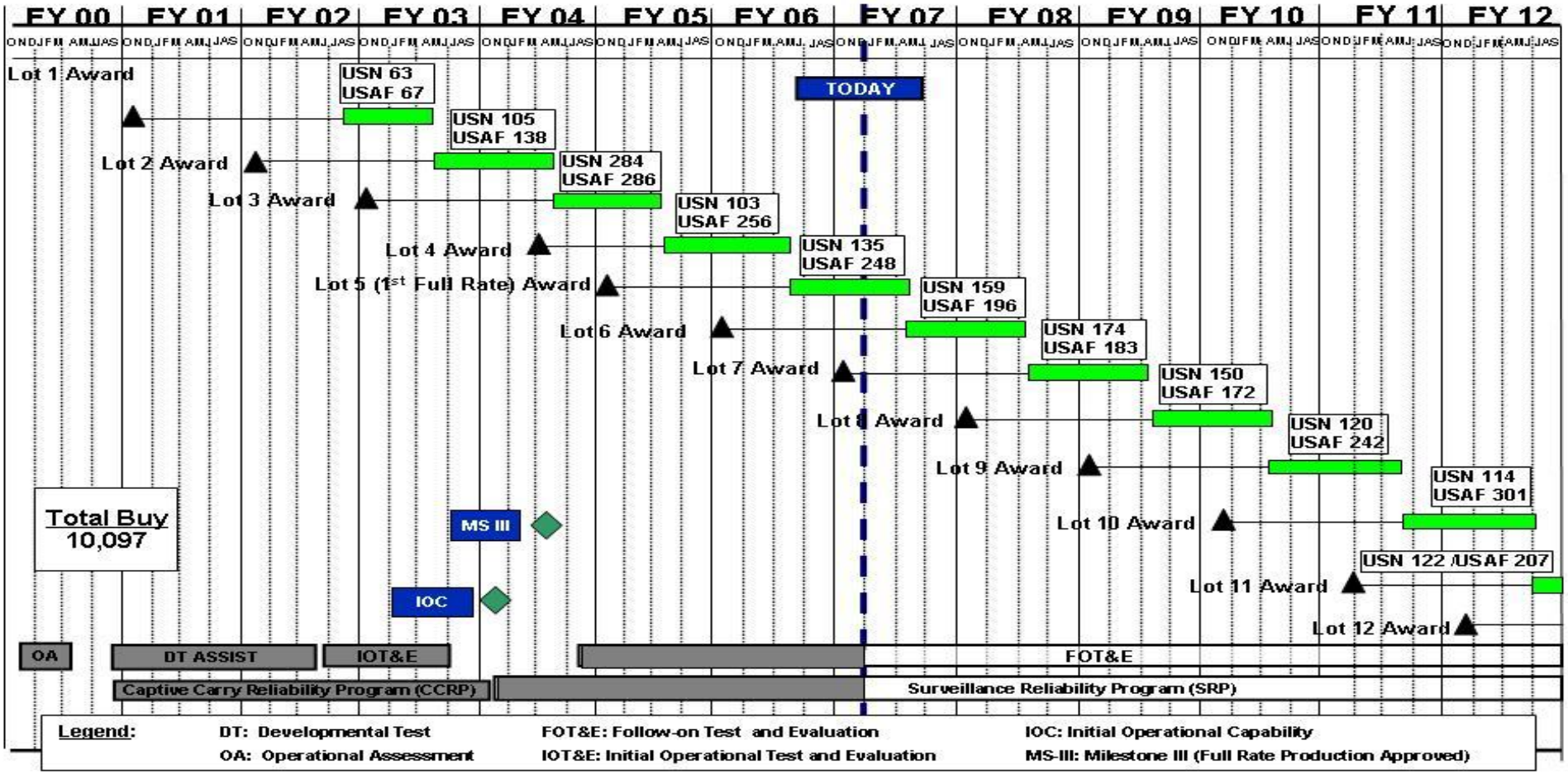

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207161F Tactical AIM Missiles**	PROJECT NUMBER AND TITLE **4132 AIM-9 Product Improvement**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FRP Award (Lots 6-9)	1Q	1Q	1Q	1Q
(U) AOTD P3I	1Q	1Q	1Q	3Q
(U) DT-IIIB	1Q	1Q		
(U) OT-IIIB		2Q	1Q	
(U) DT-IIIC			2Q	2Q
(U) OT-IIIC				1Q

Note: LRIP 4 Award was in 3Q 2004; RAA/IOC 2Q 2004; Milestone 3 was in 3Q 2004.

PE NUMBER: 0207163F
PE TITLE: Advanced Medium Range Air-to-Air Missile

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD
3777 AMRAAM	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force and Navy developed the baseline Advanced Medium Range Air-to-Air Missile (AMRAAM) as a high performance, all weather missile to counter existing air vehicle threats operating at high or low altitude having advanced Electronic Protection (EP) capabilities. The AMRAAM Pre-Planned Product Improvement (P3I) program provides for a continuing, Joint Air Force/Navy research and development program which enables AMRAAM to: (1) be compatible with advanced fighters, (2) enhance AMRAAM capability and operational flexibility against 2005 and beyond threats, (3) incorporate high payoff technology developments, and (4) investigate new variants and/or alternate missions which may use many baseline missile attributes.

Improvements under the P3I program include enhanced EP capabilities and improved weapon effectiveness through improved fuzing, guidance, and increased kinematics. A follow-on program to the three-phase P3I program referred to as AMRAAM Phase 4 is currently underway. The Phase 4 effort will lead to introduction of the AIM-120D, delivering improved AMRAAM performance via GPS-aided navigation, a two-way datalink capability for enhanced aircrew survivability and improved network compatibility, and incorporating new guidance software which will improve AMRAAM's kinematic and weapon effectiveness performance. AMRAAM is a joint Air Force/Navy, Acquisition Category (ACAT) IC program with Air Force as lead service.

This program is in budget activity 7 - Operational System Development, providing upgrades to the AIM-120C missile currently in production.

Funding begins in FY08 for studies as part of the Joint Dual Role Air Dominance Missile (JDRADM), a potential missile system intended as a follow-on to the AMRAAM.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	32.788	43.417	37.441	38.497
(U)	Current PBR/President's Budget	31.803	43.253	36.838	45.879
(U)	Total Adjustments	-0.985	-0.164		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.001	-0.164		
	Congressional Increases				
	Reprogrammings	-0.081			
	SBIR/STTR Transfer	-0.903			
(U)	Significant Program Changes:				
	None.				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3777 AMRAAM	31.803	43.253	36.838	45.879	40.326	40.695	23.002	12.882	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force and Navy developed the baseline Advanced Medium Range Air-to-Air Missile (AMRAAM) as a high performance, all weather missile to counter existing air vehicle threats operating at high or low altitude having advanced Electronic Protection (EP) capabilities. The AMRAAM Pre-Planned Product Improvement (P3I) program provides for a continuing, Joint Air Force/Navy research and development program which enables AMRAAM to: (1) be compatible with advanced fighters, (2) enhance AMRAAM capability and operational flexibility against 2005 and beyond threats, (3) incorporate high payoff technology developments, and (4) investigate new variants and/or alternate missions which may use many baseline missile attributes.

Improvements under the P3I program include enhanced EP capabilities and improved weapon effectiveness through improved fuzing, guidance, and increased kinematics. A follow-on program to the three-phase P3I program referred to as AMRAAM Phase 4 is currently underway. The Phase 4 effort will lead to introduction of the AIM-120D, delivering improved AMRAAM performance via GPS-aided navigation, a two-way datalink capability for enhanced aircrew survivability and improved network compatibility, and incorporating new guidance software which will improve AMRAAM's kinematic and weapon effectiveness performance. AMRAAM is a joint Air Force/Navy, Acquisition Category (ACAT) IC program with Air Force as lead service.

This program is in budget activity 7 - Operational System Development, providing upgrades to the AIM-120C missile currently in production.

Funding begins in FY08 for studies as part of the Joint Dual Role Air Dominance Missile (JDRADM), a potential missile system intended as a follow-on to the AMRAAM.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue effort to complete qualification of the Phase 4 missile design	19.234	20.650	11.000	5.000
(U)	Continue to provide software upgrades/system improvement program (SIP)	0.000	2.000	2.000	6.000
(U)	Continue mission support: Provide program management to execute Phase 4 program	1.495	1.770	1.629	1.611
(U)	Continue test and evaluation: Provide support to DT and OT	2.839	3.522	6.561	10.647
(U)	Aircraft Integration - Integrate Phase 4 on multiple aircraft platforms	3.319	10.681	12.448	15.621
(U)	Develop AMRAAM field reprogrammer	4.916	4.630	0.000	0.000
(U)	Joint Dual Role Air Dominance Missile (JDRADM)	0.000	0.000	3.200	7.000
(U)	Total Cost	31.803	43.253	36.838	45.879

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Missile Procurement, Budget Activity #2, PE 0207163F, P-1 Line Item, AMRAAM	103.068	115.409	224.577	275.710	285.373	303.821	309.728	316.346	0.000	7,814.786
(U) Replenishment Spares, BP25 and Missile Replacement Equipment	0.193	0.201	0.205	0.212	0.217	0.222	0.226	0.231	0.000	61.876
(U) Initial Spares, BP26	0.072	0.075	0.075	0.078	0.079	0.082	0.084	0.086	0.000	63.483
(U) AMRAAM Field Reprogrammer, BP 22	0.000	0.000	5.784	5.784	5.385	0.000	0.000	0.000	0.000	16.487

(U) D. Acquisition Strategy

The AMRAAM P3I program takes advantage of emerging technologies to update and expand the system capabilities to meet new user requirements. The Phase 3 Cost Plus Award Fee EMD contract was completed 30 Mar 04. This missile is currently in OT testing with projected fielding date of 4QFY07. The AIM-120D SDD contract, awarded in Dec 03, is intended to meet the requirement to evolve the AMRAAM for improved performance. Initial limited production of the AIM-120D missile began in FY06. The formal production cut-in decision for the AIM-120D will be in FY08. The AIM-120D Missile Performance Specification (MPS) and Interface Control Document (ICD) define the requirement to integrate the Phase 4 AMRAAM onto the F-15, F-16, and F-22A.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207163F Advanced Medium Range Air-to-Air Missile**

PROJECT NUMBER AND TITLE: **3777 AMRAAM**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Misc. Contracts	SS/FFP											0.000	0.000	15.987
F08635-90-C-0201 Hughes	SS/FFP	Hughes										0.000	0.000	5.200
F08626-91-C-0034 Hughes	SS/CPIF	Hughes										0.000	0.000	93.506
F08626-93-C-0044 (Phase 2) Hughes	SS/CPAF	Hughes										0.000	0.000	117.558
Phase 3 Risk Reduction	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	24.484
Phase 3 Improved Fuzing Capability	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	3.937
Phase 3 Improved Seeker and Advanced EP. Raytheon F08626-98-C-0027	SS/CPAF	Raytheon, Tucson, AZ										0.000	0.000	207.755
Software Upgrade/System Improvement Program (SIP)	SS/CPFF	Raytheon, Tucson, AZ				2.000		2.000		6.000		0.000	10.000	12.000
Phase 4 Contract FA8675-04-C-0001	SS/CPFF	Raytheon, Tucson, AZ		19.234	Dec-05	20.650	Dec-06	11.000	Dec-07			0.000	50.884	118.016
Phase 4 Follow-On Contract	SS/CPFF	Raytheon, Tucson, AZ								5.000		53.600	58.600	77.311
Aircraft Integration	MIPR	Wright-Patterson AFB, OH		3.319	Dec-05	10.681	Dec-06	12.448	Dec-07	15.621	Dec-08	38.300	80.369	85.300
AMRAAM Field Reprogrammer		Raytheon, Tucson, AZ		4.916	Jan-06	4.630	Jan-07					0.000	9.546	14.000
Joint Dual Role Air Dominance Missile (JDRADM)								3.200		7.000		0.000	10.200	10.200
Subtotal Product Development			0.000	27.469		37.961		28.648		33.621		91.900	219.599	785.254
Remarks: *Note: Hughes became part of Raytheon Systems effective Dec 97														
(U) Support														
COEA	PO/MIPR											0.000	0.000	3.358
Contractor Support	REO/PR			0.817		1.021		0.950		0.892		4.232	7.912	26.136
JSPO Operations	PR/IMPAC			0.678		0.749		0.679		0.719		3.078	5.903	25.840
Subtotal Support			0.000	1.495		1.770		1.629		1.611		7.310	13.815	55.334
Remarks:														
(U) Test & Evaluation														
Government Test	REO/MIPR			2.839		3.522		6.561		10.647		0.000	23.569	47.229
TM/ECM Pods	REO/MIPR											0.000	0.000	2.818

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207163F Advanced Medium Range Air-to-Air Missile**	**3777 AMRAAM**

	Subtotal Test & Evaluation	0.000	2.839	3.522	6.561	10.647	0.000	23.569	50.047
	Remarks:								
(U)	Management								
								0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Total Cost	0.000	31.803	43.253	36.838	45.879	99.210	256.983	890.635

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE 3777 AMRAAM

AMRAAM Schedule

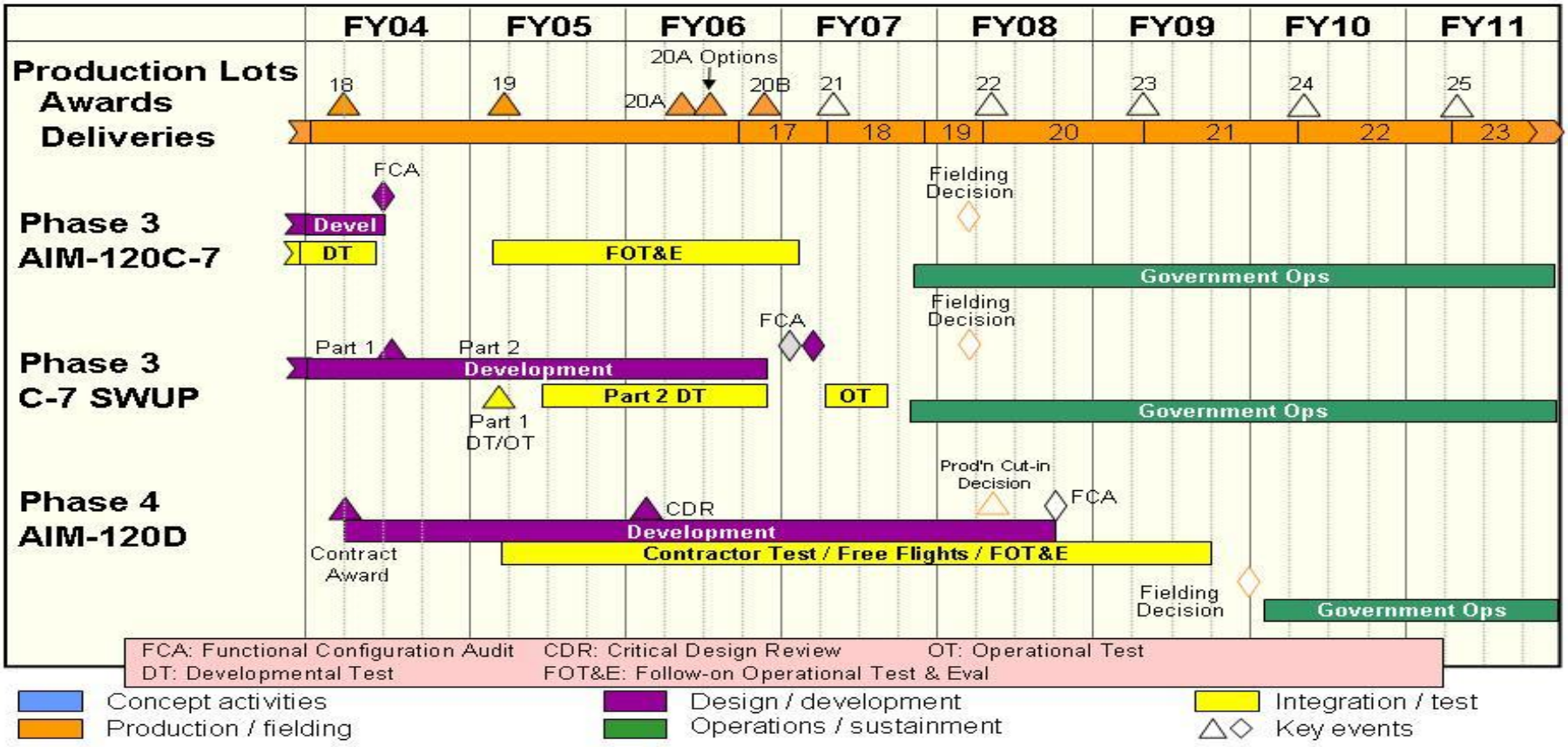

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AIM-120D SDD Critical Design Review (CDR)	1Q			
(U) Initial AIM-120D Production Contract Award (3 Increments, 1st, 2nd, 4th qtrs of FY06)	4Q			
(U) First Captive Carriage F/A-18E/F	3Q			
(U) First Captive Carriage F-15 C/D		2Q		
(U) First Live Launch (from F/A-18 E/F)		3Q		
(U) Functional Configuration Audit (FCA)			3Q	

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PE NUMBER: 0207170F
PE TITLE: JHMCS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207170F JHMCS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	2.278	5.338	5.456	5.568	4.683	4.775	4.873	Continuing	TBD
5226 Joint Helmet Mounted Cueing System	0.000	2.278	5.338	5.456	5.568	4.683	4.775	4.873	Continuing	TBD

Note: Funds transferred from PE 0604012F to PE 0207170F for FY07 and beyond.

(U) A. Mission Description and Budget Item Justification

This joint Air Force/Navy program (Air Force is the lead service) develops a helmet display system capable of depicting aircraft heading data, pilot's viewing perspective, target indication tracking/cueing, and other information on the aircrew visor to enhance pilot situational awareness. This display allows the pilot to quickly align platform sensors and weapons on targets, and engage threats using high off-boresight (HOBS) weapons such as the AIM-9X.

Milestone III was approved in Jan 04, the first Full Rate Production (FRP) contract was awarded May 04, followed by FRP-2 in Jun 05. Continuing activities include, but are not limited to, deficiency resolution, improvements to tooling and test equipment, Electronic Unit obsolescence redesign; a systems engineering approach for implementing alternate displays, such as night vision; software updates; integration; improvements to Reliability and Maintainability (R&M); system upgrade studies/analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours and life cycle costs; and efforts to support the transition to Performance Based Logistics Partnership (PBL/P) and depot activation.

This program is in budget activity 7 - Operational System Development - because it is a modification of existing aircraft

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	0.000	2.287	3.897	3.144
(U) Current PBR/President's Budget	0.000	2.278	5.338	5.456
(U) Total Adjustments	0.000	-0.009		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.009		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

FY 2006 Program Change Summary is under PE 0604012F.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207170F JHMCS

PROJECT NUMBER AND TITLE: 5226 Joint Helmet Mounted Cueing System

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5226	Joint Helmet Mounted Cueing System	0.000	2.278	5.338	5.456	5.568	4.683	4.775	4.873	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Note: Funds transferred from PE 0604012F to PE 0207170F for FY07 and beyond.

(U) A. Mission Description and Budget Item Justification

This joint Air Force/Navy program (Air Force is the lead service) develops a helmet display system capable of depicting aircraft heading data, pilot's viewing perspective, target indication tracking/cueing, and other information on the aircrew visor to enhance pilot situational awareness. This display allows the pilot to quickly align platform sensors and weapons on targets, and engage threats using high off-boresight (HOBS) weapons such as the AIM-9X.

Milestone III was approved in Jan 04, the first Full Rate Production (FRP) contract was awarded May 04, followed by FRP-2 in Jun 05. Continuing activities include, but are not limited to, deficiency resolution, improvements to tooling and test equipment, Electronic Unit obsolescence redesign; a systems engineering approach for implementing alternate displays, such as night vision; software updates; integration; improvements to Reliability and Maintainability (R&M); system upgrade studies/analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours and life cycle costs; and efforts to support the transition to Performance Based Logistics Partnership (PBL/P) and depot activation.

This program is in budget activity 7 - Operational System Development - because it is a modification of existing aircraft

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue deficiency resolution, reliability improvements, P3I activities, obsolescense upgrades, analysis/studies, night vision integration, alternate displays implementation, support for PBL/Depot line, and software updates	0.000	1.978	4.971	5.083
(U) Program Management and Support	0.000	0.300	0.367	0.373
(U) Total Cost	0.000	2.278	5.338	5.456

Note: FY2006 accomplishments/planned program is in PE 0604012F.

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, BA 5, PE 0604201F, Integrated Avionics Planning and Development	0.000	0.000	0.000	0.000	0.000	0.000			0.000	45.151
(U) RDT&E, BA 5, PE 0604012F,	2.870	0.000	0.000	0.000	0.000	0.000			0.000	5.115

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207170F JHMCS**	PROJECT NUMBER AND TITLE **5226 Joint Helmet Mounted Cueing System**

(U) C. Other Program Funding Summary ($ in Millions)

JHMCS

Note: Prior to FY01 JHMCS was funded as part of PE 0604201F. Funding from FY01-FY06 is in PE 0604012F.

(U) D. Acquisition Strategy

JHMCS is an ACAT III joint USAF/USN program (USAF - executive service). The development contract structure is Cost Plus Award Fee (CPAF). The CPAF contract is through Boeing - St. Louis for development and integration into the F-15 and F/A-18 aircraft. All other aircraft integration will be handled by the respective platform prime contractors. In concurrence, working for a transition from ICS to a PBL/Depot Partnership.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207170F JHMCS**

PROJECT NUMBER AND TITLE: **5226 Joint Helmet Mounted Cueing System**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Continue deficiencies resolution, reliability improvements, P3I activities, obsolescense upgrades, analysis/studies, night vision integration, alternate displays implementation, various T&E activities,and software updates	SS, CPAF	Boeing Co. St Louis, MO		0.000		1.978		4.971	Jan-08	5.083	Jan-09		12.032	
Subtotal Product Development			0.000	0.000		1.978		4.971		5.083		0.000	12.032	0.000
Remarks:														
(U) Management														
Program Management and Administration	C, T&M	Various		0.000		0.300		0.367		0.373		0.000	1.040	
Subtotal Management			0.000	0.000		0.300		0.367		0.373		0.000	1.040	0.000
Remarks:														
(U) Total Cost			0.000	0.000		2.278		5.338		5.456		0.000	13.072	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207170F JHMCS	PROJECT NUMBER AND TITLE 5226 Joint Helmet Mounted Cueing System

JHMCS Integrated Schedule

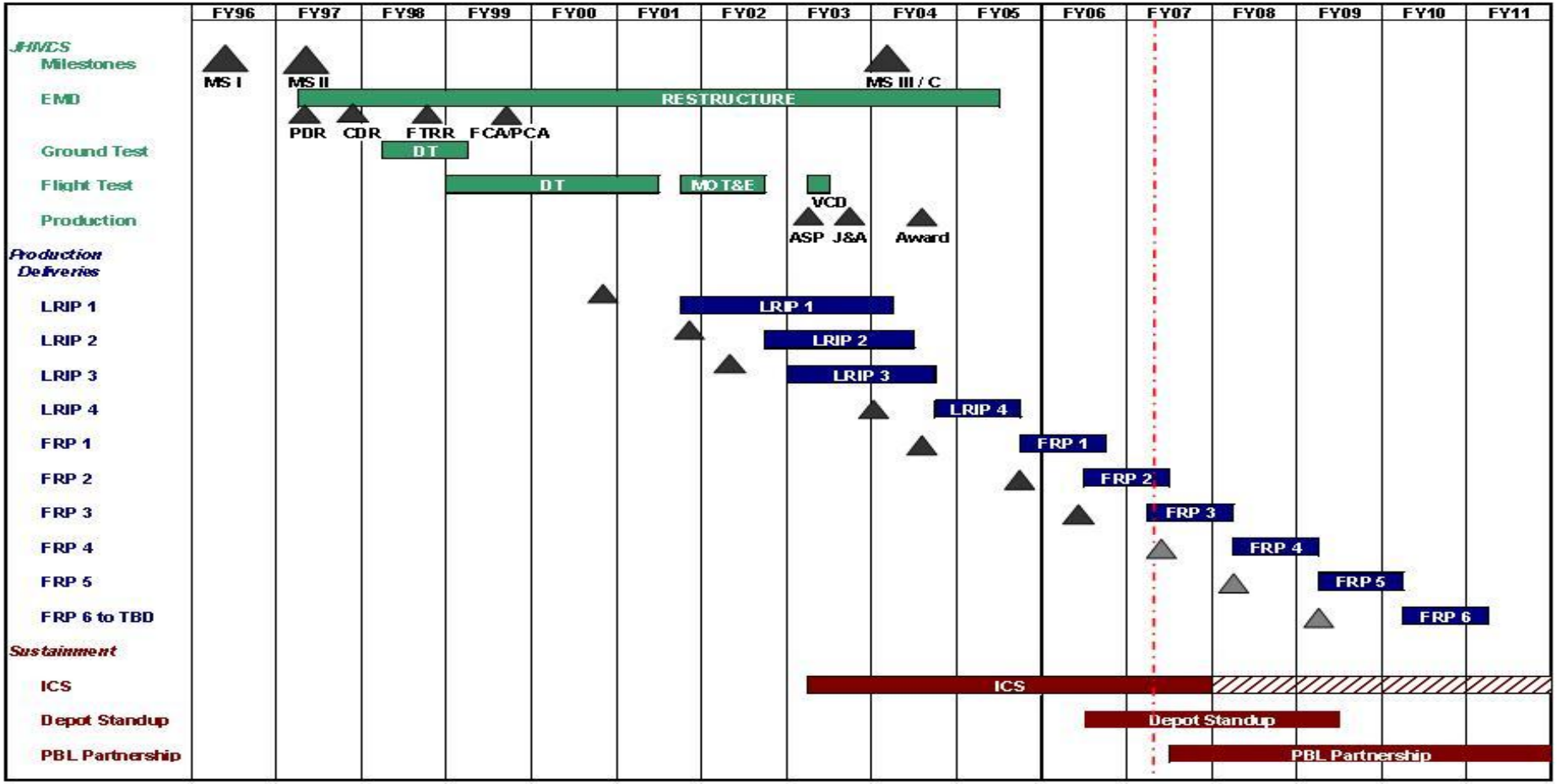

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207170F JHMCS	PROJECT NUMBER AND TITLE: 5226 Joint Helmet Mounted Cueing System

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FRP-4 Contract Award		2Q		
(U) Alternate Displays Implementation Contract Award		2Q		
(U) Alternate Displays Implementation Contract Completion				1Q

FY06 and prior events can be found in PE 0604012F.

PE NUMBER: 0207224F
PE TITLE: COMBAT RESCUE AND RECOVERY

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	50.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.261
5125	Personnel Recovery Vehicle	50.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.261

(U) A. Mission Description and Budget Item Justification

The Combat Rescue and Recovery PE 0207224F was used for the planned development of the HC-130 Tanker Conversion, and Personnel Recovery Vehicle (PRV) programs.

In preparation for the FY07 President's Budget, the PRV program was renamed Combat Search and Rescue Replacement Vehicle (CSAR-X) to more accurately describe its intended mission, and funding was transferred to a new development PE 0604261F, "Personnel Recovery Systems", project number 655213.

In preparation for the FY08 President's Budget, the HC-130 Tanker Conversion program was terminated and the HC-130 Recapitalization program was initiated, with development funds moved to PE 0604261F, project number 655249.

The primary mission of the Combat Search and Rescue Replacement Vehicle (CSAR-X) is to recover downed aircrew and isolated personnel from hostile or denied territory. Rescue forces may also conduct other missions inherent in their capabilities to conduct Personnel Recovery (PR), such as non-conventional assisted recovery, non-combatant evacuation operations, civil search and rescue, international aid, emergency medical evacuation, disaster/humanitarian relief, and insertion/extraction of combat forces.

Program descriptions are listed in Exhibits R-2a.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	113.825	0.000		
(U)	Current PBR/President's Budget	50.672	0.000		
(U)	Total Adjustments	-63.153			
(U)	Congressional Program Reductions	-42.000			
	Congressional Rescissions	-1.030			
	Congressional Increases				
	Reprogrammings	-20.000			
	SBIR/STTR Transfer	-0.123			

(U) Significant Program Changes:

The Personnel Recovery Vehcile program name has been changed to CSAR-X. The FY06 Defense Appropriations Act reduced the President's Request due to contract award delays. USAF transferred $20M to other priorities and also due to delay in contract award. CSAR-X RDT&E funding after FY06 has been transfered to PE

0604261F.

CSAR-X successfully completed Block 0 Milestone (MS) B on 31 Oct 06.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY	PROJECT NUMBER AND TITLE: 5125 Personnel Recovery Vehicle	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5125 Personnel Recovery Vehicle	50.672	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.261
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Combat Rescue and Recovery PE 0207224F was used for the planned development of the HC-130 Tanker Conversion, and Personnel Recovery Vehicle (PRV) programs.

In preparation for the FY07 President's Budget, the PRV program was renamed Combat Search and Rescue Replacement Vehicle (CSAR-X) to more accurately describe its intended mission, and funding was transferred to a new development PE 0604261F, "Personnel Recovery Systems", project number 655213.

In preparation for the FY08 President's Budget, the HC-130 Tanker Conversion program was terminated and the HC-130 Recapitalization program was initiated, with development funds moved to PE 0604261F, project number 655249.

The primary mission of the Combat Search and Rescue Replacement Vehicle (CSAR-X) is to recover downed aircrew and isolated personnel from hostile or denied territory. Rescue forces may also conduct other missions inherent in their capabilities to conduct Personnel Recovery (PR), such as non-conventional assisted recovery, non-combatant evacuation operations, civil search and rescue, international aid, emergency medical evacuation, disaster/humanitarian relief, and insertion/extraction of combat forces.

Program descriptions are listed in Exhibits R-2a.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) SPO support in development of test and evaluation master plan, acquisition strategy, preparation of Milestone B (MS B) documentation, development of request for proposals, and support of source selection activities and contract award.	4.581			
(U) Studies and Analysis	0.908			
(U) Government Test	0.230			
(U) Test and evlauation planning				
(U) Block 0 System Development and Demonstration (SDD) to include, but not limited to non-recurring engineering, test vehicle hardware, and data.	44.953			
(U)				
(U)				
(U)				
(U) Total Cost	50.672	0.000	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207224F COMBAT RESCUE AND RECOVERY**	PROJECT NUMBER AND TITLE **5125 Personnel Recovery Vehicle**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) APAF (including Advanced Procurement), PE 0207224F				65.900	657.625	624.000	804.343	960.459	Continuing	TBD
(U) RDT&E, AF PE 0604261F		200.695	279.958	344.908	368.310	342.700	261.770	260.415	Continuing	TBD

(U) D. Acquisition Strategy

The CSAR-X program will pursue an incremental development strategy. There will be a Block 0 and a Block 10 platform. Block 0 development will field a new Combat Search and Rescue (CSAR) weapon system. Block 0 will correct HH-60G force-size shortfalls while improving current CSAR capabilities of range, payload, armament, and defensive systems. Block 10 will provide for the insertion of additionally systems and improved technologies into the CSAR-X to meet all thresholds stated in the CDD.

Block 0 production deliveries will begin FY11, and have an Initial Operational Capability (IOC) in FY12. At the conclusion of Block 10 Operational Testing, the program will begin Block 10 aircraft production and the retrofitting of Block 0 aircraft to a Block 10 configuration. The program will procure and field 141 CSAR-X helicopters along with support equipment, spares, as well as aircrew and maintenance trainers and Type 1 training.

Block 10 development is planned to begin in FY08 after a successful Milestone A decision. Block 10 will develop two Test Vehicles to the Block 10 configuration allowing design, integration, and test of the Block 10 capabilities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207224F COMBAT RESCUE AND RECOVERY**

PROJECT NUMBER AND TITLE: **5125 Personnel Recovery Vehicle**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Studies and Analysis	TBD			0.908		0.000							0.908	
Block 0 SDD	CPIF/AF	Boeing Integrated Defense Sytems, Ridley Park, PA		30.421									30.421	
Test Vehicle Hardware	CPIF/AF	Boeing Integrated Defense Sytems, Ridley Park, PA		14.532									14.532	
Subtotal Product Development			0.000	45.861		0.000		0.000		0.000		0.000	45.861	0.000
Remarks:														
(U) Support														
	TBD												0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Government Test & Evaluation	413 FLTS, Eglin AFB			0.230									0.230	
Subtotal Test & Evaluation			0.000	0.230		0.000		0.000		0.000		0.000	0.230	0.000
Remarks:														
(U) Management														
	TBD			4.581									4.581	
Subtotal Management			0.000	4.581		0.000		0.000		0.000		0.000	4.581	0.000
Remarks:														
(U) Total Cost			0.000	50.672		0.000		0.000		0.000		0.000	50.672	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY	PROJECT NUMBER AND TITLE: 5125 Personnel Recovery Vehicle

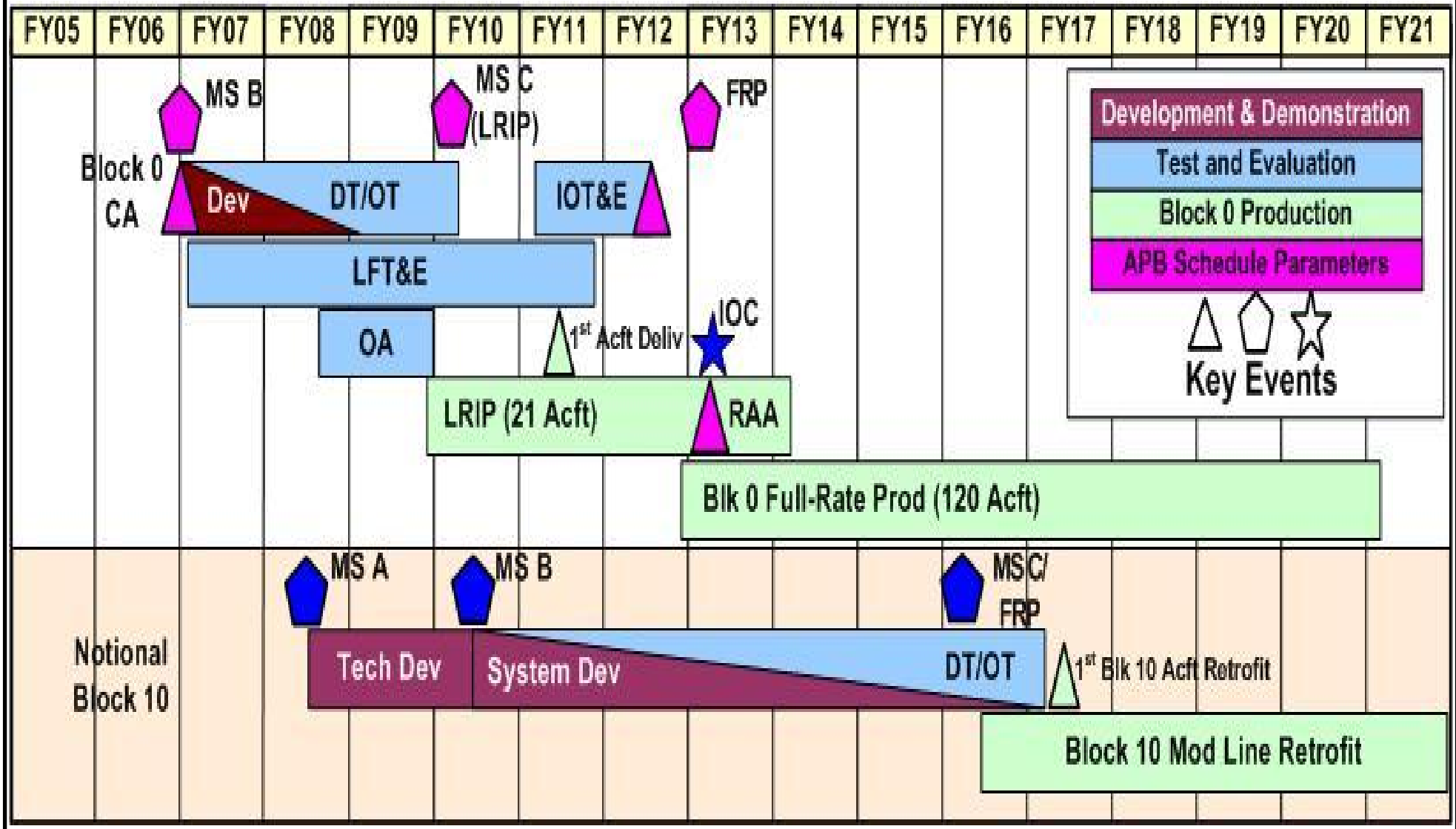

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY	PROJECT NUMBER AND TITLE: 5125 Personnel Recovery Vehicle

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) RFP Release	1Q			
(U) Conduct PRV Source Selection	1-4Q			
(U) Block 0 Milestone (MS) B		1Q		
(U) Contract Award		1Q		
(U) Block 10 MS A			3Q	

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PE NUMBER: 0207247F
PE TITLE: Air Force TENCAP

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207247F Air Force TENCAP

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	11.660	11.160	11.526	11.750	12.022	12.193	12.428	12.681	Continuing	TBD
0001 Air Force TENCAP	11.660	11.160	11.526	11.750	12.022	12.193	12.428	12.681	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Air Force TENCAP is executed by the Space Innovation and Development Center at Schriever Air Force Base, Colorado. Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, it increases the integration of national and space systems into service operations by:

--Exploiting existing national and space systems for tactical applications by conducting two- to eighteen-month rapid-prototyping technology projects, demonstrating the resulting capabilities in tests and exercises. It transitions these to warfighters for operational use or to other acquisition organizations for further development.

--Influencing the design and operation of future national and space systems for tactical applications by providing inputs into their development cycles.

--Educating and training operational forces about program activities and program-developed systems.

This program is in Budget Activity 7, Operational System Development, because its efforts develop capabilities to leverage operational systems in order to increase the effectiveness of tactical warfighting activities.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	11.661	11.202	11.419	11.607
(U) Current PBR/President's Budget	11.660	11.160	11.526	11.750
(U) Total Adjustments	-0.001	-0.042		
(U) Congressional Program Reductions				
Congressional Rescissions	-0.001	-0.042		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

None

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0001 Air Force TENCAP	11.660	11.160	11.526	11.750	12.022	12.193	12.428	12.681	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Air Force TENCAP is executed by the Space Innovation and Development Center at Schriever Air Force Base, Colorado. Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, it increases the integration of national and space systems into service operations by:

--Exploiting existing national and space systems for tactical applications by conducting two- to eighteen-month rapid-prototyping technology projects, demonstrating the resulting capabilities in tests and exercises. It transitions these to warfighters for operational use or to other acquisition organizations for further development.

--Influencing the design and operation of future national and space systems for tactical applications by providing inputs into their development cycles.

--Educating and training operational forces about program activities and program-developed systems.

This program is in Budget Activity 7, Operational System Development, because its efforts develop capabilities to leverage operational systems in order to increase the effectiveness of tactical warfighting activities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Exploit existing space and national systems for tactical applications through rapid-prototyping projects; influence the design and operation of future systems; educate and train operational forces	9.700	10.683	11.032	11.239
(U) Conduct Global Positioning System jammer detection and location (GPS JLOC) system projects	0.521	0.000	0.000	0.000
(U) Conduct adverse weather imaging system project (FOGLITE)	1.000	0.000	0.000	0.000
(U) Provide program support and other government support	0.439	0.477	0.494	0.511
(U) Total Cost	11.660	11.160	11.526	11.750

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

Projects are selected for development based upon needs identified by the program's customers - the Air Force's warfighting Major Commands - and approved via the Space Innovation and Development Center (SIDC) strategic planning process. Acquisition strategies for projects are chosen on a case-by-case basis for optimum results. Many projects are executed via existing contracts maintained by other agencies; others are executed via Air Force TENCAP contracts established with vendors responding to annual Broad Area Announcements issued by SIDC. In all cases the Department of Defense organization sponsoring a project is responsible for assuming acquisition, deployment, logistics, and budgetary responsibilities for the developed capability after it has been successfully demonstrated by Air Force

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207247F Air Force TENCAP**	PROJECT NUMBER AND TITLE **0001 Air Force TENCAP**

TENCAP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207247F Air Force TENCAP**

PROJECT NUMBER AND TITLE: **0001 Air Force TENCAP**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Exploiting existing systems through rapid-prototyping projects; influencing future systems; educating and training	Various	Various	173.517	9.700	Dec-05	10.683	Oct-06	11.032	Oct-07	11.239	Oct-08	Continuing	TBD	
FOGLITE	SS/CPFF	General Atomics, San Diego, CA	11.457	1.000	Jul-06	0.000		0.000		0.000		0.000	12.457	
GPS JLOC projects (including Nightshade and Namath)	SS/CPFF	NAVSYS Corp., Colorado Springs, CO	9.312	0.482	May-06	0.000		0.000		0.000		0.000	9.794	
GPS JLOC projects (Nightshade and Namath)	Various	Various	0.720	0.039	Feb-06	0.000						0.000	0.759	
Subtotal Product Development			195.006	11.221		10.683		11.032		11.239		Continuing	TBD	0.000
Remarks:														
(U) Support														
Program oversight	Various	Various	6.908	0.439	Dec-05	0.477	Nov-06	0.494	Dec-07	0.511	Dec-08	Continuing	TBD	
Subtotal Support			6.908	0.439		0.477		0.494		0.511		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			201.914	11.660		11.160		11.526		11.750		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

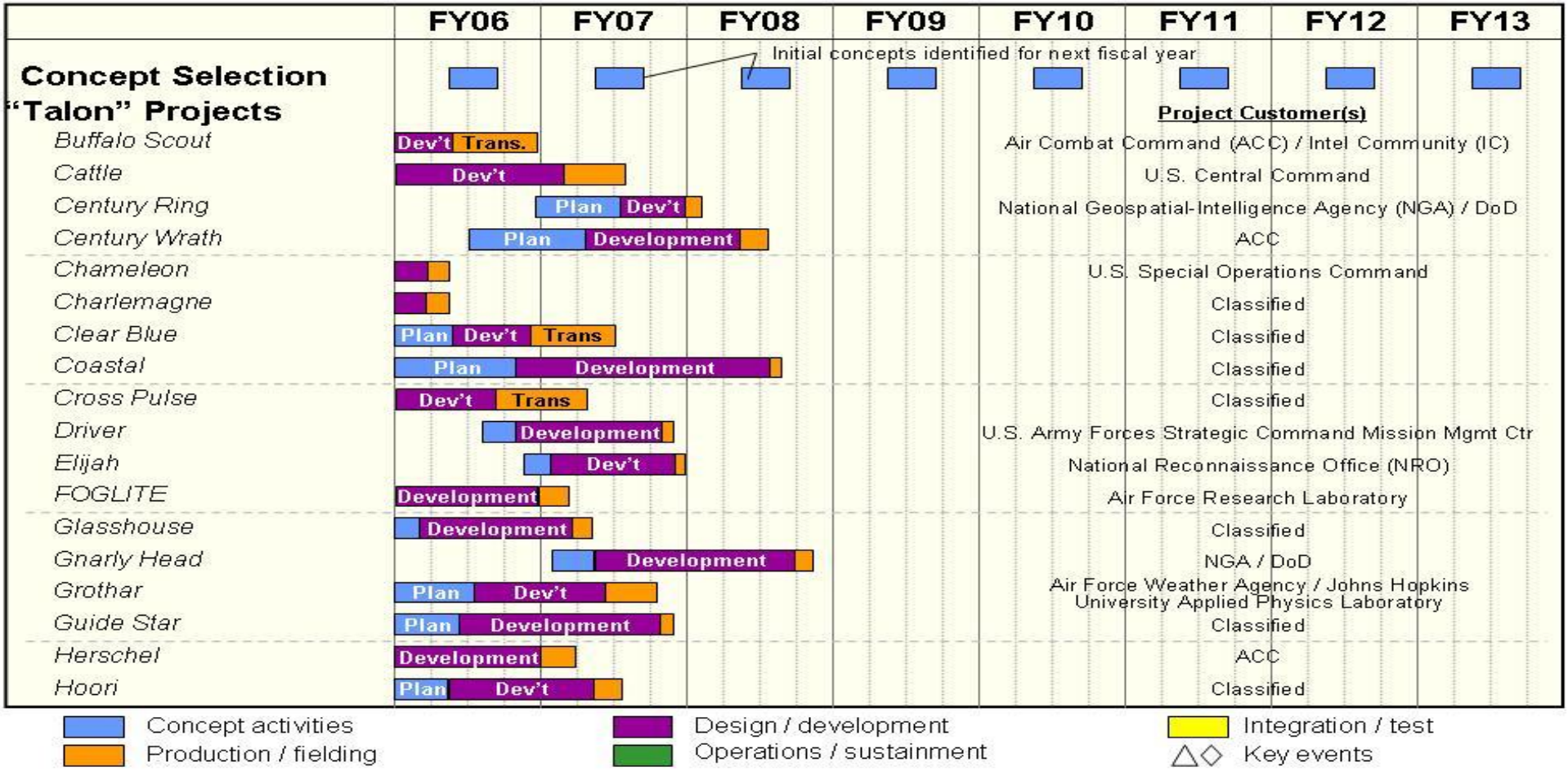

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

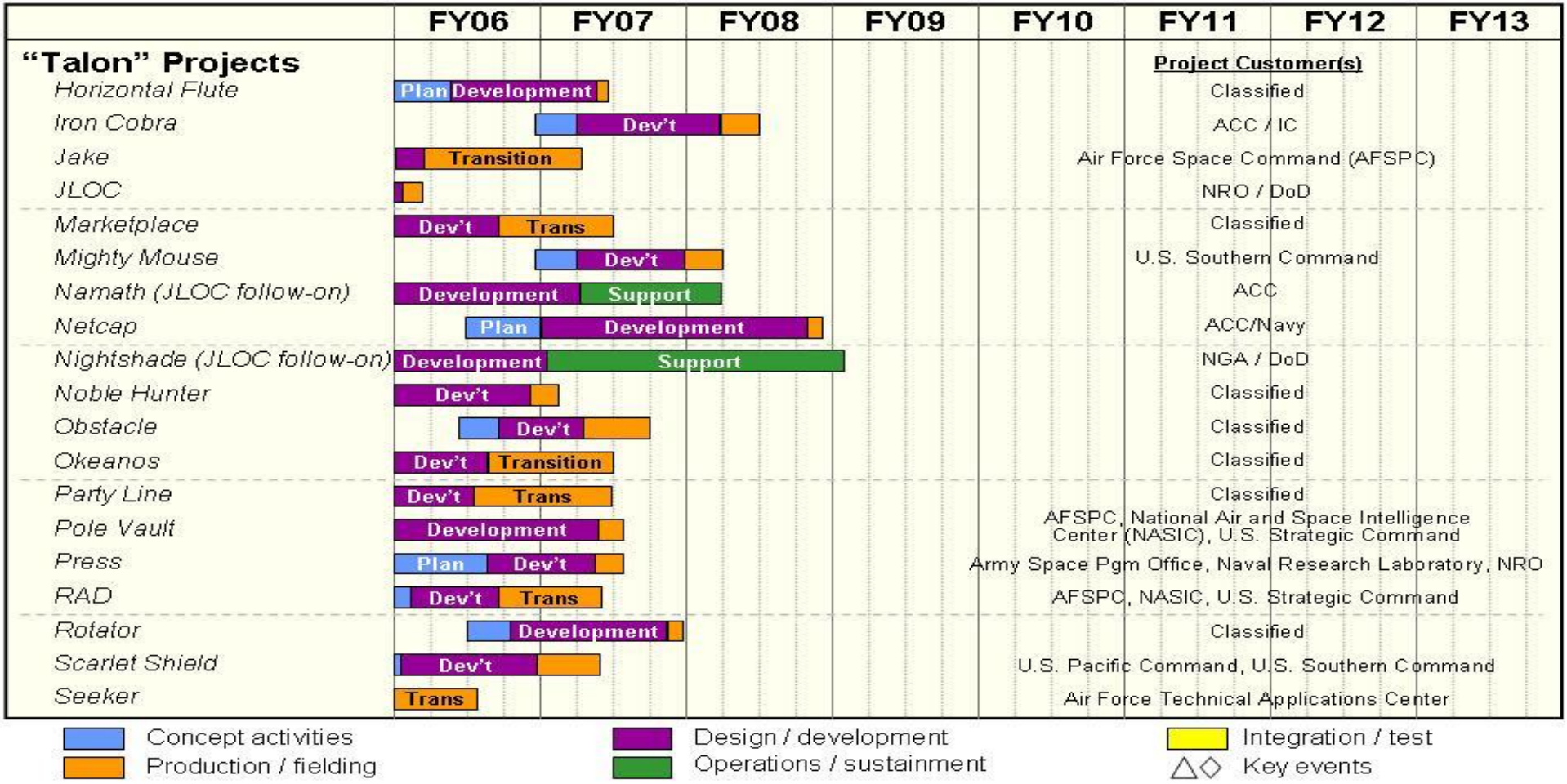

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

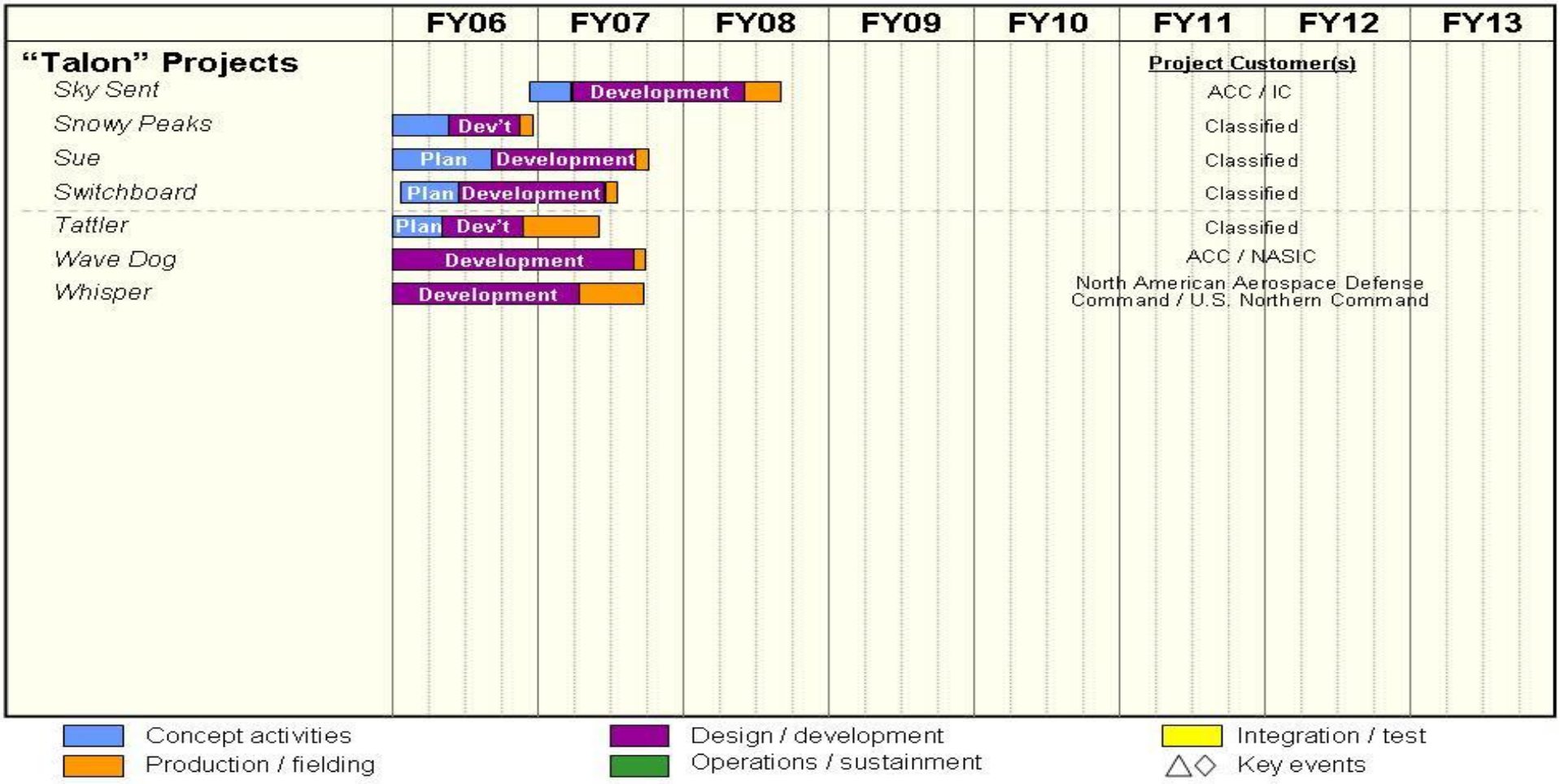

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207247F Air Force TENCAP**	PROJECT NUMBER AND TITLE **0001 Air Force TENCAP**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FY 2006 projects contracted	1Q			
(U) FY 2007 project concepts identified and approved	2-3Q			
(U) FY 2007 project contractor proposals requested/reviewed	2-4Q			
(U) FY 2007 projects approved for implementation	4Q			
(U) FY 2007 projects contracted		1Q		
(U) FY 2008 project concepts identified and approved		2-3Q		
(U) FY 2008 project contractor proposals requested/reviewed		2-4Q		
(U) FY 2008 projects approved for implementation		4Q		
(U) FY 2008 projects contracted			1Q	
(U) FY 2009 project concepts identified and approved			2-3Q	
(U) FY 2009 project contractor proposals requested/reviewed			2-4Q	
(U) FY 2009 projects approved for implementation			4Q	
(U) FY 2009 projects contracted				1Q
(U) FY 2010 project concepts identified and approved				2-3Q
(U) FY 2010 project contractor proposals requested/reviewed				2-4Q
(U) FY 2010 projects approved for implementation				4Q

Most project selection activities occur approximately per the timelines shown, but some projects are initiated on a rolling basis throughout each year in response to time-sensitive operational requirements.

PE NUMBER: 0207253F
PE TITLE: Compass Call

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	9.598	9.931	4.603	4.709	13.369	21.421	19.348	12.661	Continuing	TBD
4804 Compass Call	9.598	9.931	4.603	4.709	13.369	21.421	19.348	12.661	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The EC-130H COMPASS CALL is the USAF's wide-area, airborne Command and Control Warfare (C2W) / Information Operations (IO) weapon system. It interdicts adversary use of the electronic battlespace and is a key active component in the information battlespace and global war on terror. COMPASS CALL's sophisticated electronic combat system is capable of surgical denial or disruption of adversary radio frequency (RF) communications systems and sensors. The system was fielded in 1983 and to date has evolved through the Block 35/Baseline 0 configuration.

Due to the rapid advances in electronic technology, COMPASS CALL was designed to be easily modified and must continue to modernize and evolve to keep pace with adversary tactics and technology. Continuous development is required to maintain battlespace superiority. COMPASS CALL employs a spiral development and fielding strategy IAW AFPD 63-1 that puts capability into the warfighters hands as soon as practical and ensures each iteration of the weapon sysem is effective against the highest priority threats. That process requires a steady stream of development funds.

Development funds are required to accomplish subsystem additions and improvements such as the digital signal analysis and exciter subsystem (AXE), the special purpose emitter array (SPEAR), the IED Defeat subsystem (NOVA), the human machine interface (HMI), network centric operations, phased array transmit and receive apertures and other classified hardware and software developments necessary to counter military and commercial communications, C2 and sensor developments.

This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to pursue joint, allied, and coalition interoperability.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	9.907	4.469	0.000	0.000
(U)	Current PBR/President's Budget	9.598	9.931	4.603	4.709
(U)	Total Adjustments	-0.309	5.462		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.038		
	Congressional Increases		5.500		
	Reprogrammings	-0.030			
	SBIR/STTR Transfer	-0.279			

(U) Significant Program Changes:

(U) FY06 Congressional Adds totaling $5.4M includes $1.4M for Radar Situational Awareness and Targeting (RSAT) system concept demonstration, and $4.0M for network centric information operations improvements.

(U) FY07 Congressional Adds totaling $5.5M includes $1.0M for continuation of the RSAT system concept demonstration and $4.5M for additional operational system development.

(U) Program RDT&E was zeroed out in FY08 and FY09 when a new PE was established for Airborne Electronic Attack in FY04. The Air Force re-instated the RDT&E disconnect funding ($4.6M in FY08 and $4.7M in FY09) to restore the PE to their previous levels.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4804	Compass Call	9.598	9.931	4.603	4.709	13.369	21.421	19.348	12.661	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The EC-130H COMPASS CALL is the USAF's wide-area, airborne Command and Control Warfare (C2W) / Information Operations (IO) weapon system. It interdicts adversary use of the electronic battlespace and is a key active component in the information battlespace and global war on terror. COMPASS CALL's sophisticated electronic combat system is capable of surgical denial or disruption of adversary radio frequency (RF) communications systems and sensors. The system was fielded in 1983 and to date has evolved through the Block 35/Baseline 0 configuration.

Due to the rapid advances in electronic technology, COMPASS CALL was designed to be easily modified and must continue to modernize and evolve to keep pace with adversary tactics and technology. Continuous development is required to maintain battlespace superiority. COMPASS CALL employs a spiral development and fielding strategy IAW AFPD 63-1 that puts capability into the warfighters hands as soon as practical and ensures each iteration of the weapon sysem is effective against the highest priority threats. That process requires a steady stream of development funds.

Development funds are required to accomplish subsystem additions and improvements such as the digital signal analysis and exciter subsystem (AXE), the special purpose emitter array (SPEAR), the IED Defeat subsystem (NOVA), the human machine interface (HMI), network centric operations, phased array transmit and receive apertures and other classified hardware and software developments necessary to counter military and commercial communications, C2 and sensor developments.

This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to pursue joint, allied, and coalition interoperability.

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Development, integration, and test of classified techniques and electronic attack infrastructure (Special Purpose Emitter Array)	1.304	0.447	4.603	4.709
(U)	Development,integration, and test of Digital Signal Acqusition and Analysis Subsystem	1.443	2.234		
(U)	Integration and test of Block 35 Human Machine Interface (HMI)	1.451	1.788		
(U)	Congressional Add: Radar Situational Awareness and Targeting (RSAT) demonstration concept	1.400	1.000		
(U)	Congressional Add: Network centric information operations improvements	4.000			
(U)	Congressional Add: Operational system development		4.462		
(U)	Total Cost	9.598	9.931	4.603	4.709

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call	PROJECT NUMBER AND TITLE 4804 Compass Call

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0207253F, Aircraft Modification (3010)	29.474	46.818	84.674	74.588	69.840	70.096	70.538	70.990	Continuing	TBD
(U) PE 0207253F, Aircraft Initial Spares (3010)	14.036	14.433	15.160	15.753	16.197	16.398	16.759	17.127	Continuing	TBD

(U) D. Acquisition Strategy

COMPASS CALL baseline upgrades and quick reaction capabilities (QRC) developments are acquired sole-source through the 645th Aeronautical Systems Group (BIG SAFARI Program Office).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207253F Compass Call**

PROJECT NUMBER AND TITLE: **4804 Compass Call**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Compass Call RDT&E	SS/FFP& CPFF	BAE Systems, Nashua NH		9.598	Oct-05	4.469	Jan-07	4.603	Jan-08	4.709	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	9.598		4.469		4.603		4.709		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Primary Mission Equipment														
Compass Call RDT&E	CPFF	BAE Systems, Nashua NH				5.462	Jan-07					Continuing	TBD	TBD
Subtotal Primary Mission Equipment			0.000	0.000		5.462		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	9.598		9.931		4.603		4.709		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call	PROJECT NUMBER AND TITLE 4804 Compass Call

Compass Call Development

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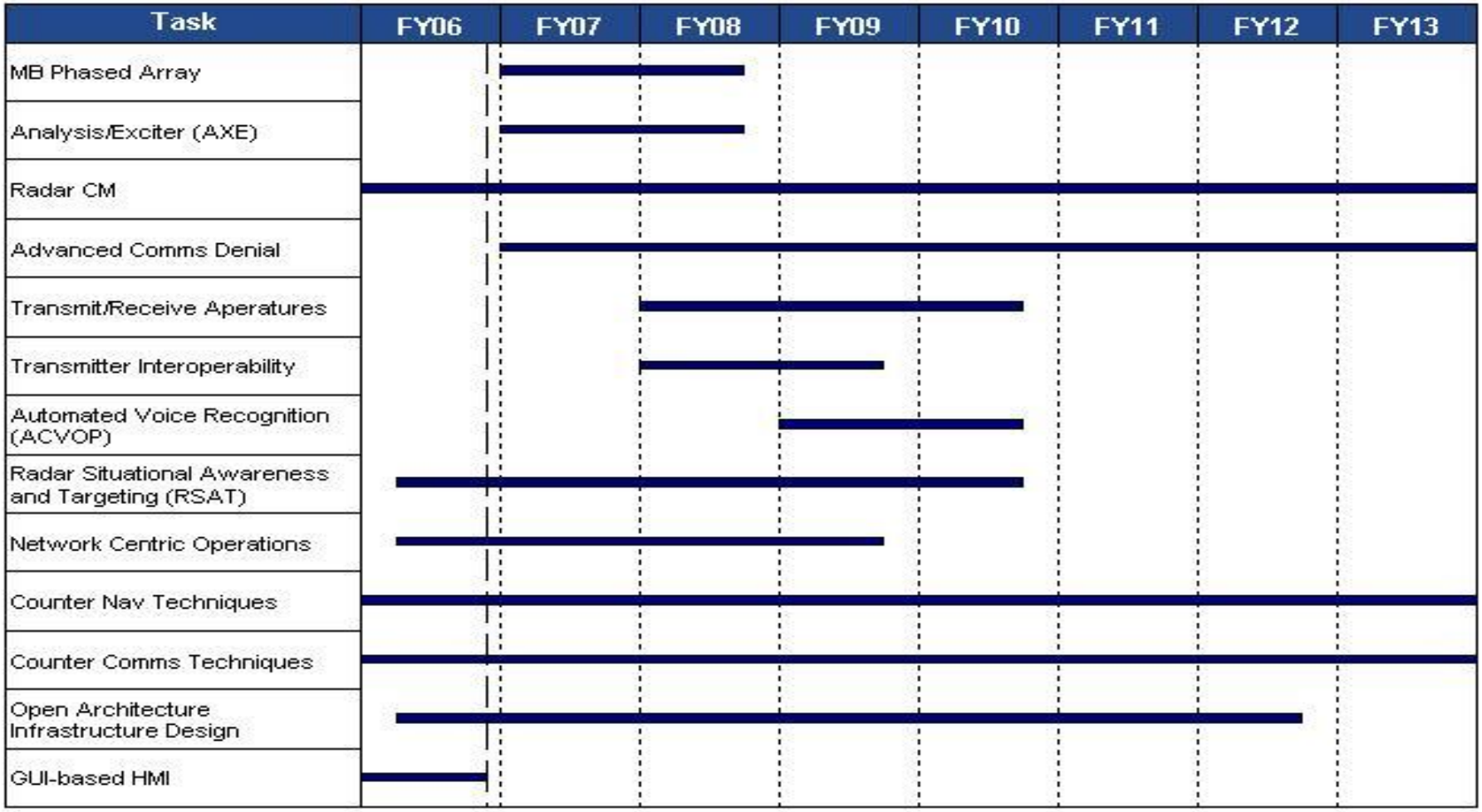

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Midband (MB) Phased Array Integration		1-4Q	1-3Q	
(U) Low-latency Analysis-Exciter (AXE) Integration		1-4Q	1-3Q	
(U) Radar Counter-measures (CM) Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Advanced Communications Denial Development		1-4Q	1-4Q	1-4Q
(U) Transmit and Receive Aperture Development			1-4Q	1-4Q
(U) EA Transmitter Interoperability Development			1-4Q	1-4Q
(U) Auto Voice Recognition (ACVOP) Integration				1-4Q
(U) Radar Situational Awareness and Targeting (RSAT) Study	2-4Q	1-4Q	1-4Q	
(U) Network Centric Operations Development	2-4Q	1-4Q	1-4Q	1-4Q
(U) Counter Nav Techniques Development	1-4Q	1-4Q	1-4Q	1-3Q
(U) Counter Comms Techniques Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Open Architecture Infrastructure Development	2-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207268F
PE TITLE: Aircraft Engine Component Improvement Program (CIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207268F Aircraft Engine Component Improvement Program (CIP)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	146.527	153.736	139.042	163.137	163.615	169.097	172.064	175.573	Continuing	TBD
1012 Aircraft Engine Component Improvement Program	146.527	153.736	139.042	163.137	163.615	169.097	172.064	175.573	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life. Historically, aircraft systems change missions, tactics, and environments to meet changing threats throughout their lives. New technical problems can develop in the engines through actual use and Engine CIP provides the means to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. The program starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP, through "Lead the Fleet" operational use and accelerated mission testing, finds and fixes engine-related problems ahead of operational impacts. Engine CIP addresses out-of-warranty usage/life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Engine CIP ensures continued improvements in engine R&M factors, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year Operations and Maintenance (O&M) and spares costs. Air Force Major Commands assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the out year cost avoidance provided by Engine CIP, out year support funding would have to be significantly increased.
This program is in Budget Activity 7 - Operational System Development, because all efforts support fielded systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	151.082	154.319	157.816	161.304
(U) Current PBR/President's Budget	146.527	153.736	139.042	163.137
(U) Total Adjustments	-4.555	-0.583		
(U) Congressional Program Reductions				
Congressional Rescissions	-0.006	-0.583		
Congressional Increases				
Reprogrammings	-0.389			
SBIR/STTR Transfer	-4.160			

(U) Significant Program Changes:
FY08 funding reduced to support higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207268F Aircraft Engine Component Improvement Program (CIP)	PROJECT NUMBER AND TITLE: 1012 Aircraft Engine Component Improvement Program

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
1012	Aircraft Engine Component Improvement Program	146.527	153.736	139.042	163.137	163.615	169.097	172.064	175.573	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines to maintain flight safety (highest priority), to correct service revealed deficiencies, to improve system operational readiness (OR) and reliability & maintainability (R&M), to reduce engine Life Cycle Cost (LCC), and to sustain engines throughout their service life. Historically, aircraft systems change missions, tactics, and environments to meet changing threats throughout their lives. New technical problems can develop in the engines through actual use and Engine CIP provides the means to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. The program starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP, through "Lead the Fleet" operational use and accelerated mission testing, finds and fixes engine-related problems ahead of operational impacts. Engine CIP addresses out-of-warranty usage/life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Engine CIP ensures continued improvements in engine R&M factors, which reduce out year support costs. Historically, R&M related Engine CIP efforts significantly reduce out year Operations and Maintenance (O&M) and spares costs. Air Force Major Commands assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the out year cost avoidance provided by Engine CIP, out year support funding would have to be significantly increased.
This program is in Budget Activity 7 - Operational System Development, because all efforts support fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continuing CIP tasks (such as, but not limited to, safety, improvement, support equipment, and repair tasks)	126.001	123.212	111.015	130.253
(U) Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests)	16.559	27.140	24.453	28.691
(U) Continuing mission support	3.967	3.384	3.574	4.193
(U) Total Cost	146.527	153.736	139.042	163.137

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
RELATED ACTIVITIES:										

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

(U) C. Other Program Funding Summary ($ in Millions)

(U) - PEs # 0604268A and #0604268N, Army/Navy Aircraft Engine CIPs for prior to 1996

(U) - PEs # 0203752A and #0205633N, Army/Navy Aircraft Engine CIPs for FY 1996-present

(U) D. Acquisition Strategy

Contracts within this Program Element are awarded sole source to engine manufacturers. CIP tasks are generally assigned to original engine manufacturers based on available funding and prioritization of candidate tasks.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207268F Aircraft Engine Component Improvement Program (CIP)**

PROJECT NUMBER AND TITLE: **1012 Aircraft Engine Component Improvement Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
GE-Evandale, OH	CPAF	Evandale, OH		41.607	Jan-06	46.233	Jan-07	41.657	Jan-08	48.876	Jan-09	Continuing	TBD	
Pratt & Whitney	CPAF	Hartford, CT		73.941	Jan-06	64.301	Jan-07	57.935	Jan-08	67.975	Jan-09	Continuing	TBD	
GE-Lynn, MA	CPFF	Lynn, MA		5.290	Jan-06	5.215	Jan-07	4.699	Jan-08	5.513	Jan-09	Continuing	TBD	
Rolls Royce/Allison	CPFF	Indianapolis, IN		1.100	Jan-06	4.097	Jan-07	3.691	Jan-08	4.331	Jan-09	Continuing	TBD	
Teledyne	CPFF	Toledo, OH		0.450	Jan-06	0.204	Jan-07	0.184	Jan-08	0.216	Jan-09	Continuing	TBD	
Honeywell	CPFF	Phoenix, AZ		3.000	Jan-06	3.011	Jan-07	2.713	Jan-08	3.183	Jan-09	Continuing	TBD	
Williams International	CPFF	Walled Lake, MI		0.500	Jan-06	0.151	Jan-07	0.136	Jan-08	0.159	Jan-09	Continuing	TBD	
Subtotal Product Development			0.000	125.888		123.212		111.015		130.253		Continuing	TBD	0.000
Remarks:														
(U) Support														
In House Support/ Misc				4.080	Oct-05	3.384	Oct-06	3.574	Oct-07	4.193	Oct-08	Continuing	TBD	
Subtotal Support			0.000	4.080		3.384		3.574		4.193		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
AF Flight Test Center - Edwards AFB, CA		Edwards AFB, CA		0.450	Jan-06	0.000	Jan-07	0.000	Jan-08	0.000	Jan-09	Continuing	TBD	
Arnold Engineering Development Center - Arnold AFB, TN		Arnold AFB, TN		8.566	Jan-06	13.667	Jan-07	12.314	Jan-08	14.448	Jan-09	Continuing	TBD	
NASA Glenn		Cleveland, OH		2.300	Jan-06	1.301	Jan-07	1.172	Jan-08	1.375	Jan-09		6.148	
Fuel		N/A		5.243	Jan-06	12.172	Jan-07	10.967	Jan-08	12.868	Jan-09		41.250	
Subtotal Test & Evaluation			0.000	16.559		27.140		24.453		28.691		Continuing	TBD	0.000
Remarks: Prior years have included fuel costs with the applicable contractors. Fuel to support T&E is now broken out separately.														
(U) Total Cost			0.000	146.527		153.736		139.042		163.137		Continuing	TBD	0.000

Footnote: Total prior to FY 2006 is not reflected above because the program was funded in procurement through FY 1979 and RDT&E funding began in FY 1980.

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

Not applicable. Engine CIP is a continuing engineering support program that funds 300-350 separate tasks per year.

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Not applicable. CIP is a continuing engineering support program that funds 300-350 separate engineering tasks per year.	1-4Q	1-4Q	1-4Q	1-4Q

PE NUMBER: 0207277F
PE TITLE: Chief's Innovation Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207277F Chief's Innovation Program

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.626	1.587	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4931 Eagle Vision	1.626	1.587	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Eagle Vision is a deployable ground station for programming and collecting panchromatic, multispectral, and synthetic aperture radar broad-area imagery from commercial earth remote sensing satellites and processing/merging it with national imagery for mission planning, topographic analysis, and intelligence-gathering purposes. The AF has an operational Eagle Vision system at Ramstein AFB, GE and the ANG has an operational system at Nevada ANG, Reno, NV, one at South Carolina ANG, McEntire ANG, SC, one at Hawaii ANG, Hickam AFB, HI, and one is being procured for the Alabama ANG. Program is in Budget Activity 7 because it provides for the development of technologies and capabilities in support of operational system development.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	1.695	1.612		
(U) Current PBR/President's Budget	1.626	1.587		
(U) Total Adjustments	-0.069			
(U) Congressional Program Reductions		-0.019		
Congressional Rescissions		-0.006		
Congressional Increases				
Reprogrammings	-0.038			
SBIR/STTR Transfer	-0.031	-0.033		

(U) Significant Program Changes:

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207277F Chief's Innovation Program	PROJECT NUMBER AND TITLE: 4931 Eagle Vision	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4931 Eagle Vision	1.626	1.587	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Eagle Vision is a deployable ground station for programming and collecting panchromatic, multispectral, and synthetic aperture radar broad-area imagery from commercial earth remote sensing satellites and processing/merging it with national imagery for mission planning, topographic analysis, and intelligence-gathering purposes. The AF has an operational Eagle Vision system at Ramstein AFB, GE and the ANG has an operational system at Nevada ANG, Reno, NV, one at South Carolina ANG, McEntire ANG, SC, one at Hawaii ANG, Hickam AFB, HI, and one is being procured for the Alabama ANG. Program is in Budget Activity 7 because it provides for the development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue to update baselines and reduce footprints on Eagle Vision units	0.147	0.439		
(U) Continue to provide sustaining system engineering and technical support	1.479	1.148		
(U) Total Cost	1.626	1.587	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN	6.095	5.247	5.687	5.801	5.917				Continuing	TBD

(U) D. Acquisition Strategy

Eagle Vision was approved to use Sole Source procurement via an International Agreement Competitive Restrictions (IACR) for Acquisition and Sustainment.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207277F Chief's Innovation Program**

PROJECT NUMBER AND TITLE: **4931 Eagle Vision**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
TBD	SS/FFP	Various		0.618	Nov-06	0.432	Nov-07					Continuing	TBD	TBD
Subtotal Product Development			0.000	0.618		0.432		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Support														
MITRE	SS/FFP	Various		0.627	Dec-06	0.655	Nov-07					Continuing	TBD	TBD
ITSP	C/FFP	Various		0.381	Dec-06	0.500	Nov-07					Continuing	TBD	TBD
Subtotal Support			0.000	1.008		1.155		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	1.626		1.587		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207277F Chief's Innovation Program**	PROJECT NUMBER AND TITLE **4931 Eagle Vision**

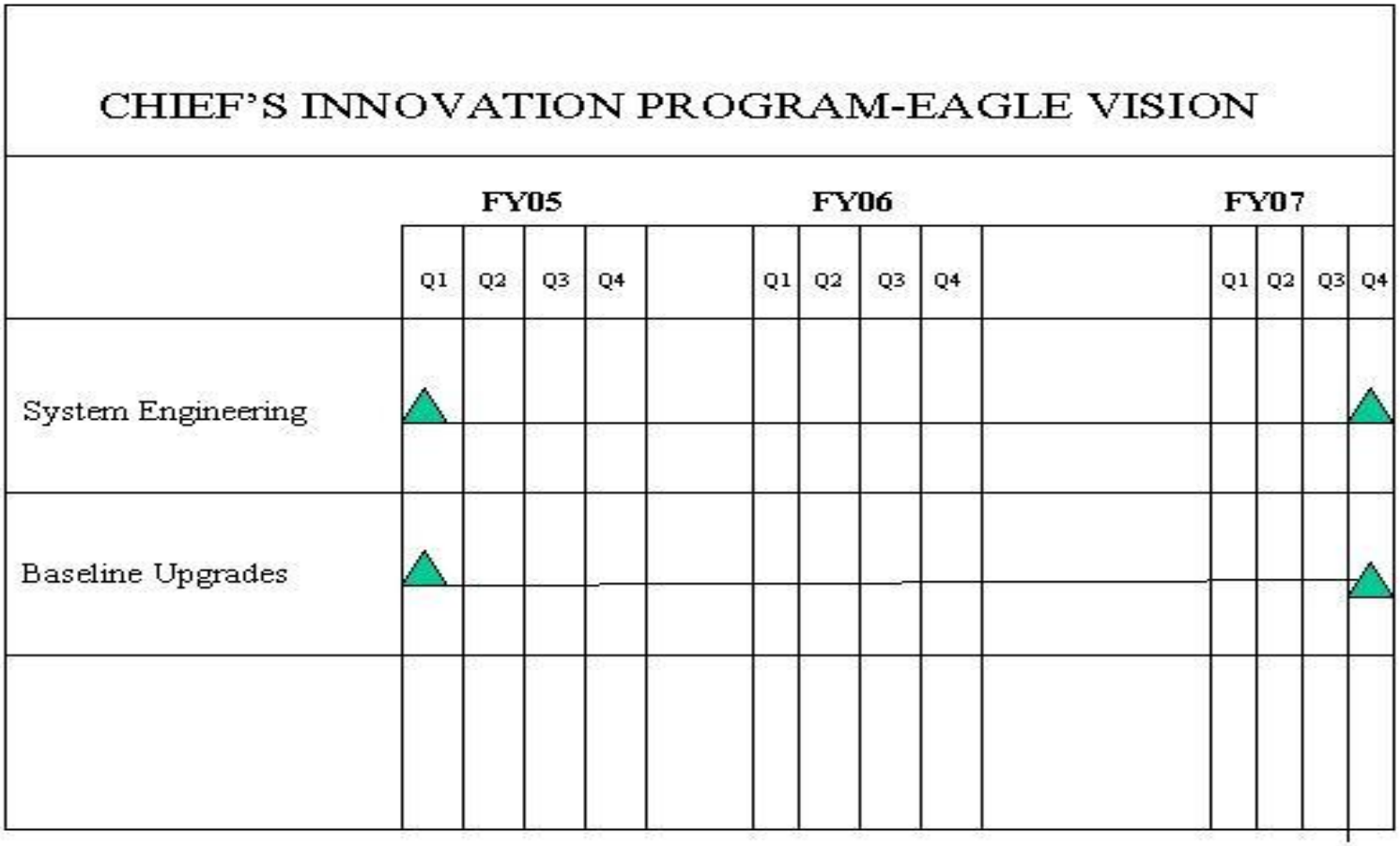

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207277F Chief's Innovation Program	PROJECT NUMBER AND TITLE: 4931 Eagle Vision

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue baseline upgrades and footprint reduction	1-4Q	1-4Q		
(U) Systems engineering	1-4Q	1-4Q		

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PE NUMBER: 0207325F
PE TITLE: Joint Air-to-Surface Standoff Missile (JASSM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	58.820	40.727	12.152	35.689	51.878	36.258	5.167	5.110	0.000	1,192.750
4515	Joint Air-to-Surface Standoff Missile (JASSM)	58.820	40.727	12.152	35.689	51.878	36.258	5.167	5.110	0.000	1,192.750

(U) A. Mission Description and Budget Item Justification

JASSM is an Air Force program designated ACAT 1C by the Defense Acquisition Board (DAB) during the Low Rate Initial Production (LRIP) decision. This program provides a long range, conventional air-to-surface, autonomous, precision guided, standoff cruise missile compatible with fighter and bomber aircraft able to attack a variety of fixed or relocatable targets. Aircraft integration is complete on the B-52H, F-16 (Block 50), B-1, and B-2. Objective aircraft include the F-15E, F-16 (Block 40), F-117, F-35, and F/A-18E/F. The JASSM Extended Range (ER) provides the capability to attack high value targets with precision, deeper into enemy territory while minimizing the threat to the launch aircraft. The threshold integration platform for JASSM-ER is the B-1. Follow-on development/component upgrades include two-way communications and time sensitive/moving surface targeting (Data Link , Maritime Interdiction) capabilities. The government is buying the JASSM system based on a contractor-developed, government-approved System Performance Specification (SPS) which became contractually binding at downselect. The contractor assumes total system performance responsibility as defined in the SPS and warrants system performance for 15 years. In late Summer/Fall 2004, OSD/Air Force convened an independent Reliability Enhancement Team (RET) to review JASSM processes, system engineering procedures, and investigate reliability/quality initiatives. The Air Force continues to implement RET recommendations through a combination of reliability initiatives, component upgrades, producibility enhancements, production quality reviews, comprehensive ground and flight testing, component obsolescence management, and pursue affordability initiatives. This activity is reflected in Budget Activity 7, Operational Systems Development, because production (Low Rate Initial Production) started in FY02.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	66.042	40.881	9.935	0.000
(U)	Current PBR/President's Budget	58.820	40.727	12.152	35.689
(U)	Total Adjustments	-7.222	-0.154		
(U)	Congressional Program Reductions	0.000	0.000		
	Congressional Rescissions	-0.002	-0.154		
	Congressional Increases	0.000	0.000		
	Reprogrammings	-6.032	0.000		
	SBIR/STTR Transfer	-1.188	0.000		

(U) Significant Program Changes:

Funding: In FY06 the Air Force reprogrammed $6M to support higher priority programs. In FY08 fundng increased by $2.2M for the JASSM-ER program. FY09

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207325F Joint Air-to-Surface Standoff Missile (JASSM)

increased by $35.689M ($11.5M for JASSM-ER, $1.689M for JASSM Data Link and $22.5M for JASSM Maritime Interdiction development Phase II)
Schedule: JASSM-ER production start moved from FY07 to FY08 due to Congressional direction.
Technical: Maritime Interdiction Phase II development added. Provides greater capability to target and destroy ships.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4515	Joint Air-to-Surface Standoff Missile (JASSM)	58.820	40.727	12.152	35.689	51.878	36.258	5.167	5.110	0.000	1,192.750
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

JASSM is an Air Force program designated ACAT 1C by the Defense Acquisition Board (DAB) during the Low Rate Initial Production (LRIP) decision. This program provides a long range, conventional air-to-surface, autonomous, precision guided, standoff cruise missile compatible with fighter and bomber aircraft able to attack a variety of fixed or relocatable targets. Aircraft integration is complete on the B-52H, F-16 (Block 50), B-1, and B-2. Objective aircraft include the F-15E, F-16 (Block 40), F-117, F-35, and F/A-18E/F. The JASSM Extended Range (ER) provides the capability to attack high value targets with precision, deeper into enemy territory while minimizing the threat to the launch aircraft. The threshold integration platform for JASSM-ER is the B-1. Follow-on development/component upgrades include two-way communications and time sensitive/moving surface targeting (Data Link , Maritime Interdiction) capabilities. The government is buying the JASSM system based on a contractor-developed, government-approved System Performance Specification (SPS) which became contractually binding at downselect. The contractor assumes total system performance responsibility as defined in the SPS and warrants system performance for 15 years. In late Summer/Fall 2004, OSD/Air Force convened an independent Reliability Enhancement Team (RET) to review JASSM processes, system engineering procedures, and investigate reliability/quality initiatives. The Air Force continues to implement RET recommendations through a combination of reliability initiatives, component upgrades, producibility enhancements, production quality reviews, comprehensive ground and flight testing, component obsolescence management, and pursue affordability initiatives. This activity is reflected in Budget Activity 7, Operational Systems Development, because production (Low Rate Initial Production) started in FY02.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue JASSM-ER Phase II development, including component upgrades/studies/development.	30.193	21.436	4.500	5.000
(U)	Continue JASSM Data Link development and weapon integration.	11.048	2.000	3.952	1.689
(U)	Begin JASSM Maritime Interdiction development and weapon integration.	0.000	10.000	0.000	22.500
(U)	Continue JASSM-ER and component refresh/upgrade/flight testing. Continue ground/live fire test support, Reliability Program, and affordability initiatives	13.332	4.917	2.200	5.000
(U)	Continue JASSM-ER aircraft integration on B-1 and other component integration efforts.	3.000	1.000	0.000	0.000
(U)	Continue program office/mission support.	1.247	1.374	1.500	1.500
(U)	Total Cost	58.820	40.727	12.152	35.689

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207325F Joint Air-to-Surface Standoff Missile (JASSM)**	PROJECT NUMBER AND TITLE **4515 Joint Air-to-Surface Standoff Missile (JASSM)**

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Missile Procurement (AF) JASSM	98.660	163.540	201.125	242.198	243.277	244.138	252.300	256.782	2,514.110	4,543.797
(U)	SEEK EAGLE	0.000	2.962	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.265

Total includes prior year not shown.

(U) D. Acquisition Strategy

All major contracts within this Program Element were awarded through full and open competition. The EMD phase option for JASSM is Cost Plus Award Fee (CPAF). JASSM-ER is being developed in two phases: Phase I Risk Reduction and Phase II Development. The Phase I Risk Reduction contract was a Firm Fixed Price (FFP) contract awarded June 2003. This phase completed March 2004. The Phase II Development contract is a CPAF contract awarded Feb 2004. The Weapon Data Link Development contract is a CPFF contract awarded March 2006.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207325F Joint Air-to-Surface Standoff Missile (JASSM)**

PROJECT NUMBER AND TITLE: **4515 Joint Air-to-Surface Standoff Missile (JASSM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
MDA - PDRR I	C/CPFF	McDonnell Douglas Aircraft, MO	120.571	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	120.571	120.571
LM - PDRR I& II	C/CPFF	Lockheed Martin, FL	151.109	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	151.109	151.109
LM - EMD & Follow on Development	C/CPAF	Lockheed Martin, FL	409.915	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	409.915	409.915
LM - JASSM ER Risk Reduction Phase I	SS/FFP	Lockheed Martin, FL	9.700	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	9.700	9.700
LM - JASSM ER Development Phase II	SS/CPAF	Lockheed Martin, FL	51.258	30.193	Feb-04	21.436	Feb-04	4.500	Jan-08	5.000	N/A	0.000	112.387	112.387
Data Link	SS/CPFF	Lockheed Martin, FL	0.000	11.048	Mar-06	2.000	Mar-06	3.952	Mar-08	1.689	Jan-09	0.000	18.689	18.689
LM - JASSM Maritime Interdiction			0.000	0.000	N/A	10.000	Jan-07	0.000	N/A	22.500	Mar-09	88.424	120.924	120.924
Subtotal Product Development			742.553	41.241		33.436		8.452		29.189		88.424	943.295	943.295
Remarks:														
(U) Support														
F-16 SPO	PO (in-house)	WPAFB, OH	26.605	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	26.605	26.605
B-52 SPO	PO (in-house)	Tinker AFB, OK	31.229	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	31.229	31.229
B-1 SPO	PO (in-house)	WPAFB, OH	3.031	3.000	N/A	1.000	N/A	0.000	N/A	0.000	N/A	0.000	7.031	7.031
Other Acft Integ	PO (in-house)	various	3.463	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	3.463	3.463
Sverdrup Inc.	C/CPAF	Eglin AFB, FL	15.952	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	15.952	15.952
Other Support	Misc	various	35.994	1.247	N/A	1.374	N/A	1.500	N/A	1.500	N/A	1.967	43.582	43.582
Subtotal Support			116.274	4.247		2.374		1.500		1.500		1.967	127.862	127.862
Remarks:														
(U) Test & Evaluation														
46TW	PO (in-house)	Eglin AFB, FL	82.600	13.332	N/A	4.917	N/A	2.200	N/A	5.000	N/A	8.022	116.071	116.071
Arnold Eng Dev Center	PO (in-house)	Arnold AFB, TN	5.522	0.000	N/A	0.000	N/A	0.000	N/A	0.000	N/A	0.000	5.522	5.522
Subtotal Test & Evaluation			88.122	13.332		4.917		2.200		5.000		8.022	121.593	121.593
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis						DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development			PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)		PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)			
(U) Total Cost	946.949	58.820	40.727	12.152	35.689	98.413	1,192.750	1,192.750

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)

JASSM Top Level

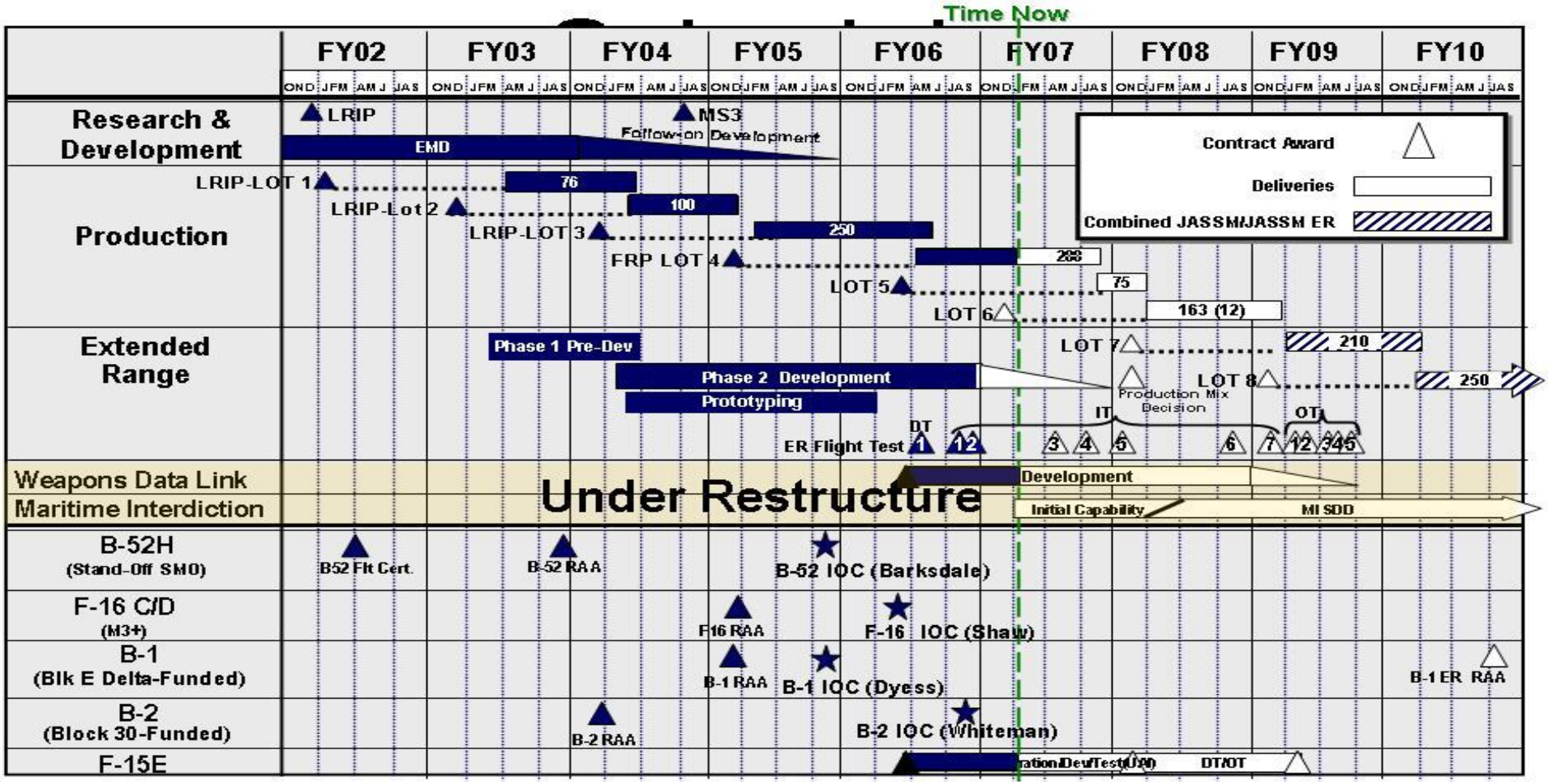

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Begin JASSM ER Flight Testing (DT/IT/OT)	2Q			
(U) Data Link Contract Award	2Q			
(U) Maritime Interdiction Contract Award (Phase I)		2Q		
(U) Maritime Interdiction Contract Award (Phase II)				2Q

PE NUMBER: 0207410F
PE TITLE: Air and Space Operations Center - Weapon System (AOC-WS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	51.796	76.849	111.557	133.469	131.676	125.974	131.309	133.933	Continuing	TBD
4372	Space C2 Operations	0.000	0.000	19.105	24.628	6.599	15.712	18.099	18.476	Continuing	TBD
5117	Integration Development	51.796	76.849	72.517	87.989	102.990	87.373	89.062	90.872	Continuing	TBD
5218	Applications Development	0.000	0.000	7.712	8.292	9.705	10.284	11.509	11.714	Continuing	TBD
5220	Unit Level	0.000	0.000	6.643	6.834	7.610	7.679	7.826	7.964	Continuing	TBD
5242	JADOCS NC	0.000	0.000	5.580	5.726	4.772	4.926	4.813	4.907	Continuing	TBD

Space Command and Control (C2) continues work started in the NCMC - TW/AA System, PE 0305906F. Starting in FY08, Space C2 funds were transferred to the 674372 project line in the AOC PE to consolidate and unify Air Force air and space C2 development and integration.

Starting in FY08 Project 674790 in PE 0207438F (Theater Battle Management Core Systems) was transferred to PE 0207410F (AOC WS) and placed into Projects 675218 (Applications Development) and 675220 (Unit Level).

C2 Execution Manager (C2EM, formerly Joint Automated Deep Operations Command System-Net-Centric (JADOCS-NC)) , Project 675242, is a continuation of the work started under the Family of Interoperable Programs (FIOP) Program Element for Web Enabled Execution Management Capability (WEEMC). WEEMC received funding in the FIOP PE in FY03 - $3.482M, FY04 - $4.580M, and FY05- $10.500M. With the cancellation of the FIOP PE, JADOCS-NC received funding from Joint Forces Command (JFCOM) in FY06, while the Joint Staff supported WEEMC development and sought alternative sources of funds for FY06 and FY07. The Air Force normalized the funding line for C2EM in FY08 and programmed dollars throughout the Future Years Defense Program (FYDP) for this important effort.

(U) A. Mission Description and Budget Item Justification

The Air and Space Operations Center Weapon System (AOC WS) program element provides development of Command and Control (C2) capabilities across the entire spectrum of air and space operations from the strategic to the tactical level. There are five projects within the AOC WS program element.

Space C2 provides integrated space information and command and control of space forces for the Joint Functional Component Command for Space (JFCC-Space) and CDR USSTRATCOM.

Integration Development supports the Air and Space Operations Center Weapon System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS). AOC WS is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Coalition/Joint Force Air Component Commander (C/JFACC) for planning, executing and assessing theater-wide air and space operations.

Application Development supports the Theater Battle Management Core Systems program which develops force-level command, control and intelligence applications and infrastructure providing core air battle planning, management and execution capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

Unit Level (UL) supports two primary mission areas: UL Operations software systems provide both the scheduling and mission preparation activities at the wing and squadron level and the capabilities to report and track the success of each mission and influence decisions on future Air Battle Planning to refine future missions. UL Intel capabilities ensure detailed threat, target and imagery information are made available to mission commanders and aircrews planning current flight operations.

C2 Execution Manager (C2EM) [formerly Joint Automated Deep Operations Command System (JADOCS) - Net Centric (NC)] continues to develop Web Enabled Execution Management Capability (WEEMC) and the existing Army ACTD JADOCS to provide new web based joint mission execution management tools for the warfighter.

This program is Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	67.029	87.483	89.994	93.948
(U)	Current PBR/President's Budget	51.796	76.849	111.557	133.469
(U)	Total Adjustments	-15.233			
(U)	Congressional Program Reductions		-10.342		
	Congressional Rescissions		-0.292		
	Congressional Increases				
	Reprogrammings	-13.368			
	SBIR/STTR Transfer	-1.865			

(U) Significant Program Changes:

In FY06, $13.368M was reprogrammed from Program Element 0207410F, Project 675117 for higher Air Force priorities.
In FY08 and out, funding for 675218 Applications Development, 675220 Unit Level, 675242 JADOCS-NC, and 675372 Space C2 was moved to PE 0207410F.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4372 Space C2 Operations	0.000	0.000	19.105	24.628	6.599	15.712	18.099	18.476	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Space Command and Control (C2) continues work started in the NCMC - TW/AA System, PE 0305906F. Starting in FY08, Space C2 funds were transferred to the 674372 project line in the AOC PE to consolidate and unify Air Force air and space C2 development and integration.

(U) A. Mission Description and Budget Item Justification

Space Command and Control (C2) system provides integrated space information and C2 of space forces for the Joint Functional Component Command for Space (JFCC-Space). Space C2 System builds on the operationally accepted pathfinder Single Integrated Space Picture (SISP) system. The Space C2 system will provide a net-centric, service oriented, technical implementation architecture that meets JFCC-Space top priority requirements. This program develops an integrated C2 solution that consumes and integrates space information to provide JFCC-Space and CDR USSTRATCOM with situational awareness of space assets (e.g., location and status of forces provided by Space Situational Awareness (SSA) systems), notification and assessment of space events, course of action development, and ability to command space forces. Space C2 system will improve the ability of JFCC-Space to fulfill assigned responsibilities of warning support/assessment of space attack, global coordination and conduct of space campaign planning, provide continuous situational awareness of assigned assets, coordinate on space intelligence requirements and intelligence campaign plans, provide operational support for space capabilities to Standing Joint Force Headquarters, conduct planning, tasking, integration, command, control and operational execution for global space operations as directed by CDRUSSTRATCOM for support to combatant commanders and other JFCCs and JTFs.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Space C2 Technology Risk Reduction: Demonstrations, Operational Pilots, evaluation of 3rd party-developed space services, and initial Joint Space Operations Center (JSpOC) Integration baseline. Develops prototypes and demonstrates higher-risk, new capabilities for technical and operational evaluation. Also develops the first technical baseline for an integrated Space and Theater C2 architecture and establishes the process for space data registry.			8.592	4.065
(U) Space C2 System: develop, test, and deliver space C2 services that will integrate Space Situational Awareness (SSA) data to provide an integrated space information environment for the JSpOC C2 node and improved deliberate assessment, planning, tasking and course of action (COA) development capability. Specifically, this system will provide Blue Operations Capability (OPSCAP), Systems Capability (SYSCAP), Blue Space Order of Battle (OOB), Red/Gray Space OOB (as available from intelligence sources), Status Reporting, monitoring of space events and operations, and theater situational awareness. Continues to develop an integrated Space/Theater C2 operational environment and service oriented architecture.			10.513	20.563
(U) Total Cost	0.000	0.000	19.105	24.628

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations & Maintenance, PE 0305906F	0.000	0.000	2.000	2.000	0.000	0.000	0.000	0.000	0.000	4.000

(U) D. Acquisition Strategy

Continuation of Integrated Space Command and Control (ISC2) contract awarded with full and open competition. Uses rapid development acquisition strategy based on spiral/incremental development with emphasis on risk reduction technology demonstrations and operational pilots. Additionally, multiple demonstrations and pilots each year will prove out development processes prior to the Milestone B decision.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

PROJECT NUMBER AND TITLE: **4372 Space C2 Operations**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Space C2 Risk Reduction and Space C2 System Development	CP/AF	Lockheed Martin, Colorado Springs, CO				0.000		14.415	Dec-07	19.169	Nov-08	0.000	33.584	TBD
						0.000						0.000	0.000	TBD
Subtotal Product Development			0.000	0.000		0.000		14.415		19.169		0.000	33.584	TBD
Remarks:														
(U) Support														
Systems Engineering	CP/FF	MITRE, Colorado Springs, CO						2.525	Nov-07	2.626	Nov-08	0.000	5.151	TBD
A&AS	CP/FF	ITSP, Colorado Springs, CO						1.766	Nov-07	2.379	Nov-08		4.145	
Program Support		Colorado Springs, CO						0.399	Nov-07	0.454	Nov-08	0.000	0.853	TBD
Subtotal Support			0.000	0.000		0.000		4.690		5.459		0.000	10.149	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.000		19.105		24.628		0.000	43.733	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE 4372 Space C2 Operations

Space C2 Schedule

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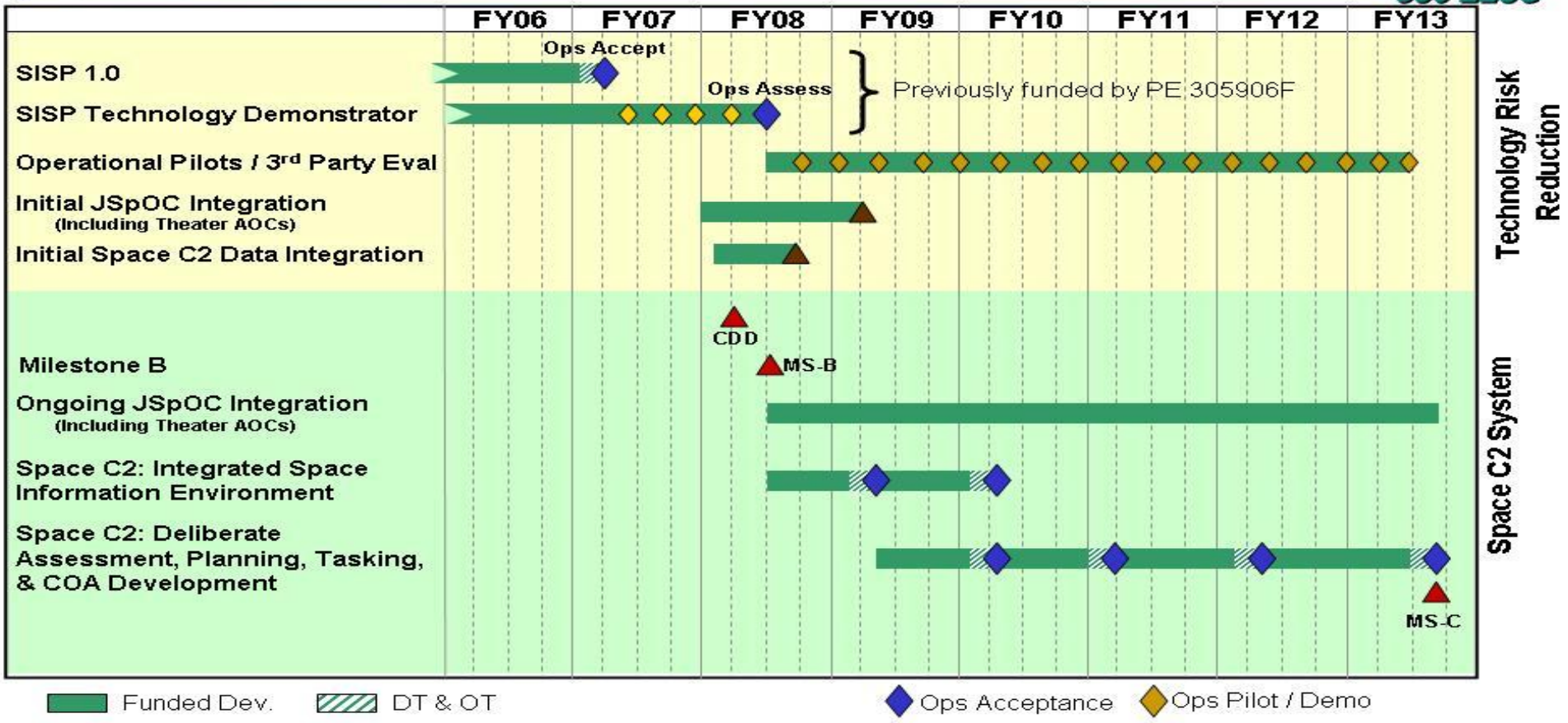

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Space C2 Operations

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Space C2 Risk Reduction Demonstrations, Pilots			3-4Q	1-4Q
(U) Initial JSpOC Integration			1-4Q	1Q
(U) Space C2 System: Integrated Space Information Environment (Initial SECRET level integrated space C2 operational environment)			1-3Q	
(U) Space C2 MS B			3Q	
(U) Development of Integrated Space Information Environment			3-4Q	1-4Q
(U) Development of Deliberate Assessment, Planning, Tasking, and COA Development				2-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5117 Integration Development	51.796	76.849	72.517	87.989	102.990	87.373	89.062	90.872	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air and Space Operations Center Weapon System (AOC WS), AN/USQ-163 Falconer, the senior element of the Theater Air Control System (TACS), is the weapon system the Commander, Air Force Forces (COMAFFOR) provides the Coalition/Joint Force Air Component Commander (C/JFACC) for planning, executing and assessing theater-wide air and space operations. The C/JFACC provides air and space support to the Coalition/Joint Forces Commander (C/JFC) by coordinating, deconflicting and assessing the progress of various weapon systems to advance the C/JFC's campaign. The C/JFACC employs the weapon system to plan, execute and assess theater-wide air and space operations. The AOC-WS develops operations strategy and planning documents. The weapon system also disseminates tasking orders, executes day-to-day peacetime and combat air and space operations, and provides rapid reaction to immediate situations by exercising positive control of friendly forces.

The AOC WS Integration Development project integrates system hardware and software to make the AOC WS a viable weapons system. The program consists of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and Support AOCs that are configured according to mission need. The project will develop and integrate
C2 and ISR capabilities through software and hardware improvements to the AOC WS baseline. To keep the future AOC Weapon System evolving to meet warfighter needs, the AOC WS program plans to spirally develop the AOC with capability increments. The AOC WS uses the Weapon System Integrator (WSI) to ensure system of systems perspective and systems engineering rigor, to move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments, to make recommendations on transitions to the "to be" architecture, and to conduct other weapon system standardization activities as defined in AOC WS requirements documents. The AOC WS Integration Development program provides a structure to transition and act as the focal point for systems integration, technical transition, and process refinement for rapidly evolving C2 programs, processes and concepts.
The program is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue AOC development of items to include, but not limited to, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.		32.940	42.396	18.779
(U) Integration to include, but not limited to, legacy systems, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.	15.221	19.710	5.700	20.295
(U) Modernization & Integration Systems Engineering Program Management and Data	5.756	4.100	4.321	13.256
(U) Integration Training (Type 1, Part Task Trainer, Distributed Mission Operations)	1.219	0.600	0.600	9.881

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Modernization Integration Test and Evaluation	4.513	0.700	0.700	7.096
(U) Government Support to include, but not limited to, Government Systems Engineering, Government Test	14.448	14.902	14.800	14.562
(U) Program Management Support	10.639	3.897	4.000	4.120
(U) Total Cost	51.796	76.849	72.517	87.989

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF PEC: 0207410F; BPAC: 83453A	19.910	23.009	43.151	34.805	52.935	28.637	22.137	31.451	Continuing	TBD

(U) D. Acquisition Strategy

The Air and Space Operations Center Weapon System selected a Weapon System Integrator (WSI) through full and open competition, to ensure system of systems perspective and systems engineering rigor and to move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments. The acquisition strategy builds on existing capabilities, using evolutionary acquisition and spiral development, to standardize, modernize and sustain AOC WSs.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 5117 Integration Development

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AOC Software Integration	CPAF	LMMS, Colorado Springs, CO	9.400	0.000		13.400	Jan-07	0.000		0.000		0.000	22.800	TBD
Modernization & Integration	CPAF	ITSP & LMMS, Hanscom AFB, MA, Other	2.206	8.117	Mar-06	0.000	Jan-07	14.200	Nov-07	54.347	Nov-08	Continuing	TBD	TBD
Integration & Version Upgrades 10.1.1, 10.2	CPAF	LMMS, Hanscom AFB, MA		15.223	Feb-06	25.850	Jan-07	2.517	Nov-07	2.860	Nov-08	Continuing	TBD	TBD
Training	MIPR	AFMC/ESC, Hanscom AFB, MA	13.925	2.800	Nov-05	0.367	Nov-06	0.800	Dec-07	0.462	Dec-08	Continuing	TBD	TBD
Other Contracts (GSA, ETC)	MIPR	Various	28.723	9.139	Nov-05	3.770	Nov-06	0.000	Dec-07	0.000	Dec-08	Continuing	TBD	TBD
Increment Development	CPAF	LMMS , Colorado Springs, CO	9.363	2.000	Feb-06	18.800	Jan-07	37.000	Jan-08	12.100	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			63.617	37.279		62.187		54.517		69.769		Continuing	TBD	TBD
Remarks:														
(U) Support														
Systems Engineering	CPFF	MITRE, Bedford, MA	9.883	7.432	Oct-05	7.177	Oct-06	10.700	Oct-07	11.000	Oct-08	Continuing	TBD	TBD
Program Support	FFP	A&AS AFMC/ESC, Hanscom AFB, MA	13.086	3.400	Dec-05	2.780	Dec-06	2.464	Dec-07	2.538	Dec-08	Continuing	TBD	TBD
Program Office Support	Various	AFMC/ESC, Hanscom AFB, MA	2.956	1.300	Oct-05	1.492	Oct-06	1.536	Oct-07	1.582	Oct-08	Continuing	TBD	TBD
Subtotal Support			25.925	12.132		11.449		14.700		15.120		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
46TS	MIPR	Eglin AFB, FL	3.424	2.385	Nov-05	3.213	Nov-06	3.300	Nov-07	3.100	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			3.424	2.385		3.213		3.300		3.100		Continuing	TBD	TBD
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207410F Air and Space Operations Center - Weapon System (AOC-WS)**	**5117 Integration Development**

(U) Total Cost	92.966	51.796	76.849	72.517	87.989	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

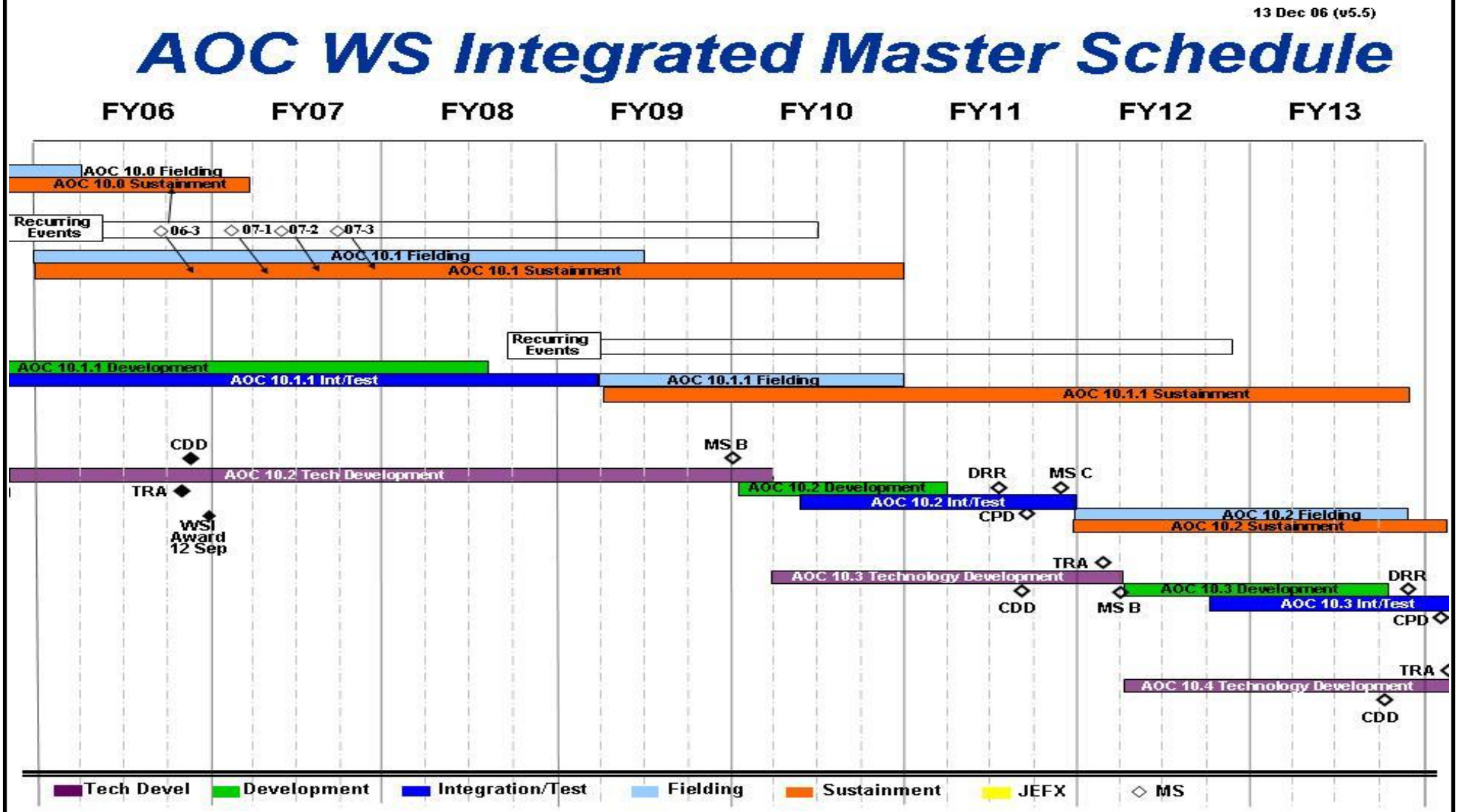

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Increment 10.1 Fielding	1-4Q	1-4Q	1-4Q	1-2Q
(U) Contract Award	4Q			
(U) Increment 10.1.1 Development	1-4Q	1-4Q	1-3Q	
(U) Increment 10.1.1 Fielding				2-4Q
(U) Increment 10.2 Technology Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Increment 10.2 MS B				4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 5218 Applications Development

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5218 Applications Development	0.000	0.000	7.712	8.292	9.705	10.284	11.509	11.714	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Starting in FY08, Project 674790 (Theater Battle Management Core Systems) in PE 0207438F was transferred to PE 0207410F (AOC WS), Projects 675218 (Applications Development) and 675220 (Unit Level).

(U) A. Mission Description and Budget Item Justification

The Theater Battle Management Core Systems (TBMCS)-Force Level program, will develop force-level command, control and intelligence applications and infrastructure providing core air battle planning, management and execution capabilities. This development effort focuses on, but is not limited to support of the Joint Forces Air Component Commander, the Air and Space Operations Center (AOC) and the wing and unit levels to include: planning and replanning of the Air Battle Plan; generation and dissemination of the Air Tasking Order; air and space defensive planning and execution; targeting; weaponeering; and numerous other applications supporting air operations command and control. It also evaluates future air and space command and control concepts identified through real world operations, exercises and demonstrations and incorporates new capability via evolutionary acquisition. The follow-on to TBMCS will continue to develop and deliver these capabilities.

Starting in FY08, some TBMCS RDT&E funds were reprogrammed to O&M to ensure adequate sustainment support for dual software baselines required for continued Joint Service interoperability.

The program is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) TBMCS/Follow-on Spiral Development	0.000	0.000	5.376	5.956
(U) TBMCS/Follow-on Training Development	0.000	0.000	1.686	1.686
(U) Test Support	0.000	0.000	0.650	0.650
(U) Total Cost	0.000	0.000	7.712	8.292

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207410F, WSC 834520, PROG BG1000	0.000	0.000	11.944	12.075	16.265	15.216	15.567	15.928	Continuing	TBD
(U) O&M, PE 0207410F, PROG BG1000			17.295	17.188	18.601	17.756	16.965	16.914	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**	PROJECT NUMBER AND TITLE **5218 Applications Development**

(U) D. Acquisition Strategy

Projects will be awarded following full and open competition and will use an evolutionary acquistion strategy based on spiral development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

PROJECT NUMBER AND TITLE: **5218 Applications Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Increment/Spiral Development	TBD	TBD	0.000	0.000		0.000		5.912	Oct-08	6.492	Oct-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		5.912		6.492		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Office Support	TBD	TBD	0.000	0.000		0.000		1.150	Oct-08	1.150	Oct-09	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		1.150		1.150		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test Support	MIPR	46TS, Eglin AFB, FL	0.000	0.000		0.000		0.650	Oct-08	0.650	Oct-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.650		0.650		Continuing	TBD	TBD
Remarks:														
(U) Management														
												Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.000		7.712		8.292		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE 5218 Applications Development

Schedule

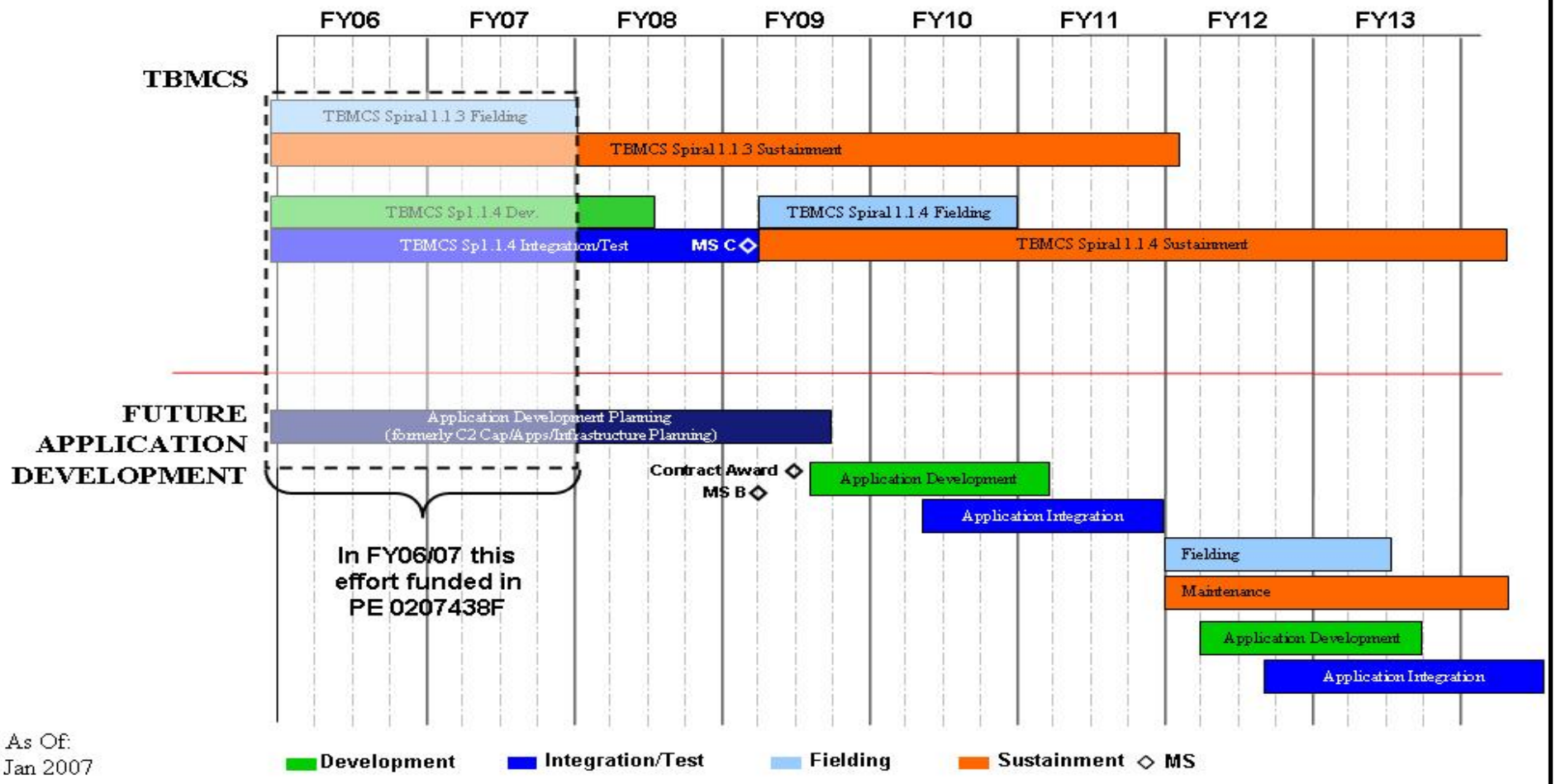

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5218 Applications Development

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) TBMCS Spiral 1.1.4			1-4Q	1-4Q
(U) Follow-on Effort				2-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 5220 Unit Level

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5220 Unit Level	0.000	0.000	6.643	6.834	7.610	7.679	7.826	7.964	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Starting in FY08 Project 674790 (Theater Battle Management Core Systems) in PE 0207438F was transferred to PE 0207410F (AOC WS), Projects 675218 (Applications Development) and 675220 (Unit Level).

(U) A. Mission Description and Budget Item Justification

The Unit Level (UL) program, as the follow on to Theater Battle Management Core Systems-Unit Level, develops, integrates, fields, and maintains an evolving sequence of increasing software capabilities that support the execution of the air battle plan and the air tasking order message received from the force level systems. Unit Level Operations software systems provide both the scheduling and mission preparation activities at the wing and squadron level and the capabilities to report and track the success of each mission and influence decisions on future Air Battle Planning to refine future missions. Unit Level Intel capabilities ensure detailed threat, target and imagery information are made available to mission commanders and aircrews planning current flight operations. UL is fielded to the Wing Operations Center (WOC), the Maintenance Operations Center (MOC), the Squadron Operations Center (SOC), and many other work-centers.

The program is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Unit Level Operations and Intel spiral software development/integration (formerly known as TBMCS-Unit Level)	0.000	0.000	5.701	5.852
(U) Test Support	0.000	0.000	0.360	0.380
(U) System Engineering	0.000	0.000	0.582	0.602
(U) Total Cost	0.000	0.000	6.643	6.834

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207410F, WSC 834520, PROG BG2000	0.000	0.000	10.758	10.602	12.967	12.042	12.278	12.338	Continuing	TBD
(U) O&M, PE 0207410F, PROG BG2000			3.000	2.182	2.201	1.091	1.110	1.715	Continuing	TBD

(U) D. Acquisition Strategy

Projects will be awarded following full and open competition and will use an evolutionary acquistion strategy based on spiral development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

PROJECT NUMBER AND TITLE: **5220 Unit Level**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Increment/Spiral Development	TBD	TBD	0.000	0.000		0.000		5.701	Oct-08	5.852	Oct-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		5.701		5.852		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Office Support	TBD	TBD	0.000	0.000		0.000		0.582	Oct-08	0.602	Oct-09	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.582		0.602		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test Support	MIPR	46TS, Eglin AFB, FL	0.000	0.000		0.000		0.360	Oct-08	0.380	Oct-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.360		0.380		Continuing	TBD	TBD
Remarks:														
(U) Management														
			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.000		6.643		6.834		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5220 Unit Level

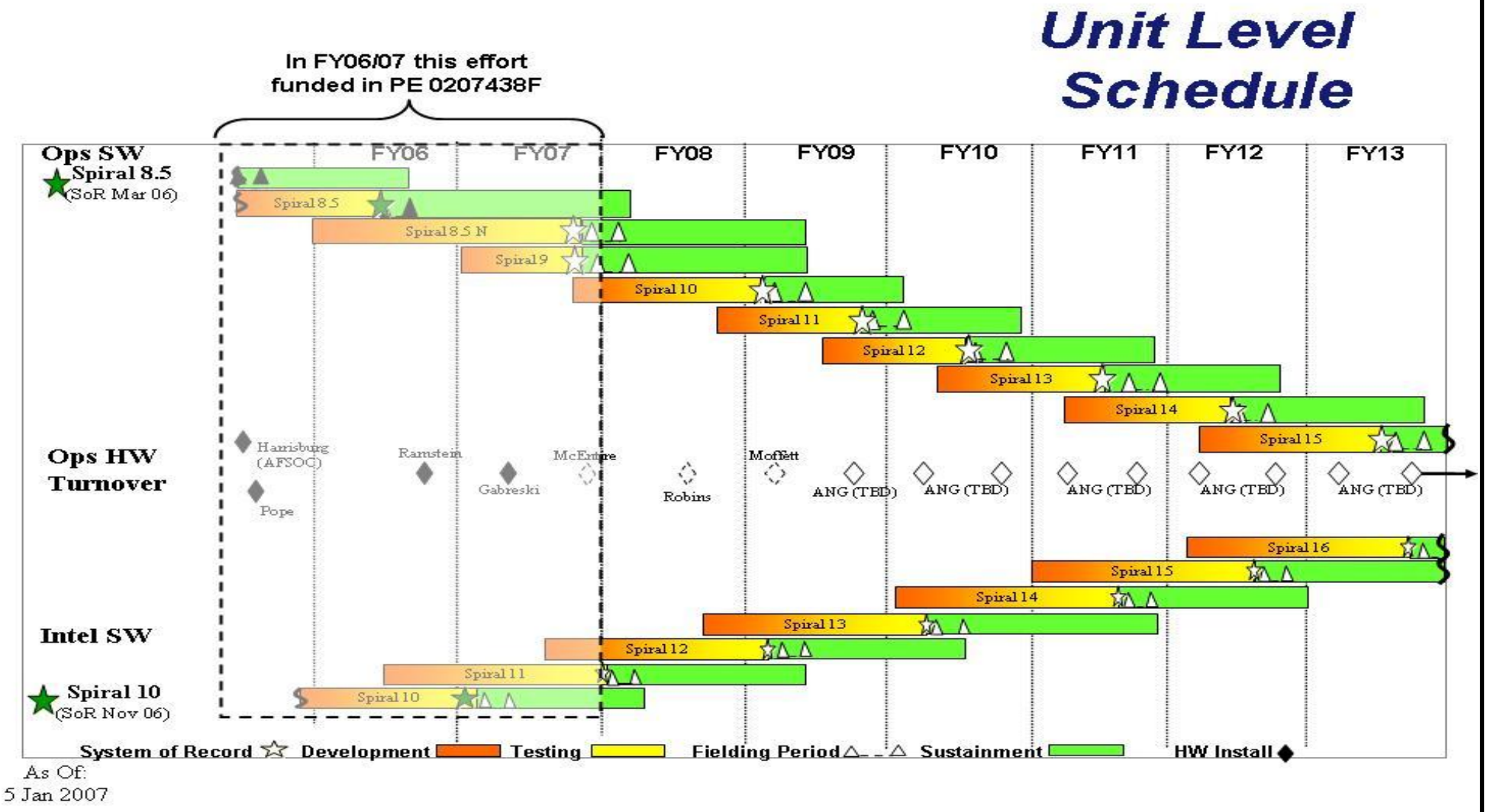

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5220 Unit Level

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Unit Level Operations and Intel spirals			1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)

PROJECT NUMBER AND TITLE: 5242 JADOCS NC

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5242 JADOCS NC	0.000	0.000	5.580	5.726	4.772	4.926	4.813	4.907	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

C2 Execution Manager (C2EM formerly JADOCS-NC) is a continuation of the work started under the FIOP Program Element for Web Enabled Execution Management Capability (WEEMC). WEEMC received funding in the FIOP PE in FY03 - $3.482M, FY04 - $4.580M, and FY05- $10.500M. With the cancellation of the FIOP PE, WEEMC received funding from JFCOM in FY06, while the Joint Staff supported WEEMC development and sought alternative sources of funds for FY06 and FY07. The Air Force normalized the funding line for C2 Execution Manager in FY08 and programmed dollars throughout the Future Years Defense Program (FYDP) for this important effort.

(U) A. Mission Description and Budget Item Justification

C2 Execution Manager (C2EM) [formerly Joint Automated Deep Operations System (JADOCS)-Net Centric (NC)] combines the best capabilities of the Air Force produced Web Enabled Execution Management Capability (WEEMC) and the Army ACTD JADOCS to provide new web based tools for Operations Center Personnel that are used during battle execution. These tools are comprised of mission managers and task coordination managers, and they use the standard DoD Common Operational Environment (COE) set of mission applications and segments. These tools will provide greater horizontal and vertical integration of the Joint Forces Commander's decisions. The funding for this effort will develop Spiral 1 and Spiral 2 capabilities and start Spiral 3 development.

This project is in Budget Activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) C2 Execution Manager Spiral 1- Will provide system upgrades in order to remain compatible with Global Command and Control System - Joint (GCCS-J) and Command and Control Personal Computer (C2PC) in areas that include, but are not limited to, security requirements.			3.457	
(U) C2 Execution Manager Spiral 2-Will provide high priority Combatant Command (COCOM) requirements to modernize the system.			1.842	1.707
(U) C2 Execution Manager Spiral 3 - Will provide new interfaces to other programs such as, but not limited to, Personnel Recovery Mission Software (PRMS).			0.281	3.289
(U) C2 Execution Manager Spiral 4-Will provide interfaces to enhanced program capabilities.				0.730
(U) Total Cost	0.000	0.000	5.580	5.726

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations and Maintenance, PE 0207410F	0.000	0.000	1.470	1.180	1.210	1.240	1.270	1.300		TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5242 JADOCS NC

(U) D. Acquisition Strategy

Planning for a single, new award, multi-year contract. Anticipate 2 Spirals per year, competitive or limited competitive Cost Plus Incentive Fee (CPIF) to be awarded Mar 08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

PROJECT NUMBER AND TITLE: **5242 JADOCS NC**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Software development	TBD	TBD						3.449	Mar-08	3.537	Mar-09	Continuing	TBD	TBD
Engineering changes	TBD	TBD						0.152	Mar-08	0.157	Mar-09	Continuing	TBD	TBD
Training	TBD	TBD						0.040	Mar-08	0.041	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		3.641		3.735		Continuing	TBD	TBD
Remarks:														
(U) Support														
Contractor support	TBD	TBD						1.882	Jan-08	1.932	Jan-09	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		1.882		1.932		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Integration Testing	TBD	TBD						0.057	Mar-08	0.059	Mar-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.057		0.059		Continuing	TBD	TBD
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		5.580		5.726		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE 5242 JADOCS NC

C2 Execution Manager Milestone Schedule

As of 21 Dec 06

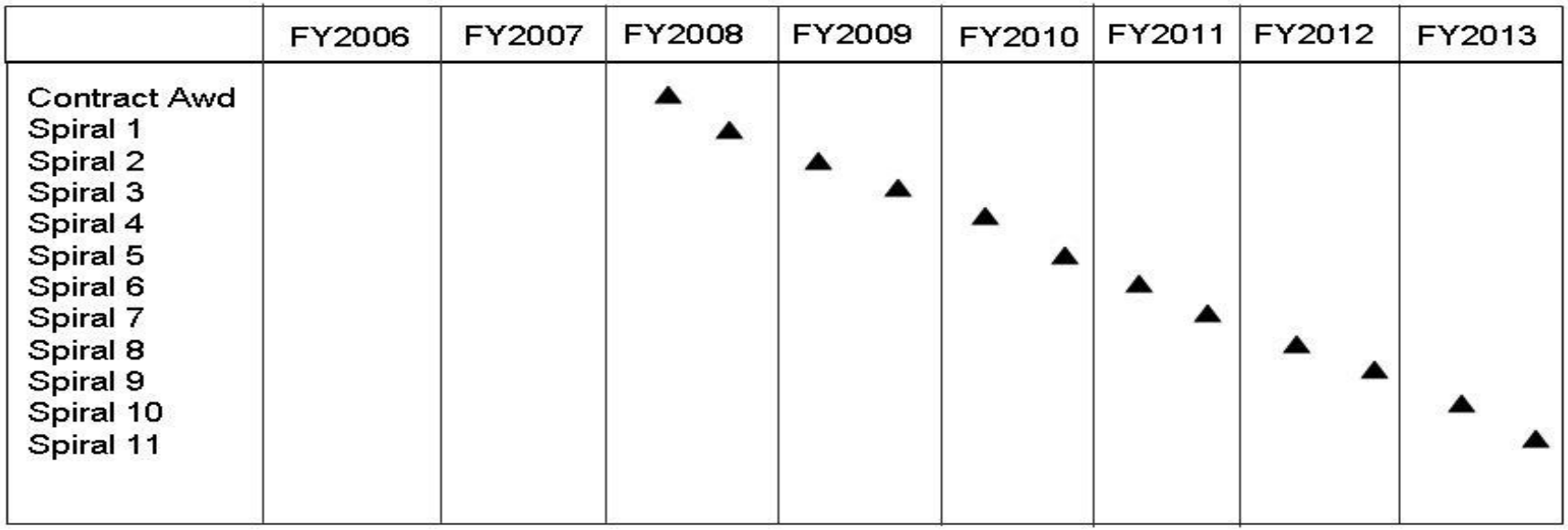

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5242 JADOCS NC

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) C2 Execution Manager contract award			2Q	
(U) C2 Execution Manager Spiral 1 delivery			3Q	
(U) C2 Execution Manager Spiral 2 delivery				1Q
(U) C2 Execution Manager Spiral 3 delivery				3Q

Note: Not every spiral of C2 Execution Manager may goes directly to the field to provide additional capability to the warfighter. Some may be dedicated to support experiments or exercises to assess new technology or capabilities.

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PE NUMBER: 0207412F
PE TITLE: Modular Control System

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	26.746	8.743	16.505	23.695	21.460	23.325	23.206	23.678	Continuing	TBD
485L	Theater Air Control System Imp (TACSI)	26.746	8.743	16.505	23.695	21.460	23.325	23.206	23.678	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Operation Control Center, PE 0102326F, referred to herein as Battle Control System-Fixed {BCS-F}] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M}]. The BCS-M is the replacement of the legacy Control and Reporting Center (CRC).

Once fielded, the BCS-M tactical C2 execution node supports the Joint Forces Air Component Commander (JFACC) and provides interoperability among elements of the Theater Air Control System (TACS) to include the Tactical Air Control Party (TACP), Air Support Operations Center (ASOC), Airborne Warning and Control System (AWACS), Joint STARS, and the Air and Space Operations Center (AOC) as well as other Navy, Marine Corps, Army, and allied/coalition assets. BCS-M is the execution arm of the AOC and conducts both OCONUS and Homeland Defense missions; theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management are the critical tactical-level capabilities of BCS-M.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. The current legacy CRC is fully employed in IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy CRC to support ongoing operations.

BCS-M uses a spiral development acquisition strategy to further advance C2 capabilities on the battlefield and also leverages other acquisitions and successful experimental models. BCS-M acquisition activities include, but are not limited to requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development, future comm requirements). The BCS-M capitalizes on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The battle management software is being developed in coordination with BCS-Fixed, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M program includes an incremental fielding of critical needs in order to deliver a product to the war fighter as soon as possible.

The program is in Budget Activity 7 because the CRC is a fielded, operational system that is being upgraded.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207412F Modular Control System

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	18.892	8.798	16.248	23.160
(U)	Current PBR/President's Budget	26.746	8.743	16.505	23.695
(U)	Total Adjustments	7.854	-0.055		
(U)	Congressional Program Reductions		-0.022		
	Congressional Rescissions		-0.033		
	Congressional Increases				
	Reprogrammings	8.374			
	SBIR/STTR Transfer	-0.520			

(U) Significant Program Changes:

- FY06 supplemental appropriation added $6.0M of RDT&E funding to field a replacement to the CRC rapidly in support of the GWOT.
- Funding ($2.374M) reduced in FY05 to support higher AF priorities; restored in FY06.
- Funding increases from FY07 to FY08 and out because of parallel common software development activities.
- Funding increases from FY08 to FY09 because both Radar Replacement and Remote Radio Spiral 4 will also be in progress.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
485L	Theater Air Control System Imp (TACSI)	26.746	8.743	16.505	23.695	21.460	23.325	23.206	23.678	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Operation Control Center, PE 0102326F, referred to herein as Battle Control System-Fixed {BCS-F}] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M}]. The BCS-M is the replacement of the legacy Control and Reporting Center (CRC).

Once fielded, the BCS-M tactical C2 execution node supports the Joint Forces Air Component Commander (JFACC) and provides interoperability among elements of the Theater Air Control System (TACS) to include the Tactical Air Control Party (TACP), Air Support Operations Center (ASOC), Airborne Warning and Control System (AWACS), Joint STARS, and the Air and Space Operations Center (AOC) as well as other Navy, Marine Corps, Army, and allied/coalition assets. BCS-M is the execution arm of the AOC and conducts both OCONUS and Homeland Defense missions; theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management are the critical tactical-level capabilities of BCS-M.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. The current legacy CRC is fully employed in IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy CRC to support ongoing operations.

BCS-M uses a spiral development acquisition strategy to further advance C2 capabilities on the battlefield and also leverages other acquisitions and successful experimental models. BCS-M acquisition activities include, but are not limited to requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development, future comm requirements). The BCS-M capitalizes on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The battle management software is being developed in coordination with BCS-Fixed, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M program includes an incremental fielding of critical needs in order to deliver a product to the war fighter as soon as possible.

The program is in Budget Activity 7 because the CRC is a fielded, operational system that is being upgraded.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)				
(U) Continue concept definition & development of evolutionary upgrades to the BCS to include, but not limited to, advanced planning, Modular Control System (MCS) upgrades, enhanced radio/radar/data link remoting, transition of ACMD technology into BCS-M, leveraging capabilities from BCS-F and	19.388	5.569	13.340	20.413

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
	AWACS 40/45, integrating evolutionary upgrades into BCS-M, and sensor replacement/upgrade.				
(U)	Develop/Field CENTAF BCS-M/Battle Control Center-CENTAF with FY06 Supplemental Funding (GWOT)	6.000			
(U)	Continue Program Support (i.e., travel, supplies, equipment, miscellaneous)	0.208	0.323	0.387	0.404
(U)	Continue Systems Engineering/Technical Support	1.150	2.851	2.778	2.878
(U)	Total Cost	26.746	8.743	16.505	23.695
	Increase in Systems Engineering/Technical support FY07 and out due to realignment.				

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
(U) OPAF PE 0207412F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement	67.222	42.371	33.552	68.984	73.828	89.941	86.652	88.380	Continuing	TBD

(U) D. Acquisition Strategy

The Battle Control System (BCS) Program Family of Systems is utilizing a spiral development acquisition strategy to further advance C2 concepts supporting future aerospace operations.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207412F Modular Control System**

PROJECT NUMBER AND TITLE: **485L Theater Air Control System Imp (TACSI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Concept Definition/Development of Evolutionary Upgrades	MIPR	Naval Air Warfare Center/Aircraft Division, Patuxent River, MD		2.817	Nov-05	1.403	Jan-07	1.600	Dec-07	2.000	Dec-08	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Spiral development	CPIF & CPAF/SS	Thales Raytheon Systems, Fullerton, CA		14.917	Dec-05	2.252	Mar-07	5.770	Oct-07	8.413	Nov-08	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Sensor Replacement/Upgrade	T&M	Technology Services Corp., Silver Spring, MD		0.253	Jan-06	0.260	Feb-07	0.255	Nov-07	0.264	Nov-08	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Sensor Replacement/Upgrade	T&M	Sensis Group, East Syracuse, NY		0.921	Jan-06	1.186	Nov-06	3.235	Jan-08	6.236	Jan-09	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - RRSVS		AFRL, Rome NY		0.480	Nov-05	0.468	Dec-06	0.480	Nov-07	1.500	Nov-08	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Mode 5/S	TBD	TBD						2.000	Feb-07	2.000	Feb-08	Continuing	TBD	TBD
Develop/Field CENTAF BCS-M/Battle Control Center-CENTAF	MIPR	US Army Space and Missle Battle Lab-West, Colorado Springs, CO		6.000	Sep-05							0.000	6.000	TBD
Subtotal Product Development			0.000	25.388		5.569		13.340		20.413		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Office Support	Various	Various		0.208	Oct-05	0.323	Oct-06	0.387	Oct-07	0.404	Oct-08	Continuing	TBD	TBD
Systems Engineering	FFP	MITRE, Bedford MA		1.150	Oct-05	1.485	Oct-06	1.371	Oct-07	1.398	Oct-08	Continuing	TBD	TBD
Technical Support	T&M	Various				1.366	Dec-06	1.407	Nov-07	1.480	Nov-08	Continuing	TBD	TBD
Subtotal Support			0.000	1.358		3.174		3.165		3.282		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)	

Remarks:

(U) Total Cost	0.000	26.746	8.743	16.505	23.695	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

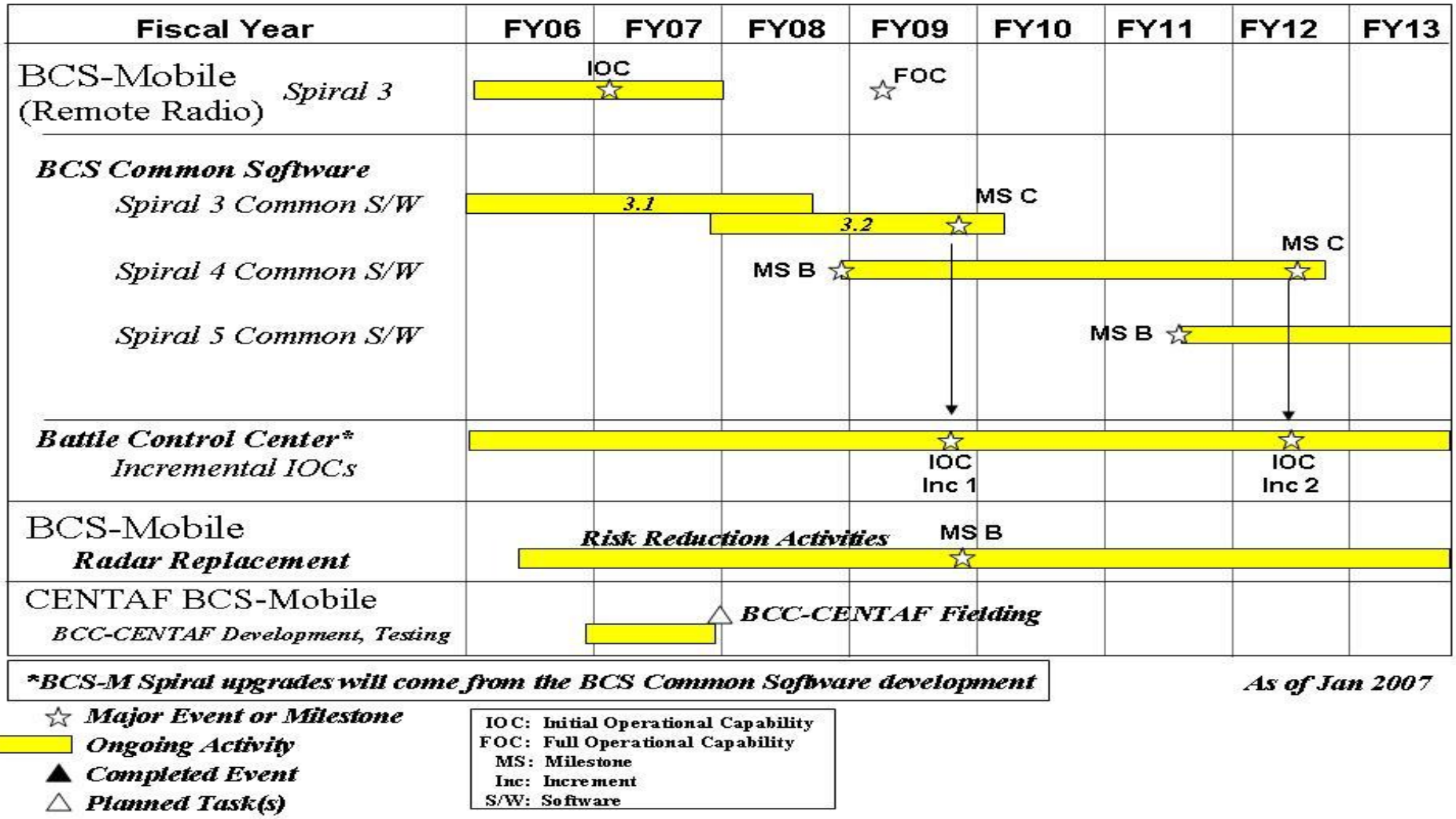

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) BCS-M Remote Radio Spiral 3 IOC		1Q		
(U) BCS-M Remote Radio Spiral 3 FOC				1Q
(U) BCS Common Software Spiral 3MS C				4Q
(U) BCS Common Software Spiral 4 MS B			4Q	
(U) BCS-M Battle Control Center IOC				4Q
(U) BCS-M Radar Replacement MS B				4Q
(U) Develop/Field CENTAF BCS-M/Battle Control Center-CENTAF	4Q	1-4Q		

PE NUMBER: 0207417F
PE TITLE: Airborne Warning and Control System (AWACS)

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	129.334	164.982	152.721	127.984	173.450	154.754	222.895	157.680	Continuing	TBD
411L	Airborne Warning & Control System (AWACS)	129.334	164.982	152.721	127.984	173.450	154.754	222.895	157.680	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective airborne battle management and surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts:
Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

B) GATM is a FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL--mandated ATC upgrade consisting of new Very High Frequency (VHF) radios with 8.33 kHz channel spacing, Traffic-alert Collision Avoidance System (TCAS)/Mode-S Identification Friend or Foe (IFF) transponder and Reduced Vertical Separation Minimum (RVSM) capability. The ATC enhancements will permit more aircraft to fly closer together in congested airspace worldwide, particularly in European airspace. Non-compliance has already resulted in airspace restrictions and denials, impacting AWACS's ability to support worldwide response in situations requiring immediate on-scene command and control (C2) battle management.

2) Block 40/45 is replacing AWACS 1970's vintage mission systems that are experiencing Diminishing Manufacturing Sources (DMS) issues, are difficult and expensive to upgrade, and limit overall AWACS system performance. The Block 40/45 upgrade will improve quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), provide sensor fusion capability in support of the Single Integrated Air Picture (SIAP) via multi-sensor integration (MSI), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, resolve radar electronics DMS, improved electronic support measures processing, and enable more effective, faster upgrades via an open systems architecture.

3) NAVWAR (Navigation Warfare) is mandated by CJCSI 6140.01A (31 Mar 04) and requires all DoD GPS users to incorporate NSA Selective Availability Anti-Spoofing Module (SAASM), make provisions for the transition to 'black keys', eliminate requirements to acquire GPS satellites using the civil signal (Coarse Acquisition (C/A code)) and incorporate new technology into the navigation sensor.

4) Next Generation Identification Friend or Foe (NGIFF): Upgrades the existing Mark XII IFF Interrogator with a Mode 5/S Interrogator extending the effective range of the AWACS Interrogator while helping discriminate between closely-spaced targets. The requirement is documented in the Required Operational Capability (ROC), ADC/TAC-1-66 & Combat ID (CID) Capstone Requirement Document (CRD), 19 March 2001, JROCM 067-01 and USAF CDR 003-97. Mode 5 IFF is designed to augment the obsolete Mode 4 waveform, providing a more secure IFF function. The Mode S capability provides civil airspace IFF interrogation for Homeland Defense and airspace control. The modification also adds Mode 5 to the AWACS transponder.

5) AMP (Avionics Modernization Program) completes the FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL mandated air traffic control system upgrades and equips the E-3 fleet with flight deck and other avionics capabilities that will allow AWACS to comply with mandated global Required Navigation Performance (RNP), surveillance and communication standards. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to support worldwide responses to situations requiring immediate on-scene command and control (C2 battle management). The AMP modifications to the flight deck include the addition of data link communications, upgrade or replacement of emergency locating technologies, voice and data link digital radios, improved visual displays and flight management system, as well as automatic position reporting via data link. Replacement of critical avionics subsystems, unsustainable beyond 2010, will be included in the AMP.

6) Command & Control, Intelligence, Surveillance and Reconnaissance (C2ISR): C2ISR System Architecture Improvements provide timely enhancements to improve critical areas of the AWACS mission system, primarily in three areas:

A) Mission Capable (MC) rate improvement: Reliability, Maintainability & Availability (RM&A) analysis and development projects provide system improvements that help meet/exceed the MC rate standard of this critical C2 platform, therefore increasing airframe longevity in order to support its flight commitment to end of operational life. Such efforts focus on increasing reliability of the air vehicle, command and control, computer, sensor systems and infrastructure improvements as well as providing solutions to diminishing manufacturing sources. Efforts will also focus on insertion of new technologies with the aim of reducing maintenance man-hours along with periodic depot maintenance improvements to increase aircraft availability. Programs will focus on risk reduction, development, and fielding.

B) C2ISR enhancement and integration: AWACS seeks to fulfill the requirements of Joint Vision 2020 as well as Aerospace Expeditionary Forces (AEF) and other Task Force Concept of Operations to meet the needs of the operator. AWACS seeks to enhance network-centric warfare capabilities with other C2ISR systems by horizontally integrating machine-to-machine interfaces into AWACS in order to digitize the kill chain. Sensor and communications improvements, such as the ability to send, receive and fuse the air (and ground) picture via data link to fighter aircraft, will be developed through rapid prototyping, modeling, simulation, and participation in live and simulated Joint exercises (e.g., Joint Combat Identification Evaluation Team (JCIET) and Joint Distributed Engineering Plant (JDEP)). Collaborative efforts with other sensor platforms through capabilities such as network-centric operations will also enhance horizontal integration efforts. Certain near-term efforts, required by the operator to improve the timeliness and accuracy of information passed to/from fighter aircraft in the engagement zone and to provide consistent and re-playable mission data once the mission is complete, are quick reaction capabilities that can be developed & fielded to support the air war. The program includes concept exploration, technology development and demonstration efforts that support continuous improvements to C2ISR capabilities of manned & unmanned platforms, space, data links and advanced Battle Management decision tools. C2ISR continues to support and develop self-protection capabilities to enable current and future threat deterrence. Fielding strategies will provide for immediate field retrofit when able, otherwise fielding will occur in subsequent modernization programs. All programs are designed to integrate with & transition into the next C2ISR Platform. The AWACS program will coordinate

with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

7) The Training, Support, and Infrastructure programs cover an array of cross cutting programs and activities in support of AWACS modification and enhancement programs. These programs include managing the AWACS developmental infrastructure, support equipment development, modernization planning/analysis, and trainer/simulator integration and concurrency. The Radar Systems Integration Lab/Software Development Facility must be maintained, operated and supported by contract to provide customers with a functioning APY 1/2 radar configuration in support of AWACS radar development, production and sustainment support equipment technologies and test strategies to ensure concurrent capability to sustain current, modified and upgraded E-3 equipment. Trainer/simulator concurrency analysis and definition is required to ensure trainers and simulators are kept current with the AWACS baseline. Associate contractor agreements are used to establish concurrency between prime integrators and training service providers.

8) Test System 3/Integration Labs: The E-3 AWACS testbed aircraft, Test System 3 (TS-3, tail number 73-1674) and the Avionics Integration Laboratory (AIL) are Government owned/contractor managed, maintained and operated assets. These test-ready assets support AWACS modernization, including advanced projects and sustainment projects, and allow AWACS to participate in live-fly (e.g., Joint Expeditionary Force Experiment) and ground-based interoperability testing. These assets also support multiple international Airborne Early Warning and Control (AEW&C) projects on a fee basis, including French, RSAF, UK, Japan, and NATO.

9) Communication projects provide the AWACS system with an effective method for electronically transmitting and receiving critical mission information such as the Air Tasking Order (ATO). Comm projects will focus on engineering and retrofitting the entire fleet.

10) Collaborative and cooperative efforts will examine re-engining the E-3 airframe replacing the existing, original engines with new engines. New engines will ensure long-term viability of the platform and increase fuel-efficiency, improve reliability, and increase power quantity and quality available to on-board mission systems. The efforts will pursue synergies and leverage the efforts of other U.S. 707-based airframes as well as the International AWACS partners that operate the 707 AWACS (United Kingdom, France, and Saudi Arabia).

11) The Support To The Warfighter program supports AWACS capability requirements to create and sustain the force. This program includes the design, development, and modernization of equipment and systems to ensure that E-3 can respond to urgent wartime/contingency acquisition requirements. Efforts include the upgrade of key capabilities to meet contingency needs, the modernization of test systems, the integration of battle management and data link enhancements, and support for reliability, maintainability and availability initiatives.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	119.746	165.820	138.540	108.704
(U)	Current PBR/President's Budget	129.334	164.982	152.721	127.984
(U)	Total Adjustments	9.588	-0.838		
(U)	Congressional Program Reductions		-0.212		
	Congressional Rescissions		-0.626		
	Congressional Increases				
	Reprogrammings	9.996			
	SBIR/STTR Transfer	-0.408			

(U) Significant Program Changes:

Funds were reprogrammed from FY08 APAF to RDT&E to properly align Block 40/45 System Development and Demonstration. The realigned program slips the Block 40/45 IOC to 2018. Additional funds were reprogrammed to Block 40/45 SD&D to reflect the current lean acquisition strategy. Funding for Avionics Modernization Program was realigned resulting in a two year slip to program start. Funding for Re-Engining was deferred beyond the FYDP.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207417F Airborne Warning and Control System (AWACS)	PROJECT NUMBER AND TITLE: 411L Airborne Warning & Control System (AWACS)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
411L	Airborne Warning & Control System (AWACS)	129.334	164.982	152.721	127.984	173.450	154.754	222.895	157.680	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective airborne battle management and surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts: Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

B) GATM is a FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL--mandated ATC upgrade consisting of new Very High Frequency (VHF) radios with 8.33 kHz channel spacing, Traffic-alert Collision Avoidance System (TCAS)/Mode-S Identification Friend or Foe (IFF) transponder and Reduced Vertical Separation Minimum (RVSM) capability. The ATC enhancements will permit more aircraft to fly closer together in congested airspace worldwide, particularly in European airspace. Non-compliance has already resulted in airspace restrictions and denials, impacting AWACS's ability to support worldwide response in situations requiring immediate on-scene command and control (C2) battle management.

2) Block 40/45 is replacing AWACS 1970's vintage mission systems that are experiencing Diminishing Manufacturing Sources (DMS) issues, are difficult and expensive to upgrade, and limit overall AWACS system performance. The Block 40/45 upgrade will improve quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), provide sensor fusion capability in support of the Single Integrated Air Picture (SIAP) via multi-sensor integration (MSI), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, resolve radar electronics DMS, improved electronic support measures processing, and enable more effective, faster upgrades via an open systems architecture.

3) NAVWAR (Navigation Warfare) is mandated by CJCSI 6140.01A (31 Mar 04) and requires all DoD GPS users to incorporate NSA Selective Availability Anti-Spoofing Module (SAASM), make provisions for the transition to 'black keys', eliminate requirements to acquire GPS satellites using the civil signal (Coarse Acquisition (C/A code)) and incorporate new technology into the navigation sensor.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207417F Airborne Warning and Control System (AWACS)**	PROJECT NUMBER AND TITLE **411L Airborne Warning & Control System (AWACS)**

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Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207417F Airborne Warning and Control System (AWACS)**	PROJECT NUMBER AND TITLE **411L Airborne Warning & Control System (AWACS)**

subsequent modernization programs. All programs are designed to integrate with & transition into the next C2ISR Platform. The AWACS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

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8) Test System 3/Integration Labs: The E-3 AWACS testbed aircraft, Test System 3 (TS-3, tail number 73-1674) and the Avionics Integration Laboratory (AIL) are Government owned/contractor managed, maintained and operated assets. These test-ready assets support AWACS modernization, including advanced projects and sustainment projects, and allow AWACS to participate in live-fly (e.g., Joint Expeditionary Force Experiment) and ground-based interoperability testing. These assets also support multiple international Airborne Early Warning and Control (AEW&C) projects on a fee basis, including French, RSAF, UK, Japan, and NATO.

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This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Programs				
(U)	Continuing Test System-3/AITS support and Program Sustaining efforts	16.066	19.575	22.477	21.259
(U)	Continuing Trainers, Simulators and Infrastructure (TSI) efforts	3.011	3.199	5.148	5.285
(U)	Continuing Block 40/45 SD&D effort including pre-production efforts	100.370	136.456	86.058	57.748

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207417F Airborne Warning and Control System (AWACS)	PROJECT NUMBER AND TITLE: 411L Airborne Warning & Control System (AWACS)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continuing C2ISR System Architecture Improvements, Advanced Projects, MC Rate Improvements	5.481	5.752	9.398	9.301
(U)	Completing Navigational Warfare (NAVWAR) SD&D	4.406	0.000	0.000	0.000
(U)	Beginning RM&A - Support to the Warfighter Projects	0.000	0.000	5.552	4.959
(U)	Beginning Next Generation Identification Friend or Foe (IFF)	0.000	0.000	24.088	29.432
(U)	Total Cost	129.334	164.982	152.721	127.984

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E										
(U)	Other APPN										
(U)	Aircraft Procurement, AF, E-3 Mods	46.841	64.312	54.286	87.895	86.758	183.008	150.777	191.543	Continuing	TBD
(U)	E-3 Initial Spares, AF	7.002	5.832	7.800	8.071	11.079	18.936	19.311	19.694	Continuing	TBD

Note: APAF, E-3 Mods includes funds in PE 0809731F (0.127 in FY 2006 and 0.516 in FY 2007)

(U) D. Acquisition Strategy

Most major programs (Block 40/45, NAVWAR, TS-3 and lab support) will be sole source to the Boeing Corporation, Seattle, Wa.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207417F Airborne Warning and Control System (AWACS)**

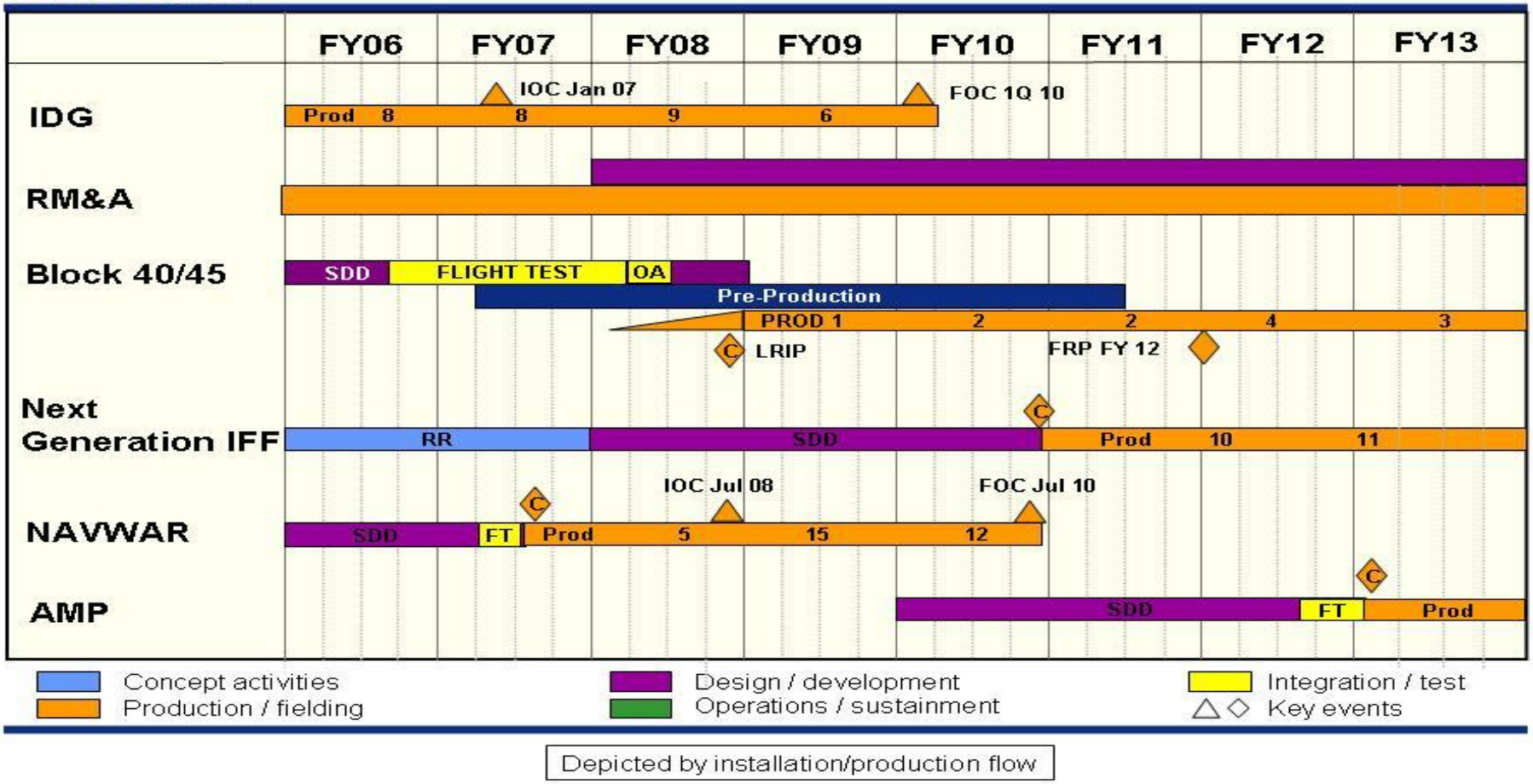
PROJECT NUMBER AND TITLE: **411L Airborne Warning & Control System (AWACS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
(U) Block 40/45 SD&D and Pre-Production	SS/CPAF	Boeing - Seattle, WA	439.180	89.861	Oct-05	124.386	Oct-06	78.248	Oct-07	45.852	Oct-08	Continuing	TBD	TBD
(U) C2ISR Sys Arch Imp	SS/FPIF & CPAF	Boeing - Seattle, WA	43.630	3.054	Oct-05	2.521	Oct-06	5.929	Oct-07	5.684	Oct-08	Continuing	TBD	TBD
(U) NAVWAR	SS/Mulipl e	Boeing - Seattle, WA	6.331	3.919	Oct-05	0.000		0.000		0.000		0.000	10.250	10.250
(U) IFF	TBD	TBD	0.000	0.000		0.000		20.581	Nov-07	26.356	Oct-08	Continuing	TBD	TBD
(U) Support to the Warfighter	TBD	TBD	0.000	0.000		0.000		4.740	Jan-08	3.957	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			489.141	96.834		126.907		109.498		81.849		Continuing	TBD	TBD
Remarks: Note: Total Program does not include NATO funds.														
(U) Support														
(U)Support/ITSP MITRE, travel, other	Competitive Multiple	AWACS Program Office - Hanscom AFB, MA	632.994	19.913	N/A	20.319	N/A	23.495	N/A	25.834	N/A	Continuing	TBD	TBD
Subtotal Support			632.994	19.913		20.319		23.495		25.834		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
(U) Test System-3 ADAPT Contract/AITS Contract / Other test activities	SS/Multipl e	Boeing - Seattle, WA	423.693	9.576	N/A	14.557	N/A	14.580	N/A	15.016	N/A	Continuing	TBD	TBD
(U) Trainers, Simulators & Infrastructure (TSI)	SS/Multipl e	Boeing - Seattle, WA	4.592	3.011	Jan-06	3.199	Jan-07	5.148	Jan-08	5.285	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			428.285	12.587		17.756		19.728		20.301		Continuing	TBD	TBD
Remarks:														
(U) Management														
													0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			1,550.420	129.334		164.982		152.721		127.984		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)	PROJECT NUMBER AND TITLE 411L Airborne Warning & Control System (AWACS)

U.S. AIR FORCE

AWACS Schedule



Depicted by installation/production flow

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207417F Airborne Warning and Control System (AWACS)		PROJECT NUMBER AND TITLE: 411L Airborne Warning & Control System (AWACS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) IDG IOC		2Q		
(U) Reliability, Maintainability, & Availability (RM&A) Projects			1-4Q	1-4Q
(U) 40/45 Airworthiness Testing	3-4Q			
(U) 40/45 Mission Systems Flight Testing Start		1Q		
(U) 40/45 Operational Assessment			2Q	
(U) 40/45 Pre-Production		2-4Q	1-4Q	1-4Q
(U) 40/45 LRIP Milestone C			4Q	
(U) 40/45 Production			4Q	1-4Q
(U) Next Generation IFF Risk Reduction Completion		4Q		
(U) Next Generation IFF SDD			1-4Q	1-4Q
(U) NAVWAR SDD	1-4Q	1-3Q		
(U) NAVWAR Flight Test		2-3Q		
(U) NAVWAR Milestone C		3Q		
(U) NAVWAR Production		3-4Q	1-4Q	1-4Q
(U) NAVWAR IOC			4Q	

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PE NUMBER: 0207418F
PE TITLE: TAC AIRBORNE CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	2.303	3.387	1.543	0.000	0.000	0.000	0.000	Continuing	TBD
5234 TACP Support	0.000	2.303	3.387	1.543	0.000	0.000	0.000	0.000	Continuing	TBD

In FY 2007 this is the first time this program element (PE) has had Research, Development, Testing and Evaluation (RDT&E) funds, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. Provides development funding to enable connectivity to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. Develops system that will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking and capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS provides spiral development to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. Provides research and development to facilitate interoperability with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	0.000	0.000	0.000	0.000
(U) Current PBR/President's Budget	0.000	2.303	3.387	1.543
(U) Total Adjustments	0.000			
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

FY 07 is the first year this PE has RDT&E funds.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 5234 TACP Support	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5234 TACP Support	0.000	2.303	3.387	1.543	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. Provides development funding to enable connectivity to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. Develops system that will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking and capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS provides spiral development to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. Provides research and development to facilitate interoperability with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Development of high-fidelity simulation system for JTAC/CCT training	0.000	2.303		
(U) Continue development of high-fidelity simulation system for JTAC/CCT Training			3.387	1.543
(U) Total Cost	0.000	2.303	3.387	1.543

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0207418F, TAC Airborne Control System, Other Procurement , AF	0.000	0.000	0.000	7.300	1.800	1.800	0.000	0.000	Continuing	TBD
(U) PE 0207418F, TAC Airborne Control System, O&M , AF	0.000	0.000	0.300	2.300	0.000	0.000	0.000	0.000	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207418F TAC AIRBORNE CONTROL SYSTEM**	PROJECT NUMBER AND TITLE **5234 TACP Support**

(U) D. Acquisition Strategy

The acquisition strategy will be based on full and open competition for an evolutionary acquisition approach using incremental development. Increment 1 will allow JTACS/CCT teams to network to aircrew full mission trainers and mission training centers. Future increments will be incorporated as funding and technology allow.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207418F TAC AIRBORNE CONTROL SYSTEM**

PROJECT NUMBER AND TITLE: **5234 TACP Support**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
677 AESG AFMC		677 AESG AFMC, Wright Patterson AFB, OH		0.000		1.453	Apr-07	2.530	Mar-08	1.243	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		1.453		2.530		1.243		Continuing	TBD	TBD
Remarks:														
(U) Support														
				0.000								Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
				0.000								Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Management														
Program Office Support		677 AESG AFMC, Wright Patterson AFB, OH		0.000		0.850		0.875		0.300		Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.850		0.875		0.300		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		2.303		3.405		1.543		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207418F TAC AIRBORNE CONTROL SYSTEM	PROJECT NUMBER AND TITLE 5234 TACP Support

Joint Terminal Controller Training Rehearsal System (JTC TRS)

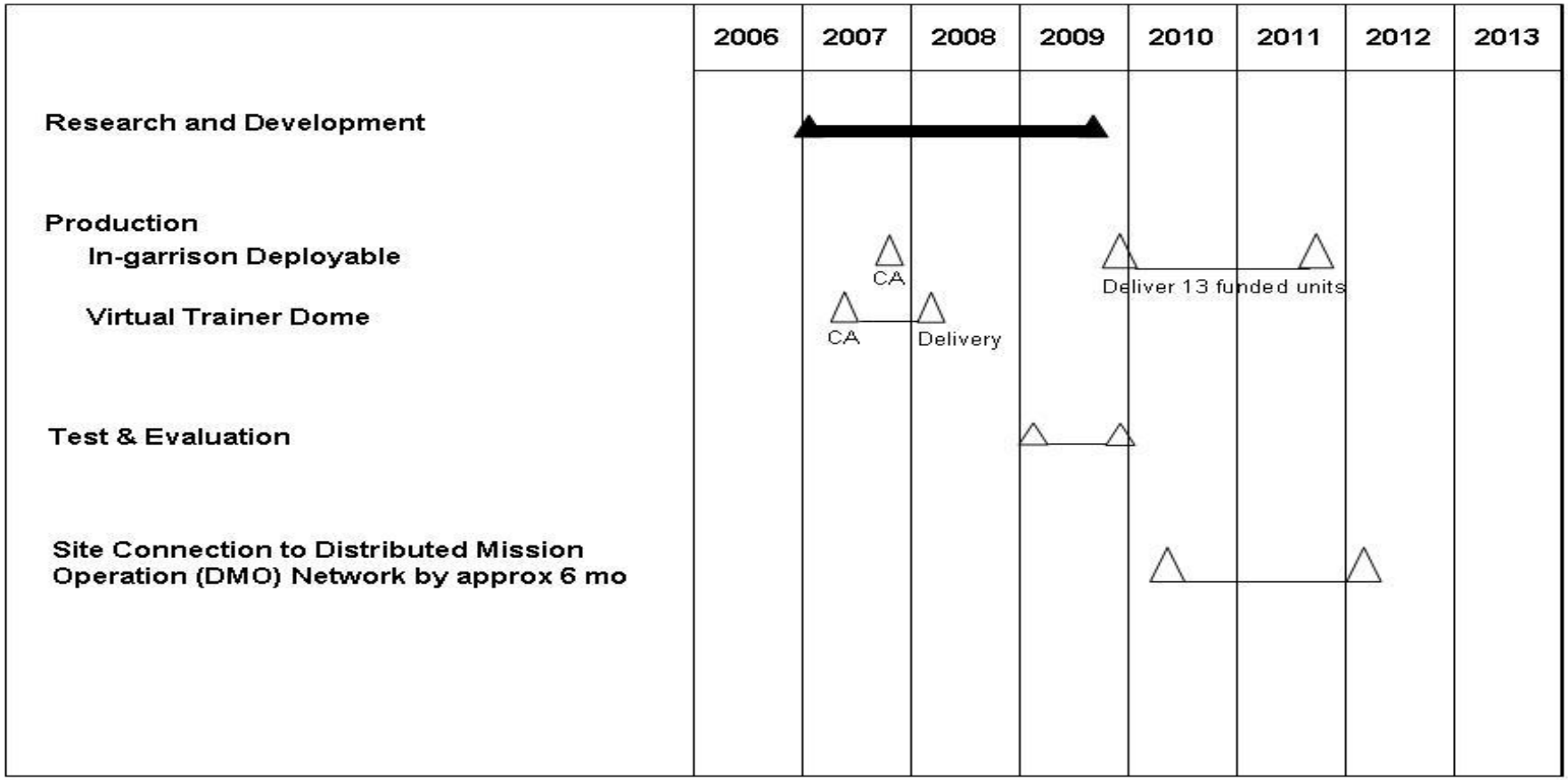

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 5234 TACP Support

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) JTC TRS In-garrison/Deployable Development		4Q	1-4Q	1-4Q
(U) JTC In-garrison/Deployable OT& E			4Q	1-4Q
(U) JTC In-garrison/Deployable Delivery				4Q
(U) JTC Virtual Trainer (VT) Dome Development		2-4Q		
(U) JTC Virtual Trainer (VT) Dome Delivery			2Q	

PE NUMBER: 0207423F
PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	23.018	41.928	33.584	27.497	58.431	65.850	67.198	68.638	Continuing	TBD
4934	Tactical Air Control Party (TACP)	6.071	8.505	13.522	10.605	10.974	11.151	11.441	11.748	Continuing	TBD
5189	C2ISR JTRS Integration	16.947	33.423	20.062	16.892	47.457	54.699	55.757	56.890	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and AF surveillance/reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting CAS operations, aerospace C2 aircraft/agencies, and Intelligence, Surveillance and Reconnaissance (ISR) platforms/agencies. The TACP-Modernization (TACP-M) program provides TACP and Air Support Operations Centers (ASOCs) personnel with the capability to precisely locate and target enemy ground forces by integrating various Laser Targeting Devices (LTD) and ultra high frequency satellite communications (UHF SATCOM) for beyond-line-of-sight (BLOS) Air Force Air Request Net operations. The purpose of the TACP-M program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and streaming video (i.e. Remote Operations Video Enhanced Receivers (ROVER)) technology. This capability increase supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flows/information exchange, and reduces potential fratricide. The TACP-M program supports the GWOT and significantly increased the mission effectiveness of the TACPs and ASOCs during Operations Enduring and Iraqi Freedom. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and Homeland Defense initiatives.

TACP-M is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized/modular capability via a streamlined acquisition using non-developmental, commercial off-the-shelf (COTS) Manpack Radios (MPR) or Handheld Radios (HHR), LTD such as; Laser Range Finder (LRF), Military Ruggedized Tablet (MRT) combined with TACP Close Air Support System (CASS) software. The TACP Vehicular Communications System (VCS) is an upgrade of the existing TACP vehicular communications system with new technology radios and ancillary components which provides reliable data communications for close air support operations. VCS will be Internet Protocol-capable, Software Compliant Architecture (SCA) compliant radios for voice & data UHF SATCOM and LOS UHF / VHF communications. These funds will continue to develop system integration software (dismounted and vehicular) and will provide limited ASOC gateway (G/W), SADL, Link-16 and other transformational capability as required.

This program funds integration of JTRS and legacy communication systems into Air Force platforms and system engineering of networking architectures specific to the JTRS suite of radios. The integration of capability provided by Joint Tactical Radio System (JTRS) products will provide a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications as well as, necessary gateways, routers or other associated components to achieve an IP-based networking capability. JTRS radios will be modular, scalable, and network ready. Legacy and other available upgraded communication products will be utilized until JTRS products, developed by the JTRS JPEO and other vendors who have JTRS and Software Communication

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems

Architecture (SCA) certifications, are available. The funding provides capabilities on various platforms including but not limited to Global Hawk, Predator, Rivet Joint, and JSTARS. The capability provided by JTRS requires system engineering efforts to standardize critical network parameters to permit the easy transmission and receipt of time-sensitive data that will give the tactical warrior transformational capabilities. The airborne network will provide unprecedented capabilities allowing the platforms to exchange voice and data in an IP-based, heterogeneous environment, including service-only, joint, coalition, and allied operations. The integration of an airborne network capability through JTRS products, legacy and other available upgraded systems is required to meet mission and joint interoperability requirements. Information assurance system engineering will ensure the data exchange capabilities will meet operational commander, theater, and national requirements.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of commercial (COTS) equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	28.501	52.112	61.670	60.182
(U)	Current PBR/President's Budget	23.018	41.928	33.584	27.497
(U)	Total Adjustments	-5.483	-10.184		
(U)	Congressional Program Reductions		-10.025		
	Congressional Rescissions	-1.383	-0.159		
	Congressional Increases				
	Reprogrammings	-3.203			
	SBIR/STTR Transfer	-0.897			

(U) Significant Program Changes:

- FY06-FY07 increase due to planned JTRS C2ISR development and TACP Laser Targeting Device integration
- FY07-FY09 funding decreases were to fund higher Air Force priorities

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 4934 Tactical Air Control Party (TACP)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4934	Tactical Air Control Party (TACP)	6.071	8.505	13.522	10.605	10.974	11.151	11.441	11.748	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and AF surveillance/reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting CAS operations, aerospace C2 aircraft/agencies, and Intelligence, Surveillance and Reconnaissance (ISR) platforms/agencies. The TACP-Modernization (TACP-M) program provides TACP and Air Support Operations Centers (ASOCs) personnel with the capability to precisely locate and target enemy ground forces by integrating various Laser Targeting Devices (LTD) and ultra high frequency satellite communications (UHF SATCOM) for beyond-line-of-sight (BLOS) Air Force Air Request Net operations. The purpose of the TACP-M program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and streaming video (i.e. Remote Operations Video Enhanced Receivers (ROVER)) technology. This capability increase supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flows/information exchange, and reduces potential fratricide. The TACP-M program supports the GWOT and significantly increased the mission effectiveness of the TACPs and ASOCs during Operations Enduring and Iraqi Freedom. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and Homeland Defense initiatives.

TACP-M is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized/modular capability via a streamlined acquisition using non-developmental, commercial off-the-shelf (COTS) Manpack Radios (MPR) or Handheld Radios (HHR), LTD such as; Laser Range Finder (LRF) and Military Ruggedized Tablet (MRT)combined with TACP Close Air Support System (CASS) software. The TACP Vehicular Communications System (VCS) is an upgrade of the existing TACP vehicular communications system with new technology radios and ancillary components which provides reliable data communications for close air support operations. VCS will be Internet Protocol-capable, Software Compliant Architecture (SCA) compliant radios for voice & data UHF SATCOM and LOS UHF / VHF communications. These funds will continue to develop system integration software (dismounted and vehicular) and will provide limited ASOC gateway (G/W), SADL, Link-16 and other transformational capability as required.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of COTS equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 4934 Tactical Air Control Party (TACP)

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue TACP Vehicular Communication System (VCS) integration of hardware (GFE & GOTS) development	2.500	0.506	1.124	4.568
(U) Software development and System integration	2.395	5.553	6.785	2.755
(U) Operational and interoperability test planning	0.341	0.825	1.680	1.386
(U) Contractor support and Systems Engineering	0.835	1.621	3.933	1.896
(U) Total Cost	6.071	8.505	13.522	10.605

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Advanced Communications System Other Procurement, AF PE 0207423F	16.085	59.517	92.113	142.366	100.354	95.207	74.622	76.102	Continuing	TBD

(U) D. Acquisition Strategy

The TACP-M is executing a spiral development for the dismounted segment. System engineering, design, integration, and fielding support is being provided under a full and open competition award (Time and Materials (T&M)). The Vehicular Communication System (VCS) is a current effort with Naval Surface Warfare Center-Crane, IN. This also is a T&M effort which will assist with the generation of key acquisition/contractual documentation (CONOPS, TTPs, ICDs, and TRD) for the FY08 full and open competition award. This contract will deliver an integrated system (both segments: mounted/dismounted) with an emphasis on Reduced Total Ownership Cost (RTOC) over the life cycle of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207423F Advanced Communications Systems**

PROJECT NUMBER AND TITLE: **4934 Tactical Air Control Party (TACP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ESC Sys Int Software Dev't	T&M	MultiMax, Inc. Largo, Maryland		1.249	Apr-06	0.006	Apr-07	0.562	Oct-07	2.255	Oct-08	Continuing	TBD	TBD
VCS (ASOC Gateway)		TBD		1.251	Apr-06							Continuing	TBD	TBD
VCS (MRC-144 Upgrade)		TBD				0.500	Oct-06	0.562	Oct-07	2.313	Oct-08	Continuing	TBD	
Subtotal Product Development			0.000	2.500		0.506		1.124		4.568		Continuing	TBD	TBD
Remarks: Vehicular Communication System (VCS) GFE & COTS hardware integration														
(U) Support														
System Engineering/Software Development	C/FFP	Various		2.395	Oct-05	5.553	Oct-06	6.785	Oct-07	2.755	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	2.395		5.553		6.785		2.755		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test Agency Support	MIPR	Various		0.341	Nov-05	0.825	Nov-06	1.680	Nov-07	1.386	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.341		0.825		1.680		1.386		Continuing	TBD	TBD
Remarks:														
(U) Management														
Support	Various	Various	0.000	0.835	Dec-05	1.621	Dec-06	3.933	Jan-07	1.896	Mar-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.835		1.621		3.933		1.896		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	6.071		8.505		13.522		10.605		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 4934 Tactical Air Control Party (TACP)

TACP Program Schedule

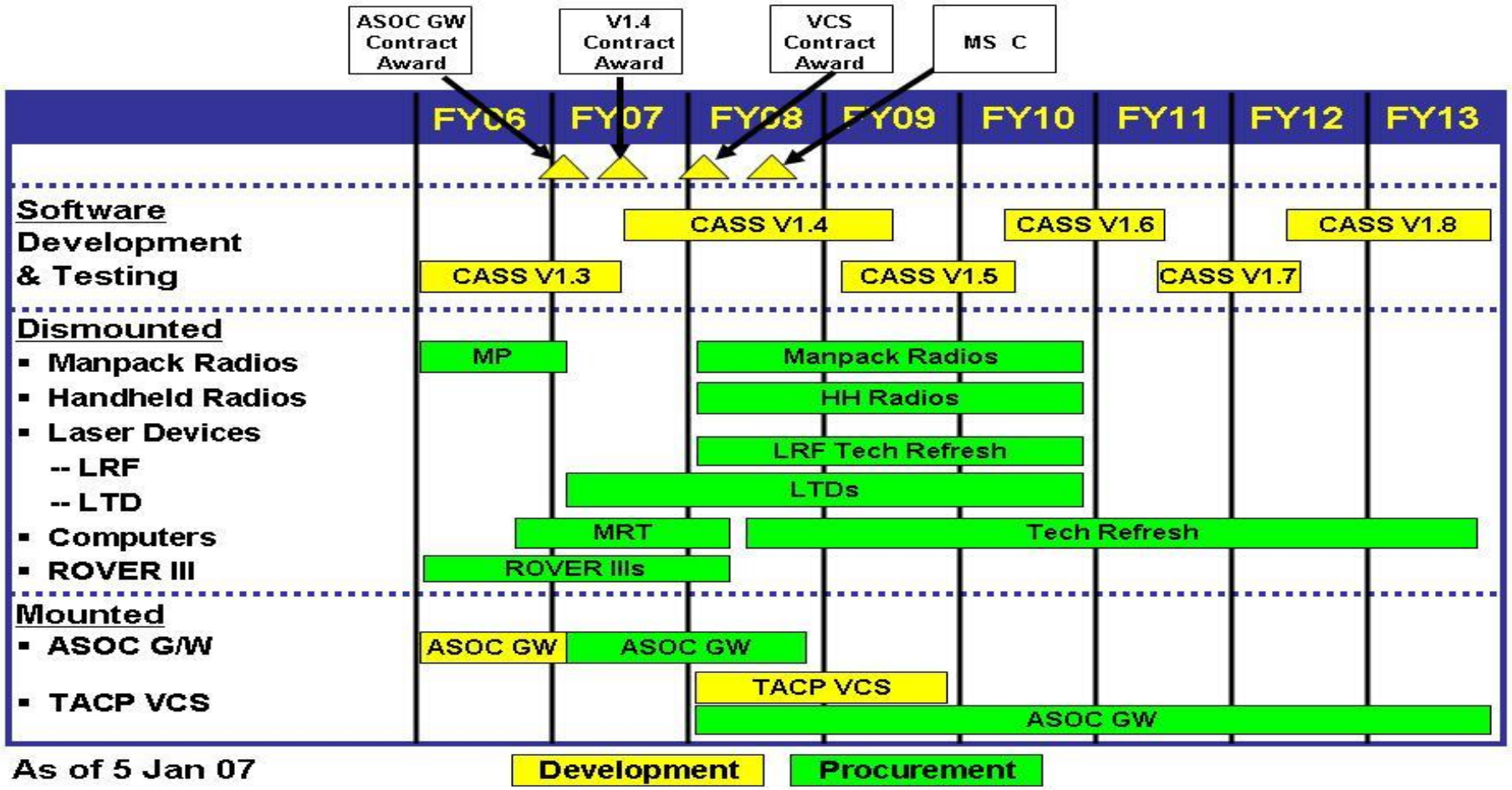

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 4934 Tactical Air Control Party (TACP)	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Milestone (MS) C			2Q	
(U) VCS Contract Award (ASOC Gateway)	4Q	1-4Q	1-3Q	
(U) Software Development - TACP-CASS v1.3	3-4Q	1-2Q		
(U) Software Development - Future TACP-CASS v1.4		3-4Q	1-4Q	1-4Q
(U) Software Development - Future TACP-CASS v1.5				1-4Q
(U) TACP-M Vehicular Development			1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 5189 C2ISR JTRS Integration	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5189 C2ISR JTRS Integration	16.947	33.423	20.062	16.892	47.457	54.699	55.757	56.890	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program funds integration of JTRS and legacy communication systems into Air Force platforms and system engineering of networking architectures specific to the JTRS suite of radios. The integration of capability provided by Joint Tactical Radio System (JTRS) products will provide a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications as well as, necessary gateways, routers or other associated components to achieve an IP-based networking capability. JTRS radios will be modular, scalable, and network ready. Legacy and other available upgraded communication products will be utilized until JTRS products, developed by the JTRS JPEO and other vendors who have JTRS and Software Communication Architecture (SCA) certifications, are available. The funding provides capabilities on various platforms including but not limited to Global Hawk, Predator, Rivet Joint, and JSTARS. The capability provided by JTRS requires system engineering efforts to standardize critical network parameters to permit the easy transmission and receipt of time-sensitive data that will give the tactical warrior transformational capabilities. The airborne network will provide unprecedented capabilities allowing the platforms to exchange voice and data in an IP-based, heterogeneous environment, including service-only, joint, coalition, and allied operations. The integration of an airborne network capability through JTRS products, legacy and other available upgraded systems is required to meet mission and joint interoperability requirements. Information assurance system engineering will ensure the data exchange capabilities will meet operational commander, theater, and national requirements.

C2ISR JTRS program is in Budget Activity 7, Operational System Development, since it supports integration of JTRS products and legacy radios into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) System Engineering, Planning, and Integration	8.345	17.423	12.532	7.342
(U) Platform Planning and Integration	5.790	16.000	7.530	6.470
(U) Develop Operational and Interoperability Test Plans	2.812	0.000	0.000	3.080
(U) Total Cost	16.947	33.423	20.062	16.892

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Advanced Communication System-Aircraft Procurement, AF PE 0207423F	2.915	0.000	25.288	68.319	159.214	200.171	191.000	197.784	Continuing	TBD
(U) Advanced Communication	11.180	39.264	44.578	123.427	128.800	187.582	254.480	259.527	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **5189 C2ISR JTRS Integration**

(U) C. Other Program Funding Summary ($ in Millions)

System-Other Procurement,
AF PE 0207423F

(U) D. Acquisition Strategy

The JTRS Integration will perform system engineering, system integration, network development, and fielding support to deliver an interoperable, fully synchronized, deployable JTRS system under a Time and Materials (T&M) contract award. This effort will assist various AF platforms to acquire and integrate the next generation communications system, to include all key documentation (CONOPS, TTPs, ICDs, TRDs, etc.) This contract will deliver an integrated system with emphasis on Reduced Total Ownership Cost (RTOC) over the life cycle of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207423F Advanced Communications Systems**

PROJECT NUMBER AND TITLE: **5189 C2ISR JTRS Integration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
System Engineering, Planning, and Integration	C/FFP	Northrop Grumman, Melbourne, FL	0.000	2.300	Jun-06	4.875	Feb-07	3.059	Feb-08	1.244	Feb-09	Continuing	TBD	TBD
System Engineering, Planning, and Integration	MIPR	Aeronautical Systems Center, Wright-Patterson AFB, OH	0.000	0.850	May-06	3.002	Apr-07	2.266	Feb-08	1.269	Feb-09	Continuing	TBD	TBD
System Engineering, Planning, and Integration	C/FFP	General Atomics, San Diego, CA	0.000	3.700	Mar-06	2.500	Mar-07	1.042	Feb-08	1.766	Feb-09	Continuing	TBD	TBD
System Engineering, Planning, and Integration	C/FFP	L3COM IS, Greenville, TX	0.000	1.200	Aug-06	2.076	Mar-07	1.497	Feb-08	0.000	Mar-09	Continuing	TBD	11.528
System Engineering, Planning, and Integration	MIPR/TBD	Air Force Research Laboratory, Rome, NY	0.000	0.295	Aug-06								0.295	0.295
System Engineering, Planning, and Integration	TBD	Electronic Systems Center, Hanscom AFB, MA	0.000			5.000	Feb-07	4.668	Dec-07	2.463	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	8.345		17.453		12.532		6.742		Continuing	TBD	TBD
Remarks:														
(U) Planning and Integration														
	MIPR/TBD	ASC/AA (Various),Wright-Patterson AFB, OH		5.790	Sep-06	15.970	Apr-07	5.990	Mar-08	5.222	Mar-09	Continuing	TBD	TBD
Subtotal Planning and Integration			0.000	5.790		15.970		5.990		5.222		Continuing	TBD	TBD
Remarks:														
(U) Development operational and interoperability test plans														
	MIPR/TB	Test Agency		2.812	Sep-06	0.000		1.540	Mar-09	4.928		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207423F Advanced Communications Systems**	**5189 C2ISR JTRS Integration**

	D	Support Varies									
	Subtotal Development operational and interoperability test plans		0.000	2.812	0.000	1.540	4.928	Continuing	TBD	TBD
	Remarks:										
(U)	Total Cost		0.000	16.947	33.423	20.062	16.892	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 5189 C2ISR JTRS Integration

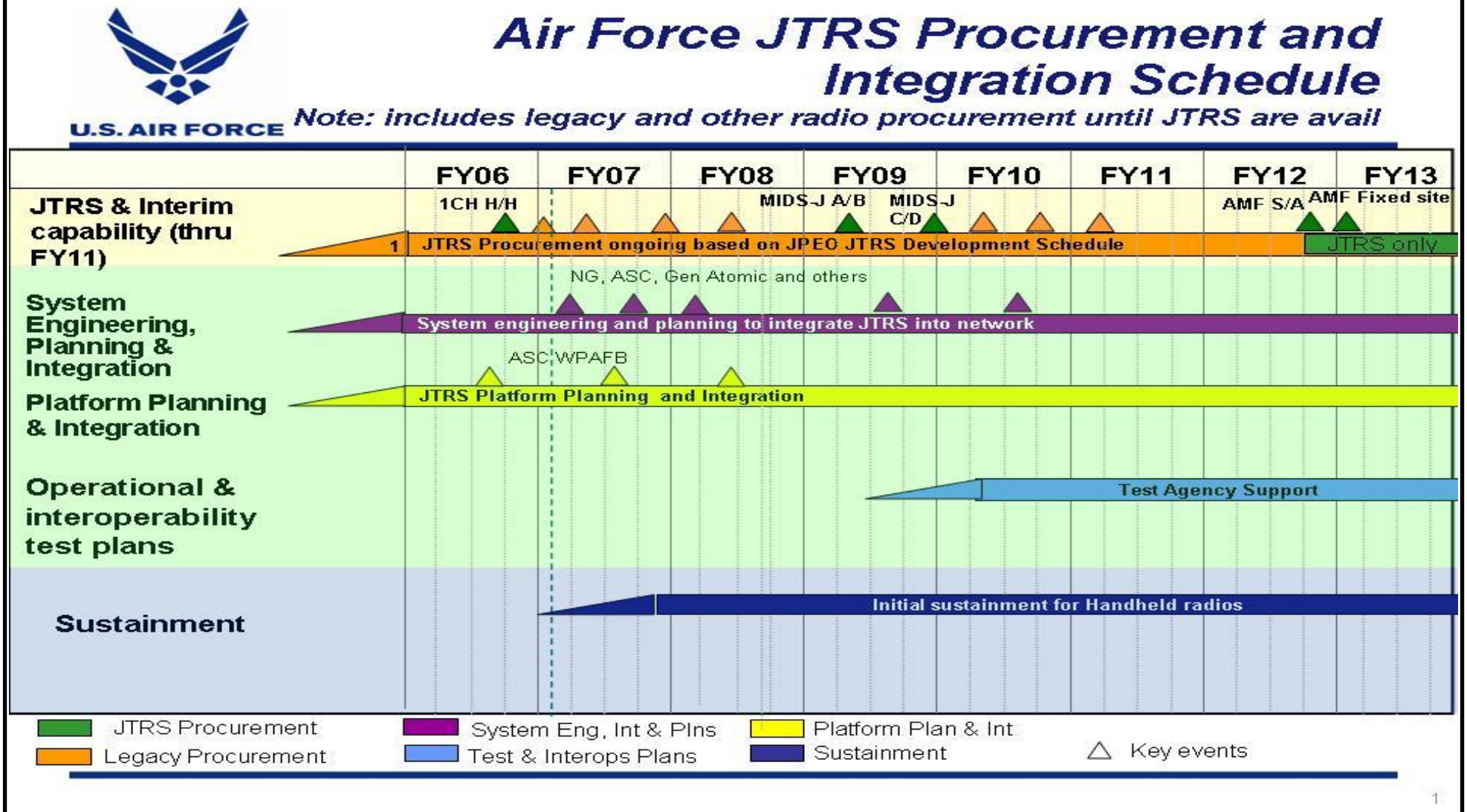

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **5189 C2ISR JTRS Integration**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) System Engineering,	2-4Q	1-4Q	1-4Q	1-4Q
(U) Planning, and Integration	2-4Q	1-4Q	1-4Q	1-4Q
(U) Operational & Interoperability Test Planning	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207438F
PE TITLE: Theater Battle Management (TBM) C4I

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	54.085	31.701	9.961	10.190	11.781	11.929	12.161	12.409	Continuing	TBD
3330	Joint Targeting Toolbox (JTT)	3.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.857	3.857
4790	Theater Battle Management Core System (TBMCS)	32.946	21.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	55.013
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	17.282	9.717	9.961	10.190	11.781	11.929	12.161	12.409	Continuing	TBD

Starting in FY08 Project 674790 (Theater Battle Management Core Systems) was transferred to PE 0207410F (Air and Space Operations Center Weapon System), Projects 675218 (Applications Development) and 675220 (Unit Level).

(U) A. Mission Description and Budget Item Justification

The TBM C4I PE includes Deliberate and Crisis Action Planning and Execution Segments (DCAPES), which is being developed as the next-generation AF interface to the Joint Operational Planning and Execution System (JOPES). DCAPES is the Air Force's single system to present, plan, source, mobilize, deploy, account for, sustain, redeploy, and reconstitute forces for contingency and crisis operations. This system provides a real time, two way interchange of personnel, manpower, logistics, and operational data between the Air Force and the warfighting Combatant Commanders. It matches people, cargo, and airframes/weapon systems to the Combatant Commander's warfighting requirements. Acquisition of this system supports the Air Force's expeditionary force concept.

Prior to FY08, the TBMC4I PE included the Theater Battle Management Core Systems (TBMCS) program and the Joint Targeting Toolbox project. TBMCS develops force-level and wing-level command, control, and intelligence systems which utilize DoD's Common Operating Environment (COE). Acquisition of these systems supports the Air Force's expeditionary force concept and will allow the execution of Theater Battle Management (TBM) planning, intelligence, and operational functions of the Joint Forces Air Component Commander (JFACC). Those functions include: generation and dissemination of the air tasking order (ATO) from the Air and Space Operations Center-Weapon System (AOC-WS) down to the wing and unit levels; air and space defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control. Joint Targeting Toolbox (JTT) is a joint service development effort that enhances joint targeting functionality.

The TBMCS and DCAPES efforts are post Milestone B and are in Budget Activity 7, Operational Systems Development because both systems incrementally upgrade and develop capabilities for currently operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	39.787	31.835	31.883	32.685
(U)	Current PBR/President's Budget	54.085	31.701	9.961	10.190
(U)	Total Adjustments	14.298	-0.134		
(U)	Congressional Program Reductions		-0.014		
	Congressional Rescissions		-0.120		
	Congressional Increases				
	Reprogrammings	15.416			
	SBIR/STTR Transfer	-1.118			

(U) Significant Program Changes:

FY06 is the last year for JTT RDT&E funding.

Starting in FY08, TBMCS (Project 674790) funding is transferred to PE 0207410F (AOC WS), projects 675218 (Applications Development) and 675220 (Unit Level).

In FY06, $9.999M was reprogrammed from PE 0207410F, AOC WS into BPAC 674790, TBMCS and $1.226M was reprogrammed from funding rephased in FY05.

In FY06, $4.191M was reprogrammed into BPAC 674802 for DCAPES development activities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 3330 Joint Targeting Toolbox (JTT)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3330 Joint Targeting Toolbox (JTT)	3.857	0.000	0.000	0.000	0.000	0.000	0.000	0.000	3.857	3.857
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Joint Targeting Toolbox (JTT) funds were placed in project 673330 for FY06. JTT is a set of automated, interoperable targeting tools which enhace joint targeting functionality at national, theater, and tactical levels. These tools are designed to support each phase of the targeting cycle to allow targeting data to be shared dynamically across the national, theater, and tactical levels.

The program is a budget activity 7 - Operation System Development because it provides funding for the modernization of a currently existing and operating system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue development on JTT Release 3.1 which includes, but is not limited to, software development, test and evaluation as well as program management.	3.857	0.000		
(U) Total Cost	3.857	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) N/A										

(U) D. Acquisition Strategy

JTT development contractor, Northrop Grumman Mission Systems, was awarded a cost plus award fee contract to develop JTT version 3.1 following a full and open competition. JTT's requirements are vetted and approved by the Joint Targeting Automated Steering Group (JTASG).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **3330 Joint Targeting Toolbox (JTT)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Software Development	CPAF/IDIQ	NGMS, Bellvue, NE		2.563	Jan-06	0.000							2.563	2.563
Subtotal Product Development			0.000	2.563		0.000		0.000		0.000		0.000	2.563	2.563
Remarks:														
(U) Support														
Systems Support				0.000		0.000						0.000	0.000	0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Development Contractor Costs	CPAF/IDIQ	NGMS, Bellvue, NE		0.541	Jan-06								0.541	0.541
Subtotal Test & Evaluation			0.000	0.541		0.000		0.000		0.000		0.000	0.541	0.541
Remarks:														
(U) Management														
Development Contractor	CPAF/IDIQ	NGMS, Bellvue, NE		0.353	Jan-06								0.353	0.353
Subtotal Management			0.000	0.353		0.000		0.000		0.000		0.000	0.353	0.353
Remarks:														
(U) Fielding														
Fielding	CPAF/IDIQ	NGMS, Bellvue, NE		0.400	Jan-06	0.000							0.400	0.400
Subtotal Fielding			0.000	0.400		0.000		0.000		0.000		0.000	0.400	0.400
Remarks:														
(U) Total Cost			0.000	3.857		0.000		0.000		0.000		0.000	3.857	3.857

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE 3330 Joint Targeting Toolbox (JTT)

JTT Schedule/PE 27438F
2006/2007

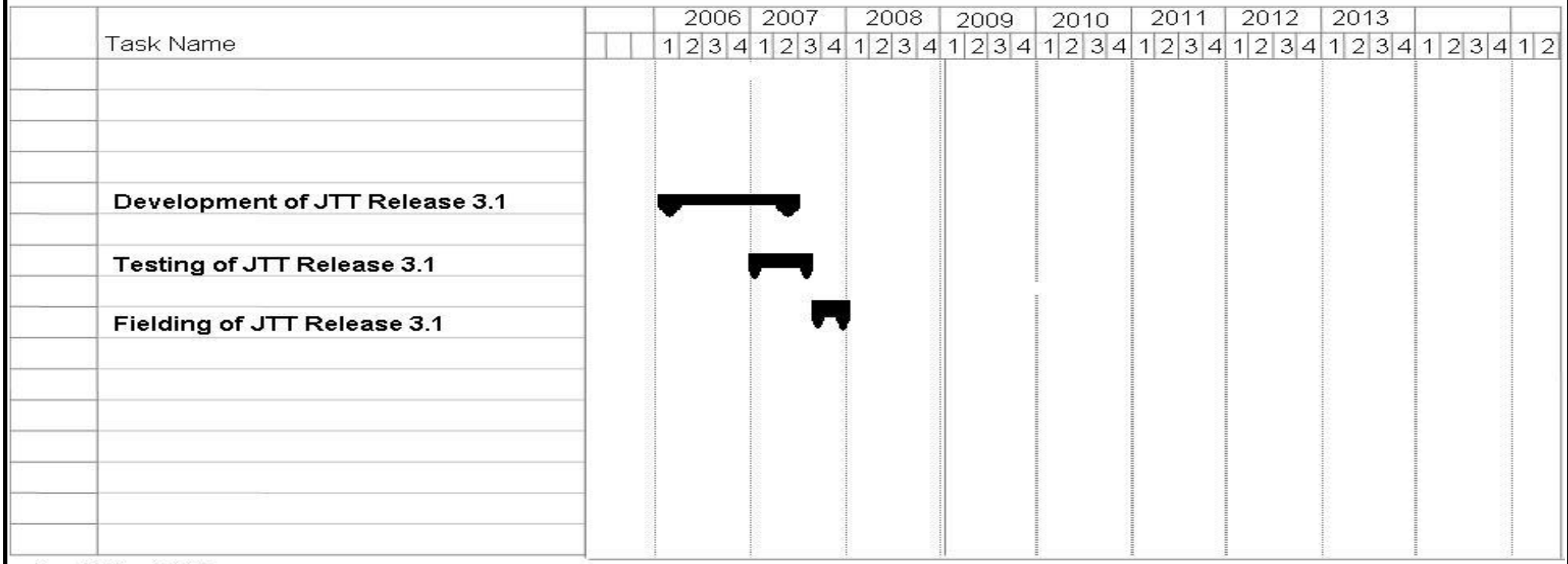

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 3330 Joint Targeting Toolbox (JTT)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Development of Release 3.1	1-4Q	1-2Q		
(U) Testing of Release 3.1		1-3Q		
(U) Fielding of Release 3.1		3-4Q		

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I

PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4790	Theater Battle Management Core System (TBMCS)	32.946	21.984	0.000	0.000	0.000	0.000	0.000	0.000	0.000	55.013
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Starting in FY08 Project 674790 (Theater Battle Management Core Systems) was transferred to PE 0207410F (AOC WS), Projects 675218 (Applications Development) and 675220 (Unit Level).

(U) A. Mission Description and Budget Item Justification

The Theater Battle Management Core Systems (TBMCS) develops force-level and wing-level command, control, and intelligence systems. It links planning, intelligence, and operations functions in an integrated battle management system for planning and executing the air war at the theater level. It also evaluates future air and space command and control concepts identified through Global War on Terrorism (GWOT) and incorporates new capability via evolutionary acquisition. Functions supported include: generation and dissemination of the air tasking order in support of the Joint Forces Air Component Commander (JFACC) from the Air and Space Operations Center-Weapon System (AOC WS) down to the wing and unit levels; air and space defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control.

Realignment of TBMCS funding into the AOC WS aligns funding with overall weapons system configuration control responsibility.
The TBMCS effort is post Milestone B and is in Budget Activity 7, Operational Systems Development because it incrementally upgrades and develops capabilities for currently operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue TBMCS baseline Spirals (including Force Level, Unit Ops & Unit Intel Spirals)	4.322	3.430	0.000	0.000
(U) Continue C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test and Field	22.169	13.018	0.000	0.000
(U) TBMCS System engineering and interoperability with US, NATO, or other coalition systems	4.850	4.396	0.000	0.000
(U) TBMCS Test Support for Force Level and Unit Level Spirals	1.605	1.140	0.000	0.000
(U) Total Cost	32.946	21.984	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, PE 0207438F, WSC 834520	40.413	23.467	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
(U) Other Procurement, AF, PE 0207410F, WSC 834520	0.000	0.000	22.702	22.677	29.232	27.258	27.845	28.266	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4790 Theater Battle Management Core System (TBMCS)**

(U) D. Acquisition Strategy

Projects were awarded following full and open competition and will use an evolutionary acquisition strategy based on spiral development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **4790 Theater Battle Management Core System (TBMCS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
TBMCS Increment/Spiral development	C/CPAF	LM IS&S, Colorado Springs, CO		15.177	Nov-05	14.620	Nov-06					14.703	44.500	TBD
Unit Level Intel	MIPR	Various		0.775	Jan-06	0.685	Nov-06					0.685	2.145	TBD
TBMCS Spiral 1.1.4 Core	C/CPFF	ISS, Colorado Springs, CO		10.539	Dec-05	1.000	Oct-06					1.000	12.539	TBD
Subtotal Product Development			0.000	26.491		16.305		0.000		0.000		16.388	59.184	TBD
Remarks:														
(U) Support														
TBMCS - System Engineering	C/CPAF	MITRE, Bedford, MA		4.850	Oct-05	4.396	Oct-06	0.000		0.000		4.396	13.642	TBD
Subtotal Support			0.000	4.850		4.396		0.000		0.000		4.396	13.642	TBD
Remarks:														
(U) Test & Evaluation														
TBMCS Test Support	MIPR	46TS, Eglin AFB, FL		1.605	Dec-05	1.283	Nov-06	0.000		0.000		1.283	4.171	TBD
Subtotal Test & Evaluation			0.000	1.605		1.283		0.000		0.000		1.283	4.171	TBD
Remarks:														
(U) Management														
				0.000		0.000		0.000		0.000		0.000	0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	32.946		21.984		0.000		0.000		22.067	76.997	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE 4790 Theater Battle Management Core System (TBMCS)

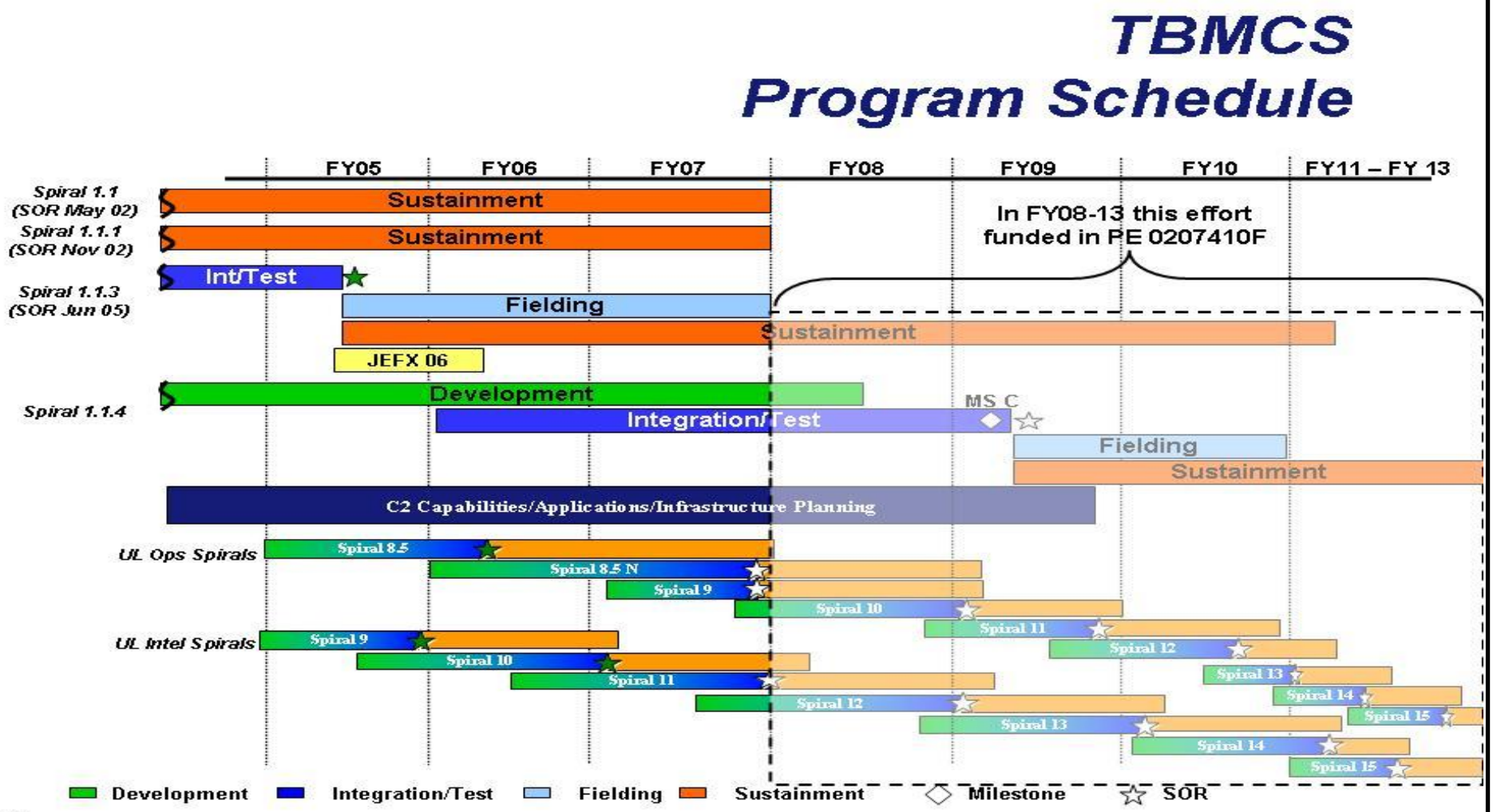

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continuing TBMCS Force Level Software Spirals	1-4Q	1-4Q		
(U) Continuing C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test & Field	1-4Q	1-4Q		
(U) Continuing TBMCS Unit Level Ops Spirals	1-4Q	1-4Q		
(U) Continuing TBMCS Unit Level Intel Spirals	1-4Q	1-4Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	17.282	9.717	9.961	10.190	11.781	11.929	12.161	12.409	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Deliberate and Crisis Action Planning and Execution Segments (DCAPES) is being developed as the next-generation AF interface to the Joint Operational Planning and Execution System (JOPES). Development activites may also include Logistics Feasibility Analysis Capability (LOGFAC), Logistics Module/Manpower and Personnel Module-Base (LOGMOD/MANPER B), War and Mobilization Planning (WMP), Enhanced Contingency Rotational AEF Scheduling Tool (ECAST), Web Enablement, and JOPES Modernization Migration. This effort is an evolutionary follow-on to the Contingency Operations Mobility Planning and Execution System (COMPES). DCAPES replaced the operational tasking and priorities functionality of COMPES with modern relational databases, integrated-distributed database, and common and shared data consistent with the Joint vision for integrated Command and Control. DCAPES is intended to be more tightly coupled with the range of planning support systems to provide a more effective crisis action planning capability for a wider range of operational scenarios and will fully support the force provider function of the AF Forces (AFFOR) Commander. DCAPES along with numerous other war planning support legacy systems are transitioning into a net-centric Service Oriented Architecture (SOA) environment via a War Planning and Execution System (WPES) management construct. DCAPES provides a real time, two way interchange of personnel, manpower, logistics, and operational data between the Air Force and the warfighting Combatant Commanders. It matches people, cargo, and airframes/weapon systems to the Combatant Commander's warfighting requirements.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Accomplishments/Planned Programs				
(U)	Continue DCAPES Increment 2 contractor development, requirements definition, prototyping, coding, and testing.	15.736	8.292	8.499	8.728
(U)	Support	0.294	0.294	0.294	0.294
(U)	Program Management	0.739	0.552	0.552	0.552
(U)	Test & Evaluation - Continue Government deployment operational testing and interoperability support	0.513	0.579	0.616	0.616
(U)	Total Cost	17.282	9.717	9.961	10.190

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations and Maintenance	3.251	2.861	4.630	4.793	4.944	5.029	5.132	5.231	Continuing	TBD

(U) D. Acquisition Strategy

The program uses an evolutionary acquisition strategy with incremental spiral development with multiple software releases to accommodate refinement and prioritization of user requirements and improve adaptability with commercial technology.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
DCAPES Increment 2a	Various	CSC, Falls Church, VA	30.669	14.658	Nov-05	7.338	Jan-07	7.545	Jan-08			0.000	60.210	TBD
DCAPES Increment 2b	TBD	TBD								7.774	Dec-08	Continuing	TBD	TBD
Contract Engineering	T&M	DSD, Sudbury, MD	0.127	0.509	Mar-06	0.529	Dec-06	0.529	Dec-07	0.529	Dec-08	Continuing	TBD	TBD
FFRDC	CPAF	Mitre, Hanscom AFB, MA	3.048	0.569	Dec-05	0.425	Jan-07	0.425	Dec-07	0.425	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			33.844	15.736		8.292		8.499		8.728		Continuing	TBD	TBD
Remarks:														
(U) Support														
Contract Logistic Functional Support	T&M	AC Technologies, Fairfax, VA	0.398	0.294	Jan-06	0.294	Jan-07	0.294	Jan-08	0.294	Jan-09	Continuing	TBD	TBD
Subtotal Support			0.398	0.294		0.294		0.294		0.294		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
46 Test Sqdn/JITC	MIPR	Eglin AFB, FL/Ft Huachuca, AZ	4.041	0.513	Dec-05	0.316	Jan-07	0.353	Jan-08	0.353	Jan-09	Continuing	TBD	TBD
Other USAF/SPO Testing	MIPR/Other	Varies Locations				0.263	Feb-07	0.263	Feb-08	0.263	Feb-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			4.041	0.513		0.579		0.616		0.616		Continuing	TBD	TBD
Remarks:														
(U) Management														
Prorgram Management Office Support	Various	Maxwell-Gunther AFB/ Montgomery, AL	19.109	0.739	Oct-05	0.552	Feb-07	0.552	Jan-08	0.552	Jan-09	Continuing	TBD	TBD
Subtotal Management			19.109	0.739		0.552		0.552		0.552		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			57.392	17.282		9.717		9.961		10.190		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE 4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)

Deliberate and Crisis Action Planning and Execution Segment -- DCAPES

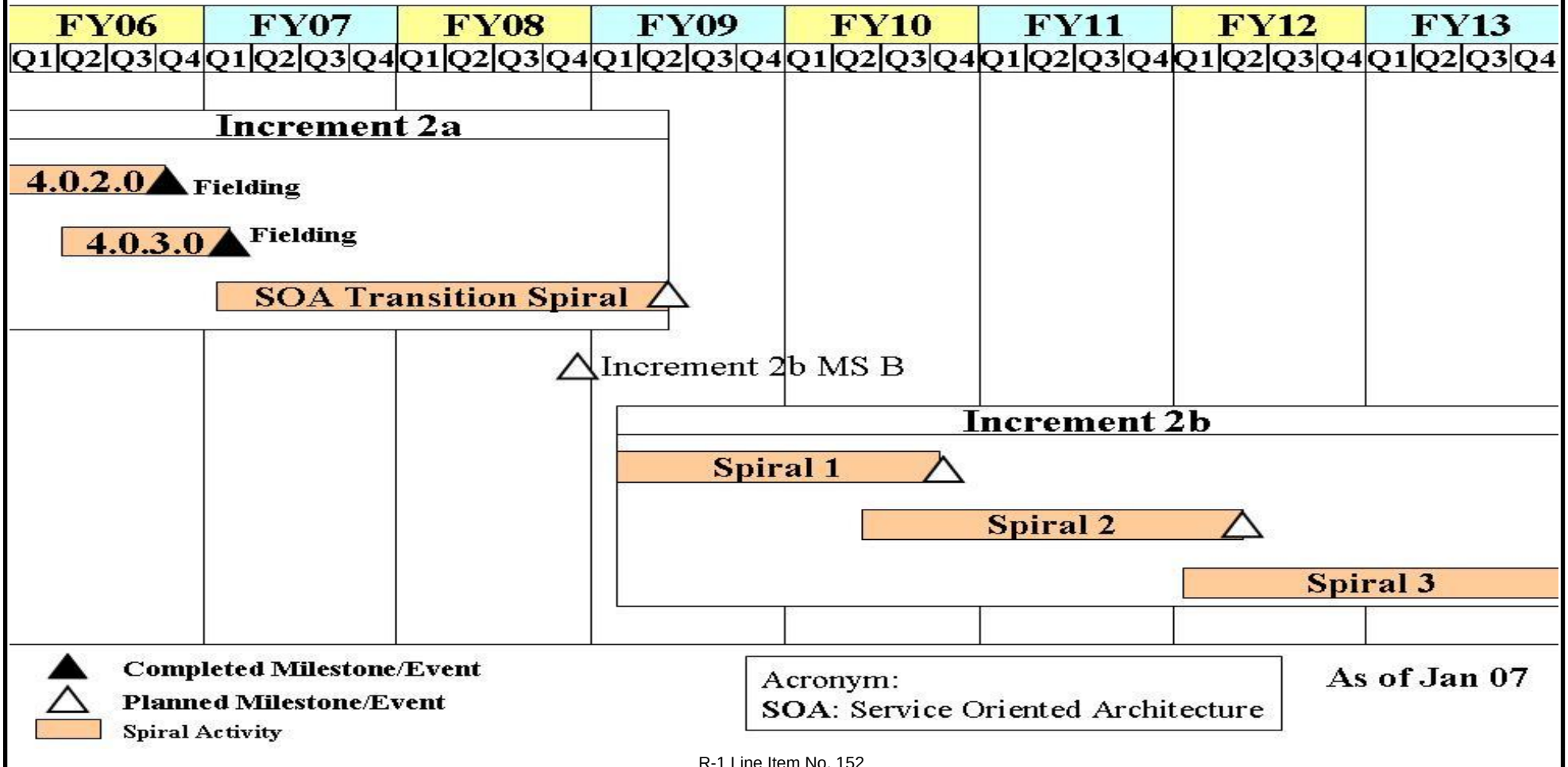

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Increment 2a 4.0.2.0 Release Development	1-4Q	1Q		
(U) Increment 2a 4.0.2.0 Release Fielding		1Q		
(U) Increment 2a 4.0.3.1 Release Development	3-4Q	1-4Q		
(U) Increment 2a 4.0.3.1 Release Fielding		4Q		
(U) Increment 2b Milestone B			4Q	
(U) Increment 2b Spiral 1				1-4Q
(U) Increment 2b Spiral 2				4Q

PE NUMBER: 0207445F
PE TITLE: FIGHTER TACTICAL DATA LINK

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	135.373	TBD
5043 Fighter Tactical Data Link	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	135.373	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Intra-Flight Data Link (IFDL), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT). DoD has identified TTNT as the initial Joint Tactical Radio System (JTRS) Joint Airborne Network - Tactical Edge (JAN-TE) capability.

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force fighter platforms to include, but not limited to, A-10, F-15A-E, F-16 Blocks 30/40/50, F-22A, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	119.965	113.388	81.084	38.626
(U)	Current PBR/President's Budget	115.818	112.755	39.545	74.312
(U)	Total Adjustments	-4.147			
(U)	Congressional Program Reductions		-0.205		
	Congressional Rescissions	-0.004	-0.428		
	Congressional Increases				
	Reprogrammings	-0.806			
	SBIR/STTR Transfer	-3.337			

(U) Significant Program Changes:

In FY08, $26.7M was removed due to a decision to equip A-10 with SADL radios rather than JTRS radios

In FY08, $15.2M was removed for higher DoD priorities

In FY09/10 funding was added for development and integration of F-22A Advanced Tactical Data Link capabilities

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE: 5043 Fighter Tactical Data Link	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5043 Fighter Tactical Data Link	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	135.373	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), Intra-Flight Data Link (IFDL), Multifunction Advanced Data Link (MADL), and Tactical Targeting Network Technology (TTNT). DoD has identified TTNT as the initial Joint Tactical Radio System (JTRS) Joint Airborne Network - Tactical Edge (JAN-TE) capability.

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force fighter platforms to include, but not limited to, A-10, F-15A-E, F-16 Blocks 30/40/50, F-22A, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Programs				
(U) Analysis, development and integration of common fighter data link technology and capabilities	52.863	19.336	5.445	18.488
(U) F-22A Advanced Tactical Data Link development, including integration of JAN-TE waveform	39.866	65.921	29.620	52.824
(U) Development and integration of A-10 SADL/Enhanced Precision Location Reporting System (EPLRS) capability	12.824	8.500	2.548	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE: 5043 Fighter Tactical Data Link

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Development and integration of A-10 Improved Data Modem (IDM) capability	4.465	15.370	0.432	0.000
(U) Fighter Tactical Data Link system engineering, testing, and technical support	5.000	3.628	1.500	3.000
(U) A-10 SADL/EPLRS and IDM Testing	0.800	0.000	0.000	0.000
(U) Total Cost	115.818	112.755	39.545	74.312

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	156.851	173.216	199.363	207.268	166.987	184.448	201.611	193.745	Continuing	TBD
(U) 0207446F (Bomber TDL)	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000		271.710
(U) 0207448F (C2ISR TDL)	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000		22.000
(U) Other APPN										
(U) Procurement (3010)										
(U) 0207434F (Link 16 Sup &Sus)	2.996	2.773	0.001	9.708	46.296	99.938	104.173	75.826	Continuing	TBD
(U) 0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000		203.609
(U) 0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000		38.233
(U) 0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus 3400)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923		TBD
(U) 0207445F (Fighter TDL)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293		
(U) 0401839F (Airlift TDL)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing	TBD
(U) Other Procurement (3080)										
(U) 0207434F (Link 16 Sup & Sus)	41.362	36.886	21.933	28.301	41.932	43.948	56.337	39.173	Continuing	TBD

(U) D. Acquisition Strategy

The 640th Electronic Systems Squadron (ELSS), formerly the Tactical Data Links System Program Office (SPO), provides for common development, integration and

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207445F FIGHTER TACTICAL DATA LINK**	PROJECT NUMBER AND TITLE **5043 Fighter Tactical Data Link**

interoperability across all Air Force platforms and ensures that Tactical Data Links are procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractors

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207445F FIGHTER TACTICAL DATA LINK**

PROJECT NUMBER AND TITLE: **5043 Fighter Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
F-22A Advanced Tactical Data Link Development and Integration	MIPR/AF Form 616	Northrop Grumman, Lockheed Martin	0.000	39.866	Nov-05	65.921	Jan-07	29.620	Jan-08	52.824	Jan-09	Continuing	TBD	TBD
Common Fighter Data Link Development *	MIPR	Various contractors managed by AFRL and ASC, WPAFB OH/SPAWAR, San Diego, CA		52.863	Jan-06	19.336	Apr-07	5.445	Apr-08	18.488	Apr-09	Continuing	TBD	TBD
Development and Integration of A-10 SADL/EPLRS Capability	AF Form 616	WPAFB, OH		12.824	Feb-06	8.500	Jan-07	2.548	Feb-08	0.000		0.000	23.872	
Development and Integration of A-10 Improved Data Modem Capability	AF Form 616	WPAFB,OH		4.465	Sep-06	15.370	Jan-07	0.432	Feb-08	0.000		0.000	20.267	
													0.000	
MITRE	SS/FFP	MITRE, Bedford MA		2.660	Dec-05	0.928	Dec-06	1.000	Dec-07	0.836	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	112.678		110.055		39.045		72.148		Continuing	TBD	TBD
Remarks: *MIPR/AF Form 616 funding to Fighter platform program offices for scheduled contract awards and development efforts.														
(U) Test & Evaluation														
46th Development Test Facility and Lockheed Martin for A-10 SADL/EPLRS and IDM Test	MIPR to AFMC	46th Test Wing, Eglin AFB, FL and Lockheed Martin		0.800	Dec-05							0.000	0.800	TBD
Subtotal Test & Evaluation			0.000	0.800		0.000		0.000		0.000		0.000	0.800	TBD
Remarks:														
(U) Management														
Program Office and Contractor Support	C/FFP	Various		2.340	Dec-05	2.700	Dec-06	0.500	Dec-07	2.164	Dec-08	Continuing	TBD	TBD
Subtotal Management			0.000	2.340		2.700		0.500		2.164		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	115.818		112.755		39.545		74.312		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link

A-10 Data Link
As of: 10 Jan 07

Dominant Air Power: Design For Tomorrow...Deliver Today

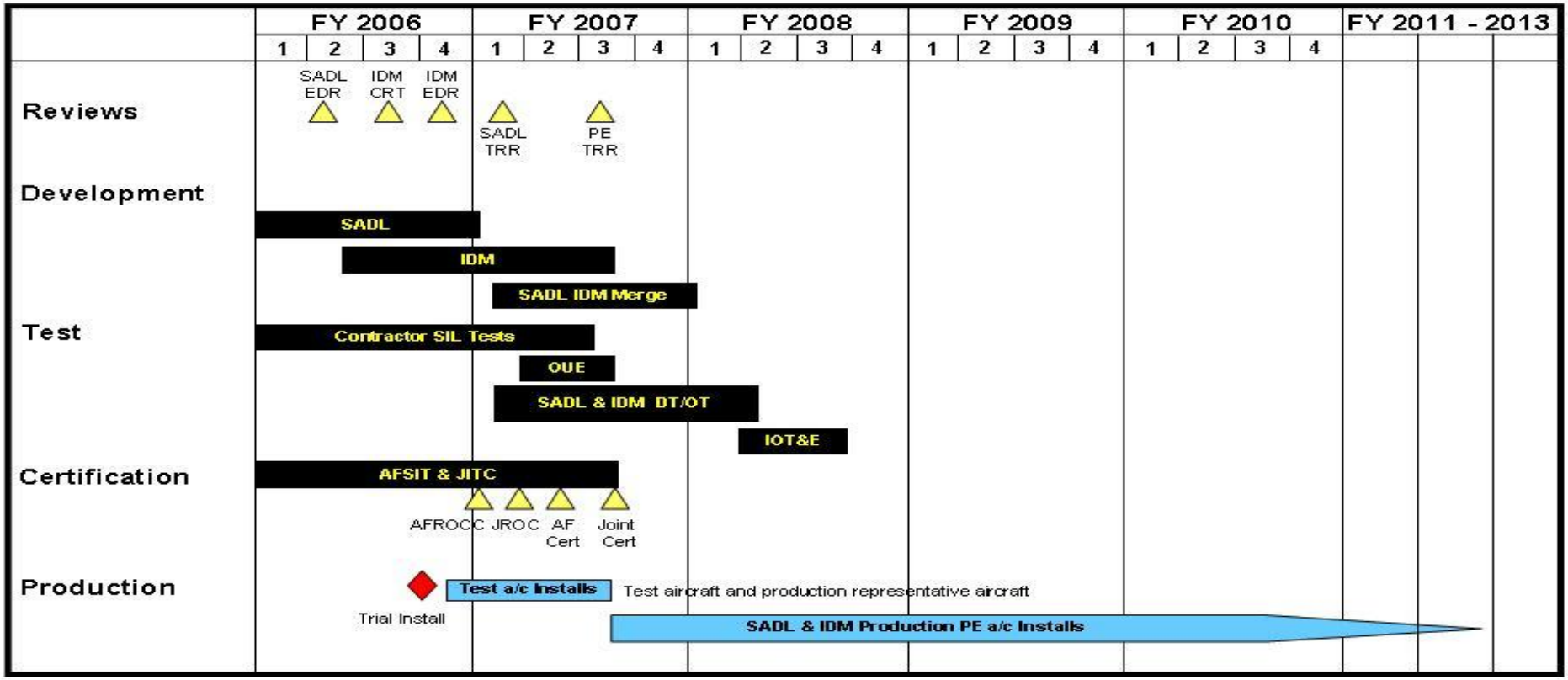

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Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link

F-22A ATDL Long Term Schedule
As of 4 Jan 07

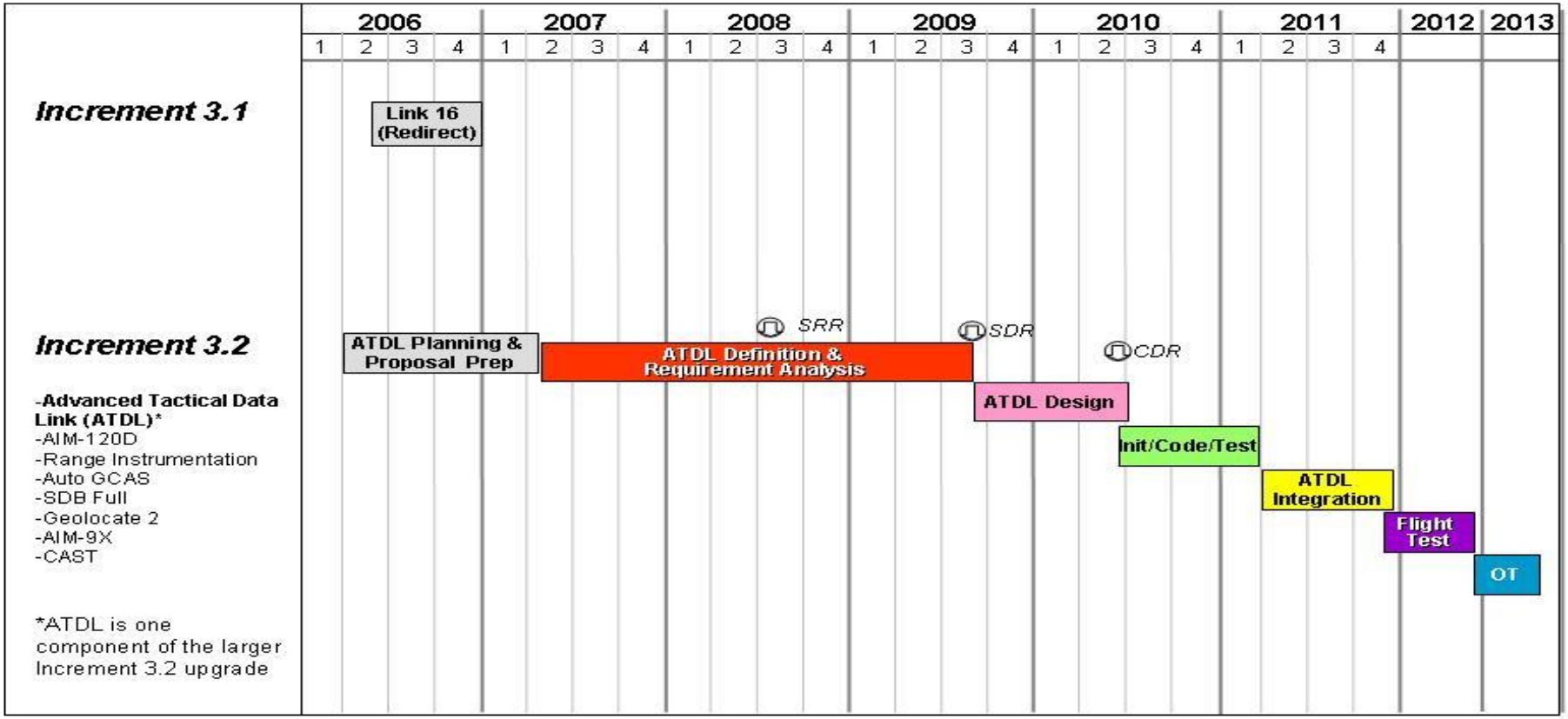

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207445F FIGHTER TACTICAL DATA LINK**	PROJECT NUMBER AND TITLE **5043 Fighter Tactical Data Link**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) A-10 SADL Development	1-4Q	1Q		
(U) A-10 SADL Engineering Design Review	2Q			
(U) A-10 SADL Test Readiness Review		1Q		
(U) A-10 IDM Development	2-4Q	1-3Q		
(U) A-10 IDM Certification	3Q			
(U) A-10 IDM Engineering Design Review	4Q			
(U) A-10 SADL/IDM Merge		1-4Q	1-2Q	
(U) A-10 Precision Engagement (SADL/IDM) Test Readiness Review		3Q		
(U) A-10 SADL/IDM DT/OT/IOT&E		1-4Q	1-3Q	
(U) A-10 SADL/IDM AFSIT & JITC Certification Activities	1-4Q	1-3Q		
(U) A-10 SADL/IDM Joint Certification		3Q		
(U) A-10 SADL/IDM Trial Install	4Q			
(U) A-10 SADL/IDM Production/Precision Engagement Aircraft Installs*		2-4Q	1-4Q	1-4Q
(U) F-22A ATDL Planning & Proposal Preparation	2-4Q	1-2Q		
(U) F-22A ATDL Definition & Requirements Analysis		2-4Q	1-4Q	1-3Q
(U) F-22A ATDL Systems Requirements Review			3Q	
(U) F-22A ATDL Systems Design Review				3Q
(U) F-22A ATDL Design				3-4Q

* APAF funded (PE 0207445F)

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PE NUMBER: 0207446F
PE TITLE: Bomber Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5041 Bomber Tactical Data Link	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides for common development, integration and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the data link to accomplish time critical targeting and other mission update functions. The BLOS data link capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	142.800	168.168	94.889	0.000
(U)	Current PBR/President's Budget	133.836	100.744	37.130	0.000
(U)	Total Adjustments	-8.964	-67.424		
(U)	Congressional Program Reductions		-67.042		
	Congressional Rescissions	-0.007	-0.382		
	Congressional Increases				
	Reprogrammings	-4.984			
	SBIR/STTR Transfer	-3.973			

(U) Significant Program Changes:

In FY08, funding was removed due to B-52 CONECT/Integrated Data Link program restructuring

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5041 Bomber Tactical Data Link	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides for common development, integration and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. Also expands LOS and BLOS data link capabilities. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the data link to accomplish time critical targeting and other mission update functions. The BLOS data link capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration; support of data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS and Global Persistent Attack CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Purchase LOS Link 16 terminals and BLOS radios for labs and integration testing	1.440	1.440		
(U) Common Bomber Tactical Data Link (TDL) analysis, systems engineering, testing, and technical support	4.472	4.000	0.520	
(U) B-1 FIDL System Development and Demonstration (SDD)	65.611	63.320	36.610	
(U) B-52 CONECT/Integrated Data Link System Development and Demonstration (SDD)	62.313	31.984		
(U) Total Cost	133.836	100.744	37.130	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	156.851	173.216	199.363	207.268	166.987	184.448	201.611	193.745	Continuing	TBD
(U) 0207445F (Fighter TDL)	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000		343.735
(U) 0207448F (C2ISR TDL)	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000		31.466
(U) Other APPN										
(U) Procurement (3010)										
(U) 0207434F (Link 16 Sup & Sus)	2.996	2.773	0.001	9.708	46.296	99.938	104.173	75.826	Continuing	TBD
(U) 0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000		419.662
(U) 0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000		38.233
(U) 0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923	Continuing	TBD
(U) 0207445F (Fighter TDL)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293		
(U) 0401839F (Airlift TDL)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing	TBD
(U) Other Procurement (3080)										
(U) 0207434F (Link 16 Sup & Sus)	41.362	36.886	21.993	28.301	41.932	43.948	56.337	39.173	Continuing	TBD

(U) D. Acquisition Strategy

The 640th Electronic Systems Squadron (ELSS), formerly the Tactical Data Links System Program Office, provides for common development, integration and interoperability across all Air Force platforms and ensures that data links are procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link

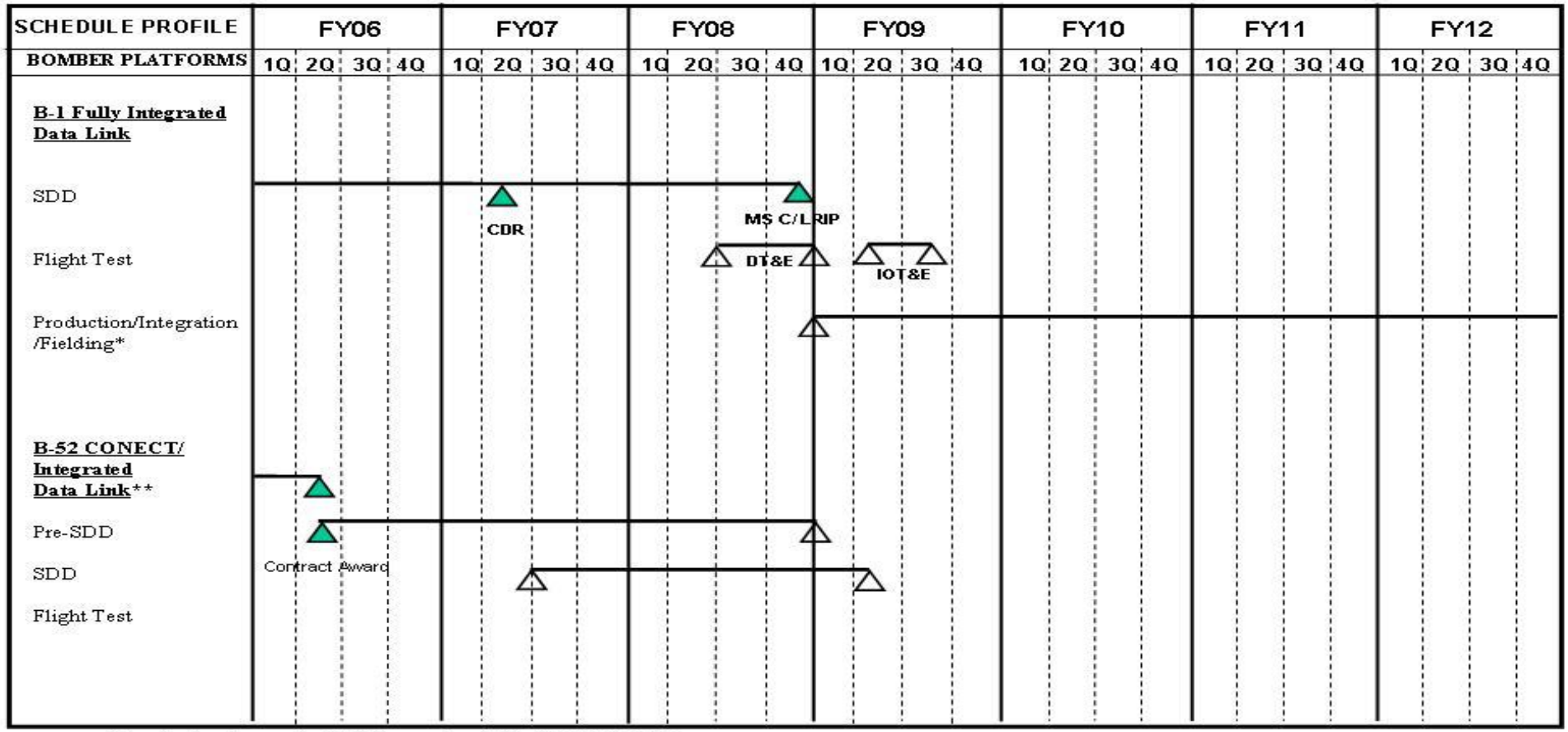
PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Link 16 Development Terminal Purchases	MIPR	SPAWAR, San Diego CA		1.440	Jun-06	1.440	Jun-07					0.000	2.880	1.800
B-1 FIDL System Development and Demonstration (SDD) *	SS/CPIF	Boeing		62.811	Nov-05	59.533	Nov-06	29.642	Nov-07			0.000	151.986	194.234
B-52 System Development and Demonstration (SDD) *	CPFF	Boeing, Wichita, KS		62.313	Feb-06	31.984	Feb-07					0.000	94.297	
Bomber TDL analysis, systems engineering & technical support/MITRE	Various	Various		3.132	Dec-05	2.660	Dec-06	0.220	Dec-07			Continuing	TBD	TBD
B-1 Training System	C/FPIF	Rockwell Collins				2.400	Jan-07	1.440	Jan-08			0.000	3.840	
Subtotal Product Development			0.000	129.696		98.017		31.302		0.000		Continuing	TBD	TBD
Remarks: *MIPR funding to Bomber platform program offices for scheduled contract awards and development efforts.														
(U) Management														
Program Office and Contractor Support	C/FFP	Various		1.340	Dec-05	1.340	Dec-06	0.300	Dec-07			Continuing	TBD	TBD
Subtotal Management			0.000	1.340		1.340		0.300		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
B-1 FIDL Testing	Project Order	AF Flight Test Center, Edwards AFB, CA		2.800	Nov-05	1.387	Nov-06	5.528	Nov-07			0.000	9.715	
Subtotal Test & Evaluation			0.000	2.800		1.387		5.528		0.000		0.000	9.715	0.000
Remarks:														
(U) Total Cost			0.000	133.836		100.744		37.130		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE 5041 Bomber Tactical Data Link

BOMBER TACTICAL DATA LINK SCHEDULE

(As of 4 January 2007)



* Production/Integration/Feilding are funded in JTRS & B-1 PE

** Efforts in FY08 and beyond are funded in the B-52 PE

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) B-1 Fully Integrated Data Link SDD	1-4Q	1-4Q	1-4Q	
(U) B-1 Fully Integrated Data Link Flight Test (DT&E & IOT&E)			3-4Q	1-3Q
(U) B-1 Fully Integrated Data Link Milestone C (LRIP)			4Q	
(U) B-52 Integrated Data Link Pre-SDD	1-2Q			
(U) B-52 Integrated Data Link Contract Award (SDD)	2Q			
(U) B-52 Integrated Data Link SDD*	2-4Q	1-4Q	1-4Q	
(U) B-52 Integrated Data Link Flight Test*		3-4Q	1-4Q	1Q

* Funded in B-52 PE starting FY08

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PE NUMBER: 0207448F
PE TITLE: C2ISR Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
5045	C2ISR Tactical Data Link	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Predator, Rivet Joint, Combat Sent, Cobra Ball, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs will increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	14.627	4.338	1.801	1.731
(U)	Current PBR/President's Budget	14.219	4.322	1.809	1.741
(U)	Total Adjustments	-0.408			
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.016		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.408			

(U) Significant Program Changes:

Beginning in FY06, funds were programmed to develop AWACS Block 30/35 TDL upgrades to address capability shortfalls in theater command and control and battle management identified during combat, which enables an enhanced TDL capability until AWACS Block 40/45 Full Operational Capability.

In FY06-07, funding was added to provide AWACS Block 40/45 Data Link Infrastructure (DLI) and Combat Identification (CID) capabilities. DLI and CID address recent combat lessons learned related to rapid exchange of fleeting target information, inter-service combat identification, and providing weapons-quality coordinates.

C2ISR Tactical Data Link baseline funding decreases from FY06-08 due to (1) JSTARS Attack Support Upgrade (ASU) completion in FY06, and (2) AWACS Block 40/45 CID and Data Link Infrastructure completion in FY07.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5045 C2ISR Tactical Data Link	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Predator, Rivet Joint, Combat Sent, Cobra Ball, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs will increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU)	6.604			
(U) AWACS 40/45 Data Link Infrastructure (DLI)	2.120	0.602		
(U) AWACS 40/45 Combat ID (CID)	3.495	1.725		
(U) C2ISR data link integration and AWACS Block 30/35 Software Enhancements	2.000	1.995	1.809	1.741
(U) Total Cost	14.219	4.322	1.809	1.741

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE 5045 C2ISR Tactical Data Link

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) 0207434F (Link 16 Sup & Sus)	156.851	173.216	199.363	207.268	166.987	184.448	210.611	193.745	Continuing	TBD
(U) 0207445F (Fighter TDL)	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift/Other TDL)	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) Aircraft Procurement, AF (3010)										
(U) 0207434F (Link 16 Sup & Sus)	2.996	2.773	0.001	9.708	46.926	99.938	104.173	75.826	Continuing	TBD
(U) 0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000	Continuing	TBD
(U) 0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) 0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing	TBD
(U) O&M (3400)										
(U) 0207434F (Link 16 Sup & Sus)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923	Continuing	TBD
(U) 0207445F (Fighter TDL)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293		
(U) 0401839F (Airlift 3400)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing	TBD
(U) Other Procurement, AF (3080)										
(U) 0207434F (Link 16 Sup & Sus)	41.362	36.886	21.933	28.301	41.932	43.948	56.337	39.173	Continuing	TBD

(U) D. Acquisition Strategy

The 640th Electronic Systems Squadron (ELSS), formerly the Air Force Tactical Data Links Network (TDN) System Program Office (SPO), provides for common development, integration and interoperability across all Air Force platforms and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207448F C2ISR Tactical Data Link**

PROJECT NUMBER AND TITLE: **5045 C2ISR Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL		6.604	Nov-05							0.000	6.604	48.504
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA		7.615	Dec-05	4.322	Dec-06	1.809	Dec-07	1.741	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	14.219		4.322		1.809		1.741		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks: Test requirements are funded by platforms														
(U) Management														
Program Office and Contractor Support												Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	14.219		4.322		1.809		1.741		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

PE27448F Schedule
C2ISR Tactical Data Link
(as of 4 Jan 07)

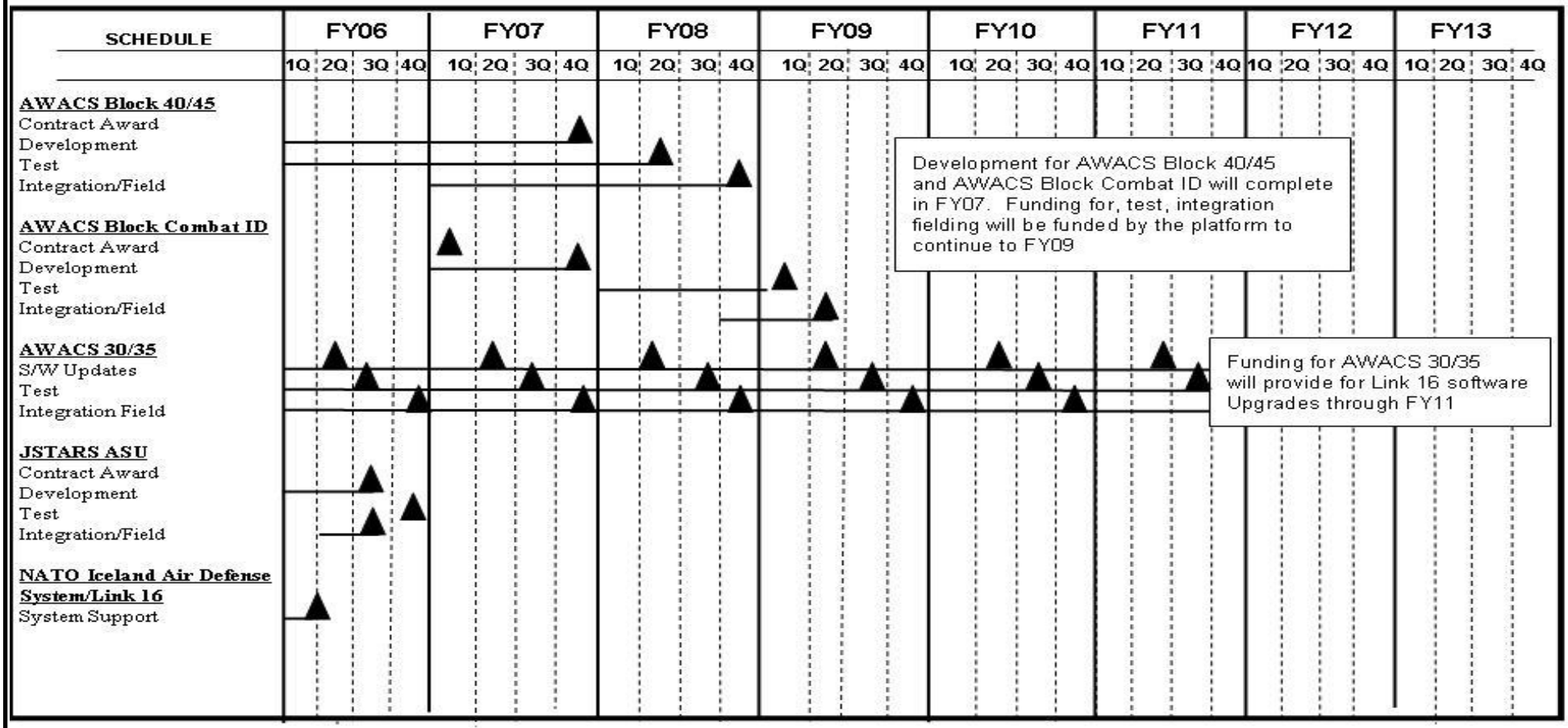

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AWACS Block 40/45 Initiative Development	1-4Q	1-4Q		
(U) AWACS Block 40/45 Combat ID Initiative Contract Award		1Q		
(U) AWACS Block 40/45 Combat ID Initiative Development		1-4Q		
(U) AWACS Block 30/35 Software Updates/Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) AWACS Block 30/35 Test/Integration & Field	1-4Q	1-4Q	1-4Q	1-4Q
(U) JSTARS ASU Development	1-3Q			
(U) JSTARS ASU Test	4Q			
(U) JSTARS ASU Integration /Field	2-3Q			
(U) C2ISR NATO IADS Link 16 Integration	1Q			

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PE NUMBER: 0207449F
PE TITLE: C2 Constellation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	39.123	43.686	45.049	46.119	47.075	47.685	48.605	49.590	Continuing	TBD
5078	Horizontal Integration	10.362	11.465	11.857	12.122	12.421	12.680	12.923	13.184	Continuing	TBD
5140	Joint Expeditionary Force Experiments	28.761	32.221	33.192	33.997	34.654	35.005	35.682	36.406	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Command and Control Constellation (C2C) efforts provide strategic, operational, and tactical direction for doctrine, organization, training, materiel, leadership/education, personnel and facilities (DOTMLPF) solutions to facilitate the horizontal flow of Warfighter Domain C2ISR information. In-depth analyses of C2C operational, systems, and technical architecture are geared to generate specifications, standards and solutions to support joint material and non-material solutions. The C2C incorporates rapidly developing technologies to promote common standards, data sharing and information services across Air Force and Joint warfighting applications to support a network-centric, joint enterprise solution. Through rigorous architecture analysis, C2C also allows for existing C2 structures to be streamlined to facilitate future joint command and control capabilities provided to the Joint Forces Commander.

Project 5078, Horizontal Integration (HI) is responsible for delivering integrated capabilities within the Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) warfighting domain of the Air Force enterprise. The Command and Control Constellation (C2C) identifies, prioritizes, develops and delivers horizontally integrated solutions--across the Services--into the hands of the joint warfighter. C2C Program funds are applied toward identifying and delivering these horizontally integrated capabilities to the warfighter.

Project 5140, Joint Expeditionary Force Experiments (JEFX), are large-scale warfighting experiments that address emerging operational challenges and are part of the total Air Force (AF) experimentation effort. They combine live-fly forces and simulations into an operationally representative warfighter environment. These experiments provide a vehicle for experimentation with operational concepts and attendant new technologies to evolve and transform our aerospace forces and capabilities for the 21st century. They are part of a broader effort to implement the Joint Vision 2020, exploit the Revolution in Military Affairs, demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation.

This program is in Budget Activity 7- Operational System Development because it provides a vehicle for developers, testers, and warfighters to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	40.334	44.027	56.663	56.317
(U)	Current PBR/President's Budget	39.123	43.686	45.049	46.119
(U)	Total Adjustments	-1.211	-0.341		
(U)	Congressional Program Reductions		-0.175		
	Congressional Rescissions		-0.166		
	Congressional Increases				
	Reprogrammings	-0.078			
	SBIR/STTR Transfer	-1.133			

(U) Significant Program Changes:

The change between the previous and current FY08 and FY09 President's Budgets are due to the reprogramming of funds to meet higher AF priorities.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5078 Horizontal Integration	10.362	11.465	11.857	12.122	12.421	12.680	12.923	13.184	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Project 5078, Horizontal Integration, is established to develop an integrated capability to support network centric operations. Project 5078 defines the Command and Control Constellation (C2C) through six thrust areas: first, Operational Requirements and Planning documentation will be created/updated; second, Systems Engineering Policy & Guidance, Education and Architecture will be developed to further refine the C2C and provide baseline data for more detailed analysis; third, operators and systems engineers will perform analyses to validate and prioritize the major issues facing the C2C and develop net-centric roadmaps; fourth, various Modeling & Simulation and experimentation methods will be used to test both non-materiel and materiel solutions; fifth, Joint Integration/applicability will be researched and applied; and sixth, Horizontal Integration Initiatives will be built and transitioned to the warfighter as the final step in the C2C systems engineering process. Program specifics are:

1) Operational Requirements documents (e.g., Program Management Directive, Concept of Employment, Initial Capability Document and C2C Architecture) will be published/revised. A FYDP Implementation plan identifying the most significant C2C net-centric integration issues will continue to be developed.

(2) Systems Engineering and Architecture Development is the 'glue' which will hold C2C elements together, and close the seams in the Command, Control Communications Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architecture. C2C system and technical architectures, cross program requirements allocation, key cost drivers, risk assessments and corresponding risk mitigation strategies will be examined. The C2C architecture provides a framework for conducting analyses to identify capability gaps, compare alternatives for improving Joint warfighting capabilities and to identify associated resource implications. Capability analyses employ the C2C architecture to identify areas where interoperability can be improved within the Air Force, among Joint Services, and among coalition partners. Once capability issues are identified through the architecture analyses, they are prioritized and Capability Roadmaps are developed to prioritize and provide solutions to the Warfighter that resolve the capability gaps.

(3) Operational Integration and System Engineering Analysis for Net-centric capability across C4ISR programs will continue. The resulting Net-centric Strategic Plan will impact C4ISR program roadmaps and feed directly into the Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) and C4ISR Net-centric Flight Plans. Provides Air Staff with issue development, data collection, data analysis, mapping of capabilities to system functions, and supports the ability to develop trade space recommendations through use of a Capability Evolution Methodology assessment tool.

(4) Modelling and Simulation (M&S) and Experimentation will leverage existing government/industry development and simulation sites to allow 'virtual' assessments of the C2 Constellation. Facility network architecture management, new or improved communications linkages between the various government and industry simulation sites, with the required accreditation and encryption systems will be developed. A series of experiments, exercises and simulations will provide alternatives and targets of opportunity for further engineering improvements and integration.

(5) C4ISR Joint Interoperability/Integration initiatives will mitigate the synchronization of Air Force and Joint nodes bridging the C2 Constellation enterprise.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation	PROJECT NUMBER AND TITLE 5078 Horizontal Integration

Focuses on supporting several major venues including: Joint Battle Management Command and Control (JBMC2) Roadmap, Joint Forces Command (JFCOM) Board of Directors and the Multi - Service Working Group.

(6) Horizontal Integration Initiatives will capitalize on near-term opportunities to eliminate known horizontal integration deficiencies in the seamless C4ISR network vision. These initiatives will become integral to weapon systems' configuration controlled baselines.

This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration and provides developers, testers and warfighters a way to experiment, analyze,and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Operational Requirements/Planning documents creation/update	0.920	0.990	1.000	1.050
(U)	Systems Engineering Policy/Guidance and Architecture Education Development	3.800	4.004	4.356	4.462
(U)	Operational Analysis supporting Net-Centric Integration	1.906	2.671	2.681	2.700
(U)	M&S Infrastructure and Operational Experimentation	2.000	2.000	2.000	2.000
(U)	Joint Interoperability/Integration Efforts	0.764	0.800	0.820	0.860
(U)	Horizontal Integration Initiative focused on warfighting capability development	0.972	1.000	1.000	1.050
(U)	Total Cost	10.362	11.465	11.857	12.122

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

This project uses full and open competition for one or more operational requirements document creation, systems engineering & architecture development, modeling & simulation and experimentation, joint interoperability/integration, and horizontal integration approaches.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Capability Based Planning (CBP)	FFRDC	MITRE Corp, ESC, Hanscom AFB, MA		0.319	Nov-05	0.335	Nov-06	0.351	Nov-07	0.367	Nov-08	Continuing	TBD	TBD
	C/CPAF	ManTech ITSP, ESC, Hanscom AFB, MA		0.100	Dec-05	0.105	Dec-06	0.110	Dec-07	0.115	Dec-08	Continuing	TBD	TBD
Architecture development	FFRDC	MITRE Corp, ESC, Hanscom AFB, MA		1.276	Nov-05	1.191	Nov-06	1.530	Nov-07	1.629	Nov-08	Continuing	TBD	TBD
	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		0.360	Dec-05	0.378	Dec-06	0.396	Dec-07	0.414	Dec-08	Continuing	TBD	TBD
Capability Roadmaps	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		0.789	Dec-05	0.828	Dec-06	0.868	Dec-07	0.907	Dec-08	Continuing	TBD	TBD
	C/CPAF	ManTech ITSP, ESC, Hanscom AFB, MA		0.150	Dec-05	0.158	Dec-06	0.165	Dec-07	0.173	Dec-08	Continuing	TBD	TBD
	FFRDC	MITRE, ESC, Hanscom AFB, MA		0.700	Nov-05	0.735	Nov-06	0.770	Oct-07	0.805	Nov-08	Continuing	TBD	TBD
Operational Requirements Planning Documents, System Engineering, Operation Integration Analysis, and Joint Interoperability Integration efforts	MIRP	AFC2ISRC/ CX		1.945	Oct-05	2.776	Oct-06	2.611	Oct-07	2.451	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	5.639		6.506		6.801		6.861		Continuing	TBD	TBD
Remarks:														
(U) Support														
Misc/Program Management Office	Various	ESC, Hanscom AFB, MA		1.411	Dec-05	1.482	Dec-06	1.413	Dec-07	1.452	Dec-08	Continuing	TBD	TBD
Subtotal Support			0.000	1.411		1.482		1.413		1.452		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

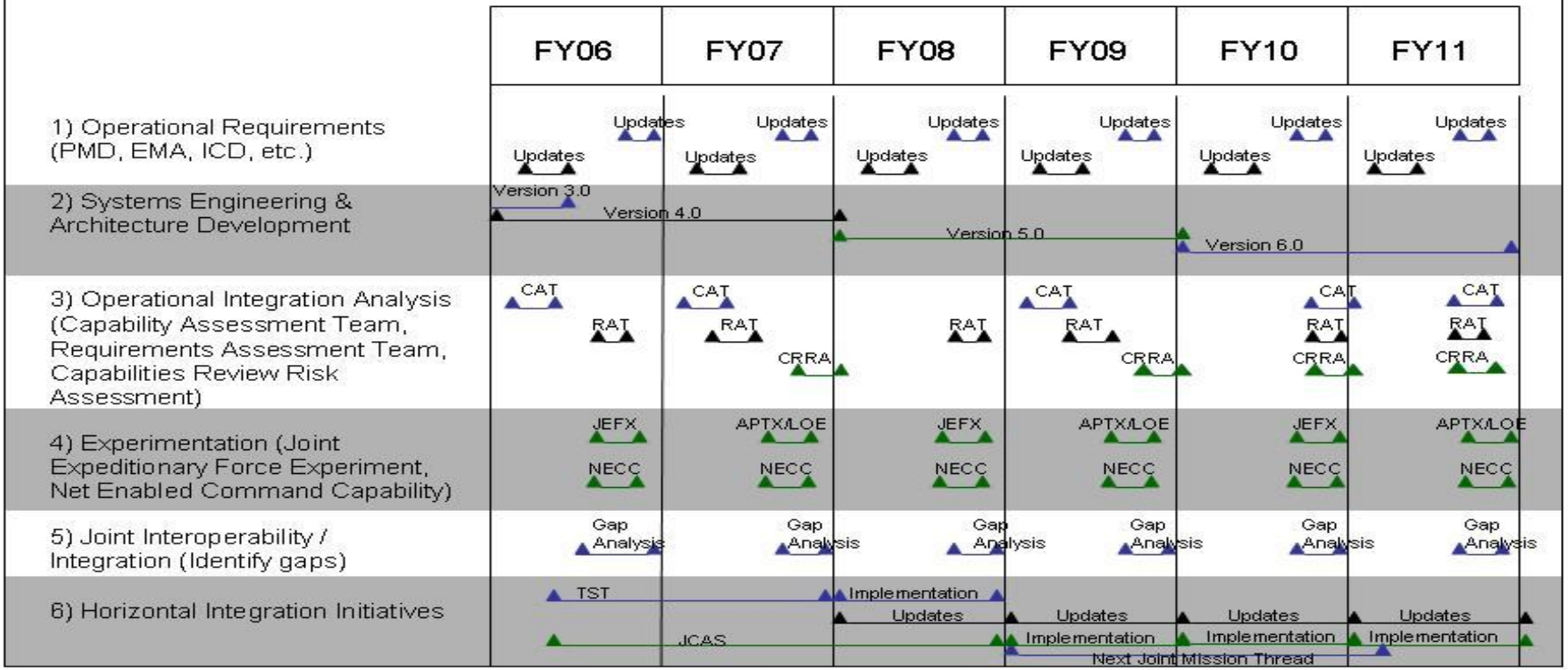
Remarks:														
(U) Test & Evaluation														
Engineering Analysis and Assessment	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		1.886	Dec-05	1.980	Dec-06	2.075	Dec-07	2.169	Dec-08	Continuing	TBD	TBD
	C/CPAF	ManTech ITSP, ESC, Hanscom AFB, MA		0.100	Dec-05	0.105	Dec-06	0.110	Dec-07	0.115	Dec-08	Continuing	TBD	TBD
	FFRDC	MITRE Corp, ESC, Hanscom AFB, MA		1.176	Nov-05	1.235	Nov-06	1.294	Nov-07	1.352	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	3.162		3.320		3.479		3.636		Continuing	TBD	TBD
Remarks:														
(U) Management														
Program Management Support	C/CPAF	ManTech ITSP, ESC Hanscom AFB, MA		0.150	Nov-05	0.157	Nov-06	0.164	Nov-07	0.173	Nov-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.150		0.157		0.164		0.173		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	10.362		11.465		11.857		12.122		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

Horizontal Integration Schedule

U.S. AIR FORCE

ELECTRONIC SYSTEMS CENTER



Integrity - Service - Excellence

As of: 5 Jan 07

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Operational Requirements Documents	1-4Q	1-4Q	1-4Q	1-4Q
(U) Systems Engineering & Architecture	1-4Q	1-4Q	1-4Q	1-4Q
(U) Operational Integration Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) M&S Infrastructure and Experimentation	2-3Q	2-3Q	2-3Q	2-3Q
(U) Joint Interoperability/Integration	3-4Q	3-4Q	3-4Q	3-4Q
(U) Horizontal Integration Initiatives	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5140	Joint Expeditionary Force Experiments	28.761	32.221	33.192	33.997	34.654	35.005	35.682	36.406	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Expeditionary Force Experiments (JEFX) and Advanced Process Technology Experiments (APTX)/Limited Objective Experiments (LOE) are large-scale warfighter experiments that address emerging operational challenges and are part of the total Air Force (AF) experimentation effort. JEFX and APTX/LOE explore significant capability gaps across the range of AF Concept of Operations (CONOPS) and address critical lessons learned from recent operations. They combine live-fly forces and simulations into an operationally representative warfighter environment. JEFX, spirally conducted, and APTX/LOE provide a multi-dimensional, multi-national, multi-service environment for an end-to-end process of exploration, assessment, and transition of capabilities that will provide joint and coalition warfighters with solutions to gaps identified in the Capability Review and Risk Assessment (CRRA) process and through lessons learned in recent and current operations. They are part of a broader effort to implement the Joint Vision 2020, demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation. The integration of systems and process is the major reason JEFX is an experiment and not simply a demonstration or exercise. JEFX occurs on even years and APTX/LOE on odd years.

This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration, developers, testers, and warfighters to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Spiral develop systems architecture, systems engineering, and integration of initiatives into a cohesive system of systems process	3.580	5.906	6.654	6.773
(U)	Plan, design, coordinate, assess and report the APTX/LOE and JEFX experiments, provide expertise to support initiative selection, acquisition, program management, communications and systems planning	4.480	6.762	7.100	7.150
(U)	Develop initiatives to introduce new technologies and operational capabilities into the Aerospace Expeditionary Force (AEF) Concept of Operations (CONOPS)	5.731	6.235	6.350	6.410
(U)	Implement architectural configuration, conduct M&S, install and the test the communications infrastructure and execute the experiment	14.970	3.318	13.088	3.664
(U)	Transition successful JEFX assessed and CSAF approved warfighting capabilities for fielding into an integrated C2ISR baseline	0.000	10.000	0.000	10.000
(U)	Total Cost	28.761	32.221	33.192	33.997

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207449F C2 Constellation**	PROJECT NUMBER AND TITLE **5140 Joint Expeditionary Force Experiments**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

JEFX supports evolutionary acquisition of multiple programs by providing a venue to experiment new and emerging technologies to be integrated into other systems-of-record.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207449F C2 Constellation**

PROJECT NUMBER AND TITLE: **5140 Joint Expeditionary Force Experiments**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Experimentation	FFRDC	MITRE, ESC Hanscom AFB, MA		2.400	Nov-05	2.000	Nov-06	2.700	Nov-07	2.700	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	ACS Defense, ESC, Hanscom AFB, MA		1.461	Nov-05	1.000	Nov-06	1.600	Nov-07	1.600	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	GEMINI, ESC, Hanscom AFB, MA		0.300	Dec-05	0.250	Nov-06	0.300	Nov-07	0.300	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	PTI, ESC, Hanscom AFB, MA		0.180	Nov-05	0.130	Nov-06	0.200	Nov-07	0.200	Nov-08	Continuing	TBD	TBD
Experimentation	C/IDIQ	Titan, ESC. Hanscom AFB, MA		0.003	Dec-05	0.000		0.000		0.000		Continuing	TBD	TBD
Experimentation	C/CPAF	Lockheed Martin, ESC, Hanscom AFB, MA		1.750	Nov-05	1.600	Nov-06	1.700	Nov-07	1.700	Nov-08	Continuing	TBD	TBD
Experimentation	Various	ESC Hanscom AFB, MA		0.650	Oct-05	0.120	Oct-06	0.200	Oct-07	0.200	Oct-08	Continuing	TBD	TBD
Experimentation	C/T&M	Lockheed Martin, ESC, Hanscom AFB, MA		0.050	Jul-06	0.000		0.000		0.000		0.000	0.050	TBD
Experimentation	C/T&M	Northrop Grumman, ESC, Hanscom AFB, MA		0.094	Dec-05	0.000		0.000		0.000		0.000	0.094	TBD
Various	C/T&M	Northrop Grumman, AFRL,		0.554	Dec-05	0.000		0.000		0.000		0.000	0.554	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

Various	C/T&M	Rome, NY Titan, NAWC, St Inigoes, MD	0.075	Mar-06	0.000	0.000	0.000	0.000	0.075	TBD
Various	MIPR	NAWC, China Lake, CA	0.100	Dec-05	0.000	0.000	0.000	0.000	0.100	TBD
Experimentation	C/T&M	Dolphin Tech, AFRL, Rome, NY	0.116	May-06	0.000	0.000	0.000	0.000	0.116	TBD
Experimentation	C/T&M	NCI Info Sys, AFRL, Rome, NY	0.005	May-06	0.000	0.000	0.000	0.000	0.005	TBD
Experimentation	MIPR	SAF/MBMB, Washington DC	0.028	Feb-06	0.000	0.000	0.000	0.000	0.028	TBD
Experimentation	C/T&M	SAIC, WR-ALC, GA	0.011	May-06	0.000	0.000	0.000	0.000	0.011	TBD
Experimentation	FFP	Trusted Comp Sol, AFRL, Rome, NY	0.042	Mar-06	0.000	0.000	0.000	0.000	0.042	TBD
Experimentation	FFP	Lockheed Martin, ESC, Hanscom AFB, MA	0.199	Nov-05	0.000	0.000	0.000	0.000	0.199	TBD
Experimentation	FFP	General Dynamics, ESC, Hanscom AFB, MA	0.015	Dec-05	0.000	0.000	0.000	0.000	0.015	TBD
Experimentation	FFP	Multimax, ESC, Hanscom AFB, MA	0.041	Nov-05	0.000	0.000	0.000	0.000	0.041	TBD
Experimentation	FFP	Ezenia, ESC, Hanscom AFB, MA	0.026	Dec-05	0.000	0.000	0.000	0.000	0.026	TBD
Experimentation	C/T&M	Alion, AFC2ISRC, Langley AFB, VA	1.516	Nov-05	0.000	0.000	0.000	0.000	1.516	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

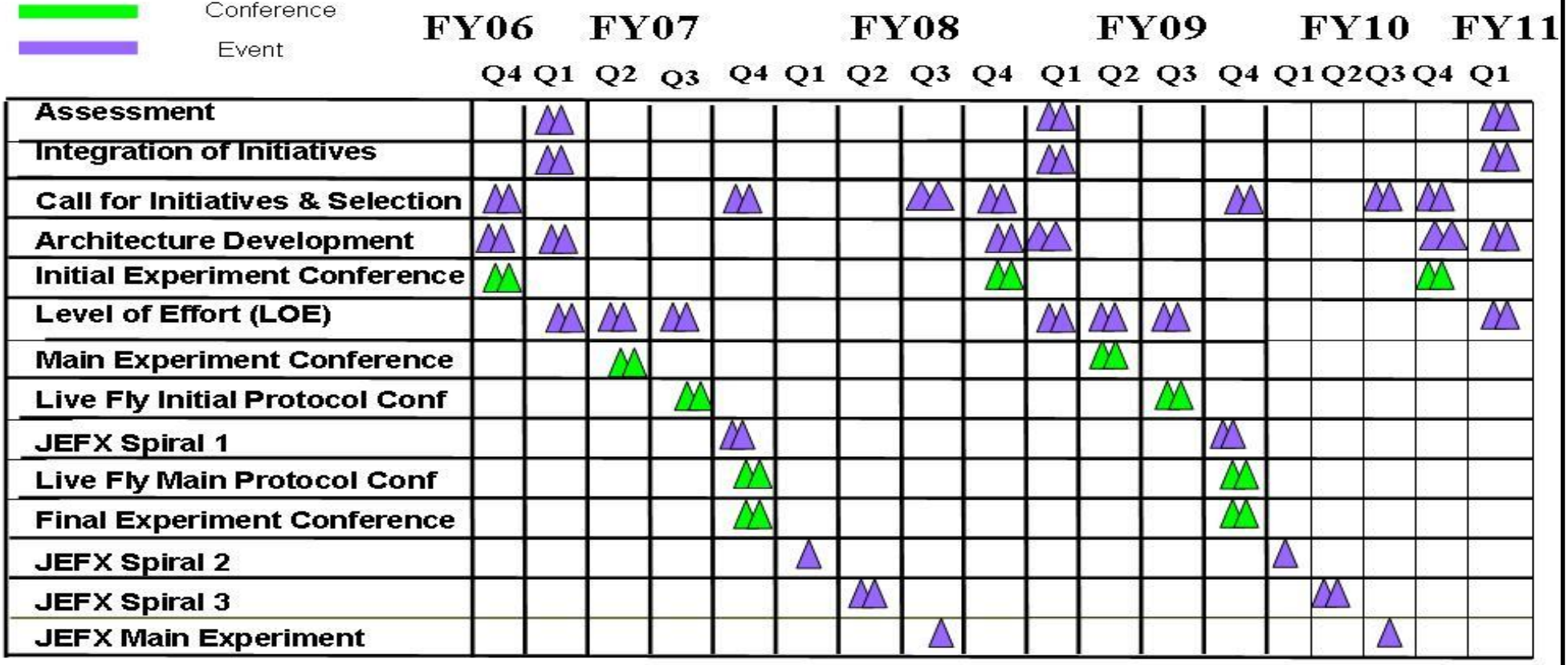
PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

Experimentation	C/T&M	SAIC, AFC2ISRC, Langley AFB, VA		1.029	Nov-05	0.000		0.000		0.000		0.000	1.029	TBD
Experimentation	C/T&M	L3-Com, AFC2ISRC, Langley AFB, VA		1.197	Nov-05	0.000		0.000		0.000		0.000	1.197	TBD
Experimentation	C/T&M	Northrop Grumman, AFC2ISRC, Langley AFB, VA		0.216	Nov-05	0.000		0.000		0.000		0.000	0.216	TBD
Experimentation	C/T&M	Lockheed Martin, AFC2ISRC, Langley AFB, VA		0.484	Nov-05	0.000		0.000		0.000		0.000	0.484	TBD
Experimentation	Various	Various, AFC2ISRC, Langley AFB, VA		0.000		5.245	Nov-06	5.802	Nov-07	5.802	Nov-08	Continuing	TBD	TBD
Experimentation	MIPR	L-3 Com, 505CCW		1.050	Dec-05	1.050	Dec-06	1.130	Dec-07	1.130	Dec-08	Continuing	TBD	TBD
Experimentation	C/GSA	Sverdrup, 505CCW		0.175	Oct-05	0.175	Oct-06	0.180	Oct-07	0.180	Oct-08	Continuing	TBD	TBD
Experimentation	C/GSA	Northrup Grumman, 505CCW		0.250	Oct-05	0.250	Oct-06	0.250	Oct-07	0.250	Oct-08	Continuing	TBD	TBD
Experimentation	Various	505CCW		7.225	Mar-06			1.831	Jan-08	1.831	Jan-09	Continuing	TBD	TBD
Experimentation	MIPR	Various		7.208	Jan-06	20.401	Jan-07	17.299	Nov-07	18.104	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	28.450		32.221		33.192		33.997		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
T&E	MIPR	46th Test Squadron		0.311	Jan-06							Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.311		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	28.761		32.221		33.192		33.997		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation	PROJECT NUMBER AND TITLE 5140 Joint Expeditionary Force Experiments

JEFX Timeline



As of: 10 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207449F C2 Constellation**	PROJECT NUMBER AND TITLE **5140 Joint Expeditionary Force Experiments**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Assessment		1Q		1Q
(U) Integration of Initiatives		1Q		1Q
(U) JEFX/APTX/LOE Initiatives & Selection	3-4Q	4Q	3-4Q	4Q
(U) Architecture Development	4Q	1Q	4Q	1Q
(U) APTX/LOE		1-3Q		1-3Q
(U) JEFX Spiral 1		4Q		4Q
(U) JEFX Spiral 2	1Q		1Q	
(U) JEFX Spiral 3	2Q		2Q	
(U) JEFX Main Experiment	3Q		3Q	

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PE NUMBER: 0207581F
PE TITLE: JOINT STARS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	110.852	155.615	65.924	71.128	50.046	37.222	37.970	38.239	Continuing	TBD
0003 JSTARS	110.852	155.615	65.924	71.128	50.046	37.222	37.970	38.239	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (Joint STARS) program produces the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides radar-derived all-weather surveillance and targeting information on moving and stationary ground targets, slowly moving rotary and fixed wing aircraft, and rotating antennas. Joint STARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets, and can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground commanders to effectively make and execute battle decisions, and helps achieve predictive battlespace awareness.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions in tracking and killing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in Command/Control and ISR (C2ISR), Network Centric Operations Capabilities, and interoperability with Joint Service, allied, and coalition systems. These efforts include, but are not limited to, Re-Engining, manned and unmanned platforms, space data links, advanced Battle-Management Command, Control and Communications (BMC3) concepts, ISR Constellation, Air Moving Target Indicator (AMTI), Ground Moving Target Indicator (GMTI), Joint Air to Surface Standoff Missile (JASSM-Maritime Interdiction), Advanced Radar Modes (ARM), Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Enhanced Land/Maritime Mode (ELMM), Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) and other large airborne platform integration efforts including Affordable Moving Surface Target Engagement (AMSTE), weapons guidance capabilities, self defense capabilities, radar, SAR, and aircraft performance improvements. These efforts rely on the test infrastructure provided by the Joint STARS Test Support (JETS). JETS includes a dedicated test aircraft, laboratories, and support facilities used by the Joint STARS Test Force (JTF) to conduct RDT&E activities. Training and support systems development efforts (included but not limited to Weapon Systems Trainer (WST), Navigator Training Station (NTS), and Mission Crew Trainer (MCT)). Also included in this program element is Communication Computer Netcentric Upgrade (CCNU) which will address Prime Mission Equipment (PME), Diminishing Manufacturing Sources (DMS) issues including but not limited to CNS/ATM (8.33 kHz VHF spiral). The result is greater mission capability, higher mission reliability, and maximum weapon system availability. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability such as Attack Support Upgrade (ASU) Link 16 enhancements which evolve JSTARS into a controlling unit with full battle management capabilities.

Re-Engining - Provides the JSTARS E-8 aircraft additional range and time on station, improved fuel economy, time to climb and reliability. Includes non-recurring engineering, flight test, MIL-STD qualification, and flight data analysis.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	104.321	152.696	100.538	57.048
(U)	Current PBR/President's Budget	110.852	155.615	65.924	71.128
(U)	Total Adjustments	6.531	2.919		
(U)	Congressional Program Reductions		-0.091		
	Congressional Rescissions		-0.590		
	Congressional Increases		3.600		
	Reprogrammings	9.091			
	SBIR/STTR Transfer	-2.560			

(U) Significant Program Changes:

- FY06 reprogrammed $9.091 for ELMM development
- FY07 Congressional add to CNS/ATM for $3.6M
- FY08 & 09 adjustments made to rephase Re-engining production and terminate CNS/ATM development.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207581F JOINT STARS	PROJECT NUMBER AND TITLE: 0003 JSTARS	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0003 JSTARS	110.852	155.615	65.924	71.128	50.046	37.222	37.970	38.239	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (Joint STARS) program produces the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides radar-derived all-weather surveillance and targeting information on moving and stationary ground targets, slowly moving rotary and fixed wing aircraft, and rotating antennas. Joint STARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets, and can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground commanders to effectively make and execute battle decisions, and helps achieve predictive battlespace awareness.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions in tracking and killing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in Command/Control and ISR (C2ISR), Network Centric Operations Capabilities, and interoperability with Joint Service, allied, and coalition systems. These efforts include, but are not limited to, Re-Engining, manned and unmanned platforms, space data links, advanced Battle-Management Command, Control and Communications (BMC3) concepts, ISR Constellation, Air Moving Target Indicator (AMTI), Ground Moving Target Indicator (GMTI), Joint Air to Surface Standoff Missile (JASSM-Maritime Interdiction), Advanced Radar Modes (ARM), Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Enhanced Land/Maritime Mode (ELMM), Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) and other large airborne platform integration efforts including Affordable Moving Surface Target Engagement (AMSTE), weapons guidance capabilities, self defense capabilities, radar, SAR, and aircraft performance improvements. These efforts rely on the test infrastructure provided by the Joint STARS Test Support (JETS). JETS includes a dedicated test aircraft, laboratories, and support facilities used by the Joint STARS Test Force (JTF) to conduct RDT&E activities. Training and support systems development efforts (included but not limited to Weapon Systems Trainer (WST), Navigator Training Station (NTS), and Mission Crew Trainer (MCT)). Also included in this program element is Communication Computer Netcentric Upgrade (CCNU) which will address Prime Mission Equipment (PME), Diminishing Manufacturing Sources (DMS) issues including but not limited to CNS/ATM (8.33 kHz VHF spiral). The result is greater mission capability, higher mission reliability, and maximum weapon system availability. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability such as Attack Support Upgrade (ASU) Link 16 enhancements which evolve JSTARS into a controlling unit with full battle management capabilities.

Re-Engining - Provides the JSTARS E-8 aircraft additional range and time on station, improved fuel economy, time to climb and reliability. Includes non-recurring engineering, flight test, MIL-STD qualification, and flight data analysis.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207581F JOINT STARS	PROJECT NUMBER AND TITLE: 0003 JSTARS

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Spiral Development, Kill Chain and Integration/Analysis, Interoperability (including but not limited to Weapons Guidance, Wide Area Tracker, Automatic Target Recognition, NCCT, ICAN, ELMM, FBCB2, AFMTT, CCNU, Find-Fix-Target-Track-Engage-Assess (F2T2EA), International, Inverse Synthetic Aperture ISAR), Diminishing Manufacture Sources (DMS) etc.)	14.108	3.918	3.744	3.010
(U)	Communications & Network Upgrade (CNU)(Joint Tactical Radio System (JTRS)			7.059	12.912
(U)	Affordable Moving Surface Target Engagement (AMSTE)		41.238	4.000	
(U)	Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) formerly Global Air Traffic Mgmt (GATM) (i.e.; TCAS, Mode S, 8.33kHz VHF,etc.)	27.328	35.157		
(U)	Link 16 ASU support, connectivity efforts, etc.	14.923	11.495		
(U)	Test and Infrastructure Effort (including but not limited to Joint Test Force, JSTARS Extended Test Support contract, Information Assurance, range support, PL-2 security, support of T-3 test aircraft, test labs, etc.)	29.093	32.844	31.357	31.162
(U)	Re-Engining	12.500	30.963	19.764	14.438
(U)	JASSM-MI				9.606
(U)	Advanced Radar Modes (ARM) (previously under Spiral Development) - Phase I (including but not limited to Swath SAR, Intelligent Band Width Compression (IBC) and Enhanced Synthetic Aperture Radar (ESAR)).	12.900			
(U)	Total Cost	110.852	155.615	65.924	71.128

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Modifications, BP11 (PE 0207581F)	34.594	137.563	79.689	81.420	202.149	212.088	142.002	30.816	Continuing	TBD
(U)	Spares, BP16 (PE 0207581F)	0.584	0.895	1.329	1.440	1.474	1.494	1.524	1.554	Continuing	TBD

(U) D. Acquisition Strategy

The AF will continue development for various fleetwide modifications throughout the life of the Joint STARS weapon system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207581F JOINT STARS

PROJECT NUMBER AND TITLE: 0003 JSTARS

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ASU	SS/CPAF	HAFB, MA	9.993	14.923	Nov-05	11.495	Nov-06						36.411	TBD
CNS/ATM (GATM)	Various	HAFB, MA	62.437	27.328	Nov-05	35.157	Nov-06						124.922	TBD
Spiral Development	Various	Various		12.642	Nov-05	3.918	Nov-06	3.744	Nov-07	3.010	Nov-08	Continuing	TBD	TBD
Communications & Network Upgrade (CNU)(Joint Tactical Radio System (JTRS))	TBD	TBD						7.059		12.912		Continuing	TBD	
AMSTE	Various	Various				41.238	Dec-06	4.000	Oct-07				45.238	TBD
JASSM-MI	TBD	HAFB, MA								9.606		Continuing	TBD	TBD
Advanced Radar Modes (ARM) - Phase I	Various	Various		12.402	Dec-06								12.402	12.402
Subtotal Product Development			72.430	67.295		91.808		14.803		25.528		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.														
(U) Support														
SPO Ops Support	Various	HAFB, MA		2.066	Oct-05	0.000	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	2.066		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.														
(U) Test & Evaluation														
E-8C JSTARS Ext. Test Spt (JETS)	Various	Various		19.907	Oct-05	23.534	Nov-06	21.362	Nov-07	21.141	Nov-08	Continuing	TBD	TBD
JTF Test Ops/Support	Various	Various		7.086	Nov-05	7.510	Nov-06	7.795	Nov-07	7.721	Nov-08	Continuing	TBD	TBD
PL-2	Various	Various		2.100	Oct-05	1.800	Nov-06	2.200	Nov-07	2.300	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	29.093		32.844		31.357		31.162		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.														
(U) Management														
Integration & Analysis				0.380	Oct-05	0.000	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	0.380		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Re-Engining														
Re-Engining	TBD	TBD		12.018	Jan-07	30.963	Jan-07	19.764	Jan-08	14.438	Jan-09	Continuing	TBD	TBD
Subtotal Re-Engining			0.000	12.018		30.963		19.764		14.438		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.														
(U) Total Cost			72.430	110.852		155.615		65.924		71.128		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

Joint STARS Program Schedule

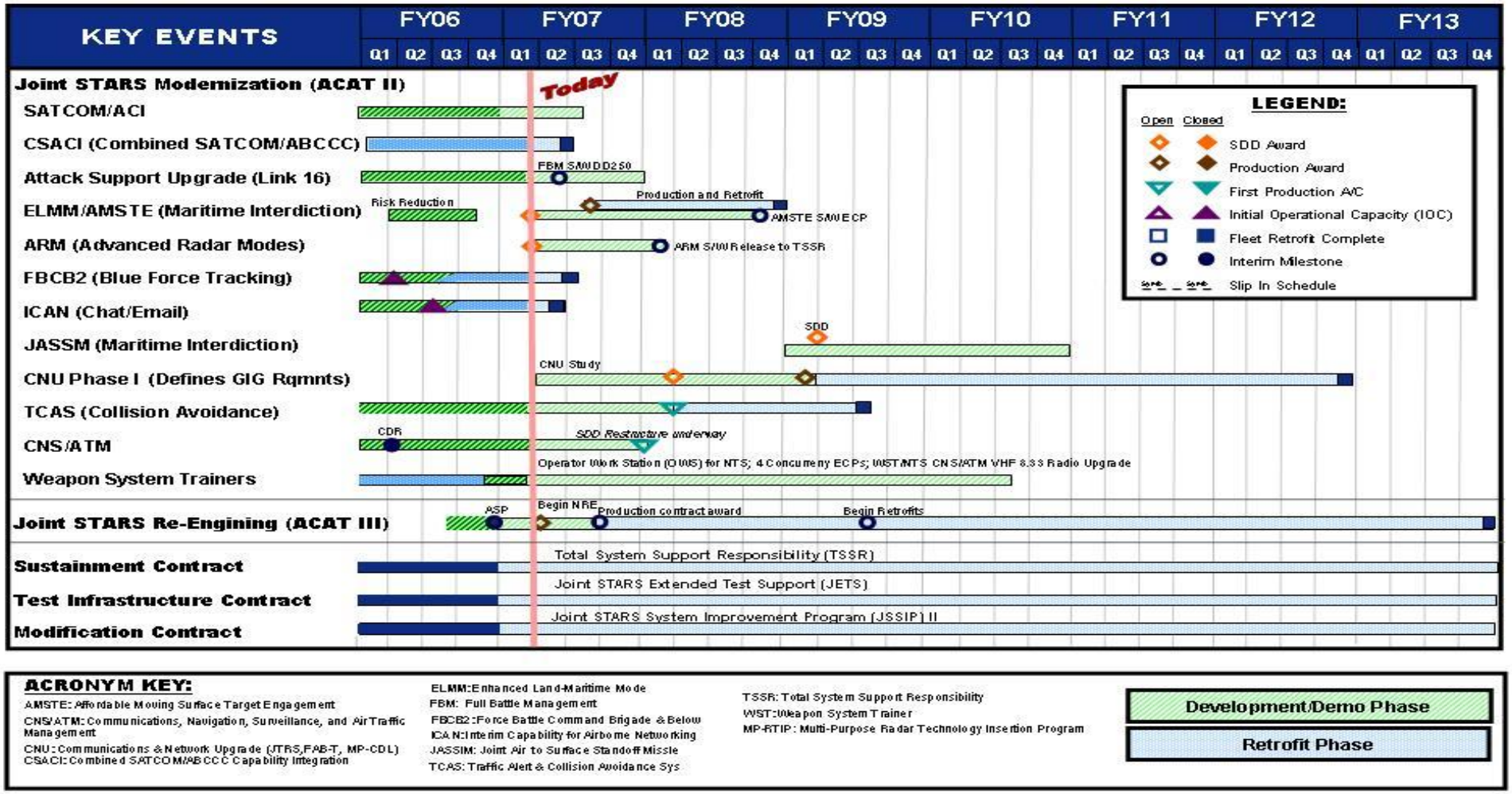

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) CSACI Retrofit Complete		2Q		
(U) ASU Full Battle Management, S/W DD250		4Q		
(U) Spiral Development ELMM SDD Risk Reduction Contract Award	1Q			
(U) Spiral Development - ELMM SDD Contract Award		1Q		
(U) ELMM/AMSTE Production Contract Award		3Q		
(U) AMSTE S/W Release to TSSR			4Q	
(U) AMSTE Fleet Retrofit Complete			4Q	
(U) ARM Phase I Contract Award		1Q		
(U) JASSM-MI SDD Contract Award				2Q
(U) FBCB2 Complete		3Q		
(U) ICAN Complete		2Q		
(U) CNU Phase I SDD Award			2Q	
(U) CNU Production Award				1Q
(U) CNS/ATM Critical Design Review	1Q			
(U) CNS/ATM (TCAS) First A/C Retrofit			2Q	
(U) CNS/ATM (8.33 kHz VHF) Initial Flight/Ground Readiness Review			1Q	
(U) Re-engining Begin NRE		2Q		
(U) Re-engining Production Award		3Q		
(U) Re-engining Begin Retrofits				3Q

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PE NUMBER: 0207590F
PE TITLE: Seek Eagle

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207590F Seek Eagle

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	19.108	16.364	22.969	21.900	24.749	23.901	23.430	23.824	Continuing	TBD
4037 SEEK EAGLE Certifications	19.108	16.364	22.969	21.900	24.749	23.901	23.430	23.824	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force has a variety of combat aircraft and numerous stores (munitions, missiles, fuel tanks, electronic countermeasures pods, etc.). Aircraft carry these stores in countless different loading combinations determined by operational scenarios, missions, and tactics. Loading configurations change as operational plans and tactics change, and as new aircraft and stores are developed and produced. Before operational use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), and must verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes these certifications through any combination of ground and flight testing, wind tunnel testing, modeling and simulation, and engineering analyses. Over 2000 aircraft/store combinations are recommended for flight testing each year. Depending upon the complexity, certification takes from weeks to years. The SEEK EAGLE program is also responsible for insertion of new and emerging technologies into the SEEK EAGLE process, and for providing resources for sustainment of a viable Air Force aircraft/store certification capability. Integrated solutions to combat aircrew weapon delivery planning problems are developed and provided to the warfighters via Combat Weapons Delivery Software (CWDS). This includes the development of electronic technical orders (TOs), which results in cost savings by eliminating paper TOs. SEEK EAGLE funds are currently budgeted to support certification for new weapons programs including Small Diameter Bomb (SDB), Joint Direct Attack Munition (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), Smart-Triple Ejector Rack (Smart-TER), Sniper Targeting Pod, LITENING Targeting Pod, HARM Targeting System-Release 7 (HTS-R7), Fighter Airborne Communications Enhancement (FACE), and many other inventory stores on inventory aircraft. Planning and budgeting estimates are in progress for future certifications of weapons on F-22A, F-35, and the MQ-9 (Predator).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	19.232	16.426	19.948	20.118
(U) Current PBR/President's Budget	19.108	16.364	22.969	21.900
(U) Total Adjustments	-0.124			
(U) Congressional Program Reductions				
Congressional Rescissions		-0.062		
Congressional Increases				
Reprogrammings	-0.048			
SBIR/STTR Transfer	-0.076			
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4037 SEEK EAGLE Certifications	19.108	16.364	22.969	21.900	24.749	23.901	23.430	23.824	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force has a variety of combat aircraft and numerous stores (munitions, missiles, fuel tanks, electronic countermeasures pods, etc.). Aircraft carry these stores in countless different loading combinations determined by operational scenarios, missions, and tactics. Loading configurations change as operational plans and tactics change, and as new aircraft and stores are developed and produced. Before operational use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), and must verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes these certifications through any combination of ground and flight testing, wind tunnel testing, modeling and simulation, and engineering analyses. Over 2000 aircraft/store combinations are recommended for flight testing each year. Depending upon the complexity, certification takes from weeks to years. The SEEK EAGLE program is also responsible for insertion of new and emerging technologies into the SEEK EAGLE process, and for providing resources for sustainment of a viable Air Force aircraft/store certification capability. Integrated solutions to combat aircrew weapon delivery planning problems are developed and provided to the warfighters via Combat Weapons Delivery Software (CWDS). This includes the development of electronic technical orders (TOs), which results in cost savings by eliminating paper TOs. SEEK EAGLE funds are currently budgeted to support certification for new weapons programs including Small Diameter Bomb (SDB), Joint Direct Attack Munition (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), Smart-Triple Ejector Rack (Smart-TER), Sniper Targeting Pod, LITENING Targeting Pod, HARM Targeting System-Release 7 (HTS-R7), Fighter Airborne Communications Enhancement (FACE), and many other inventory stores on inventory aircraft. Planning and budgeting estimates are in progress for future certifications of weapons on F-22A, F-35, and the MQ-9 (Predator).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue development of F-22A data and engineering models to use for follow-on F-22A weapons certification and follow-on technical support from the contractor.	0.500	0.500	0.500	0.500
(U) Conduct various automation projects and automated Technical Orders/mission planning projects using CWDS	3.100	2.800	3.300	3.200
(U) Continue/complete various technology process improvement projects and aircraft load/separation prediction capabilities using ACFD (Applied Computational Fluid Dynamics)	2.800	2.600	3.600	3.600
(U) Conduct various aircraft-store certifications on USAF fighter and bomber aircraft	12.708	10.464	15.569	14.600
(U) Total Cost	19.108	16.364	22.969	21.900

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) Proc of Ammunition, AF*										
(U) - JDAM (PE 0207583F)	0.000	0.107	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) - WCMD (PE 0207600F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) Missile Procurement, AF*										
(U) - JSOW (PE 0207324F)	0.958	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) - AIM-120 C7 (AMRAAM) (PE 0207163F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) - AIM-9X (PE 0207161F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) - JASSM (PE 0207325F)	0.000	2.962	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

* Note: The SEEK EAGLE procurement dollars shown above are appropriated in each weapon's P-1 line.

(U) D. Acquisition Strategy

Budget authorization for procurement funds are given directly to the weapon system program offices, who then procure the required certification test articles through the weapon production contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207590F Seek Eagle

PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed Martin	C/CPFF	Marietta, GA	4.325	0.500		0.500		0.500		0.500		Continuing	TBD	
Leigh Aerosystems	FFP	Carlsbad, CA	0.943	0.000		0.000		0.000		0.000		0.000	0.943	
Subtotal Product Development			5.268	0.500		0.500		0.500		0.500		Continuing	TBD	0.000
Remarks:														
(U) Support														
Mission Support	PO/REO	Eglin AFB, FL	14.004	1.150		1.300		5.000		3.500		Continuing	TBD	
Subtotal Support			14.004	1.150		1.300		5.000		3.500		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
46th Test Wing	PO/REO	Eglin AFB, FL	153.272	11.200		10.100		11.100		10.900		Continuing	TBD	
AEDC	PO/REO	Arnold Engineering Dev Center TN	17.766	1.400		1.500		1.500		1.000		Continuing	TBD	
Various	PO/REO/ MIPR	Multiple other for T&E Support	76.298	4.858		2.964		4.869		6.000		Continuing	TBD	
Subtotal Test & Evaluation			247.336	17.458		14.564		17.469		17.900		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			266.608	19.108		16.364		22.969		21.900		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207590F Seek Eagle	PROJECT NUMBER AND TITLE 4037 SEEK EAGLE Certifications

The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Each aircraft/store configuration requested by the user goes through the SEEK EAGLE process by the designated user priority.

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) JDAM	4Q	1-4Q		
(U) JASSM	2-4Q	1-4Q	1-4Q	
(U) SDB	4Q	1-4Q	1-4Q	1-4Q
(U) WCMD	4Q			
(U) AIM-9X	1-4Q	1-4Q	1-4Q	1-4Q

Note: The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Each aircraft-store configuration requested by the user goes through the SEEK EAGLE process by the designated user priority.

PE NUMBER: 0207601F
PE TITLE: USAF Modeling and Simulation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	24.303	23.670	23.044	29.223	27.977	30.800	31.396	32.032	Continuing	TBD
4567	M&S Foundations	6.113	4.507	6.315	6.351	6.438	6.461	6.586	6.719	Continuing	TBD
4991	Accelerated Acquisitions	4.755	4.481	5.157	5.155	5.284	5.366	5.471	5.581	Continuing	TBD
5004	New and Emerging Capabilities	0.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5135	Warfighter Readiness	13.435	13.686	11.572	17.717	16.255	18.973	19.339	19.732	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

United States Air Force (USAF) Modeling & Simulation (M&S) four thrusts areas (Modeling and Simulation Foundations, Accelerated Acquisition, New and Emerging Warfighting Capabilities, and Warfighter Readiness) provide RDT&E funding for corporate M&S training, mission rehearsal, and system development. These thrusts support the Department of Defense (DoD) Training Transformation & Acquisition Reform initiatives. The USAF M&S Program Element (PE) provides the capability that immerses Warfighters in distributed, simulated environments to execute the Global War on Terror (GWOT) during joint mission rehearsal, training, and experimentation.

In support of the DoD Training Transformation initiative, USAF M&S develops and modernizes models and simulations that are the backbone of USAF Distributed Mission Operations (DMO). DMO enables the joint, coalition, and interagency training required to prepare forces for combat by generating the air and space picture for the Joint Force Commander in combat exercises, training over 19,000 personnel per year in exercises (i.e., Ulchi-Focus Lense, Red & Blue Flags, Unified Endeavor, etc). DMO also provides the current operational environment that allows warfighters to interact with other tactical cockpit simulators as well as the High Demand/Low Density platforms, often unavailable for live training due to real-world operations. USAF M&S is also integral to inter-agency Homeland Defense exercises chartered to train combat units tasked to protect the Homeland, including the National Capital Region (exercise Amalgam Arrow); generates equipment and manpower efficiencies by using simulations which reduce fuel consumption, aircraft wear and tear, and manpower costs.

In support of the DoD Acquisition Reform initiative, the Air Force Integrated Collaborative Environment (AF-ICE) provides systems-of-systems test capability that will shorten the acquisition lifecycle, reduce developmental costs, and minimize risks associated with interoperability of new technology. AF-ICE enhances the acquisition process from concept development through test and evaluation using M&S to speed delivery of net-enabled warfighting capabilities.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	25.144	23.470	22.931	29.056
(U)	Current PBR/President's Budget	24.303	23.670	23.044	29.223
(U)	Total Adjustments	-0.841	-0.200		
(U)	Congressional Program Reductions		-0.010		
	Congressional Rescissions		-0.090		
	Congressional Increases		0.300		
	Reprogrammings	-0.170			
	SBIR/STTR Transfer	-0.671			

(U) Significant Program Changes:

In FY07, $1.0M was added to project 5004 to enable the development of the Synthetic Theater Operational Research Model (STORM).

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4567 M&S Foundations	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4567 M&S Foundations	6.113	4.507	6.315	6.351	6.438	6.461	6.586	6.719	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

M&S Foundations (MSF) focuses on integrating foundational capabilities needed to improve the usefulness, productivity, scalability and efficiency of M&S capabilities derived from Warfighter Readiness (WR), Accelerated Acquisitions (AA), and New and Emerging Warfighting Capabilities (NEWC). The efforts supporting the M&S Foundations thrust include both concept exploration and development.

MSF will provide tools, standards and interfaces to be used by model developers and users to ensure efficiencies and model reuse. M&S Foundations will provide the capability to rapidly and efficiently create realistic and accurate synthetic operational battlespaces to support the full spectrum of activities associated with mission preparation and acquisition of warfighting capabilities by providing appropriate authoritative data and component representations. With the capability generated via MSF, users will readily access available repositories of reusable, validated, and integrated synthetic components. Synthetic components will include representations of operational battlespace entities such as friendly and enemy assets and representations of the natural environment that include the terrain, atmospheric and space weather effects, and energy and signal propagation effects. The rapid composition will be based on a durable common architecture framework and common standards. MSF capability also supports efficient, cost-effective Verification, Validation and Accreditation activity across the training, test, experimentation, acquisition, planning and analysis communities.

Air Force Director of Weather (AF/A3O-W) is designated as the DoD Air and Space Natural Environment Modeling and Simulation Executive Agent (ASNE MSEA). ASNE MSEA coordinates all aspects of DoD M&S related to representations of the air and space natural environment, ensuring air and space weather is properly represented in Joint and Service models, simulations, war games, and experiments. The ASNE MSEA part of this project primarily funds the following: Environmental Scenario Generator, Environmental Hypercube (pre-runtime physics-based weather effects), and Space Weather Analysis as required to support joint M&S program offices and activities like OSD Program, Analysis, and Evaluation; Air Force Studies and Analyses Agency; Joint Analysis System; Joint National Training Capability; Distributed Mission Operations & Training; One Semi-Automated Force; Navy Probability of Raid Annihilation Assessment; Terminal Fury; Unified Engagement; Hazard Prediction and Assessment Capability; and Joint Expeditionary Force Experiment. Primary customers are combatant commanders, service components, and various DoD organizations conducting simulations and exercises involving air, ground, sea, and space assets. ASNE MSEA develops authoritative natural environment scenarios necessary for robust "What-if" mission planning and rehearsal and for realistic training, analysis, and acquisition models and simulations. ASNE MSEA leads the development and execution of the DoD Integrated Natural Environment Authoritative Representation Process (INEARP) Concept of Operations.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4567 M&S Foundations

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) MSF Concept exploration/model development/model transition	5.157	3.532	5.317	5.351
(U) Provide DoD M&S community with tools to search Air & Space Natural Environment scenarios; measure effects on weapon systems and subsystems and access tailored reusable databases	0.956	0.975	0.998	1.000
(U) Total Cost	6.113	4.507	6.315	6.351

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

ASC, Wright Patterson AFB, OH will manage the acquisition and model development process for all M&S Foundation activities. All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **4567 M&S Foundations**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Concept Exploration and Technology Support	Various	ASC, Wright Patterson AFB, OH		5.157	Oct-05	3.532	Oct-06	5.317	Oct-07	5.351	Oct-08	Continuing	TBD	TBD
ASNE	Various	Various		0.956	Oct-05	0.975	Oct-06	0.998	Oct-07	1.000	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	6.113		4.507		6.315		6.351		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
													0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	6.113		4.507		6.315		6.351		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

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ASNE MSEA Schedule

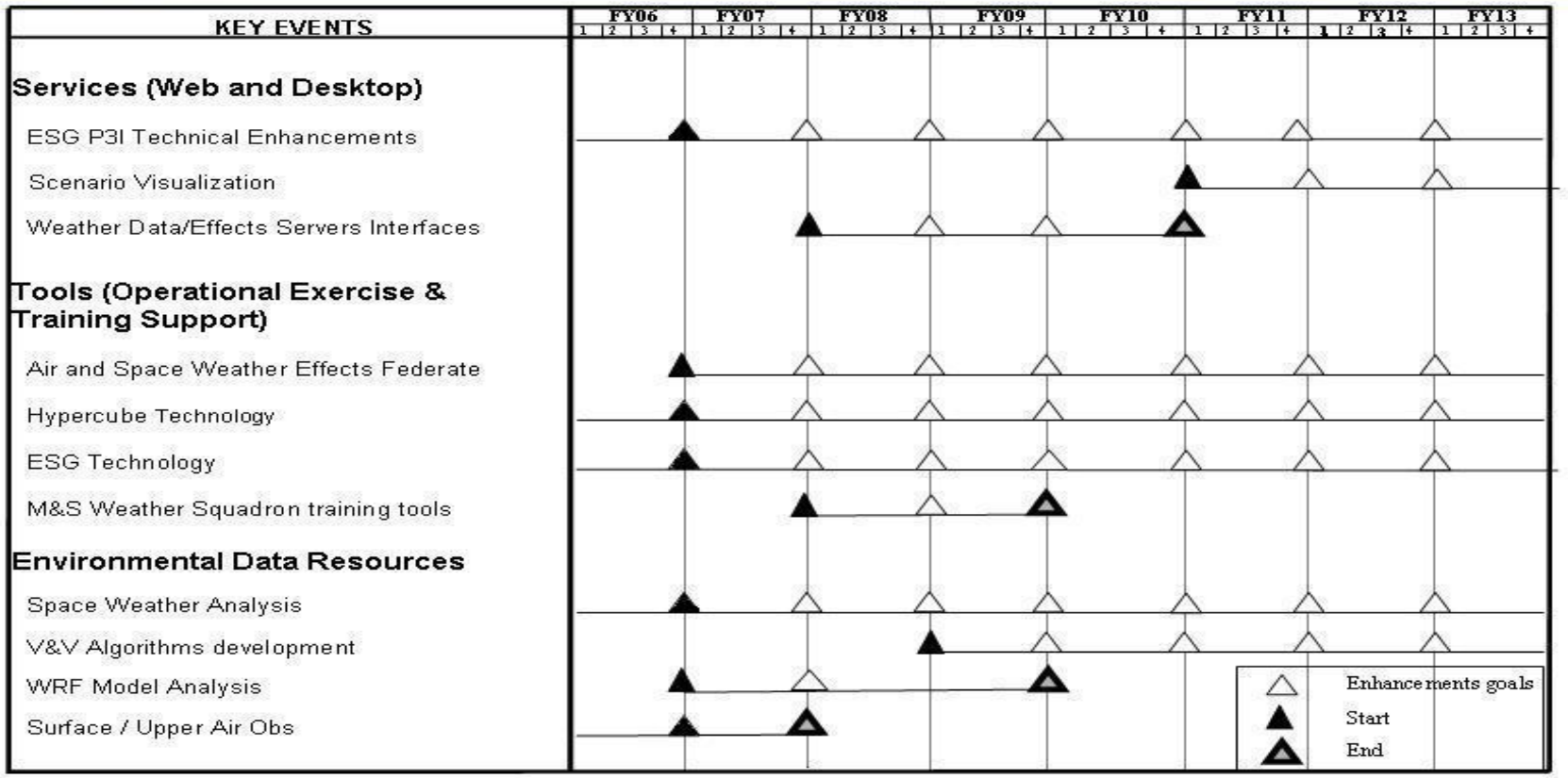

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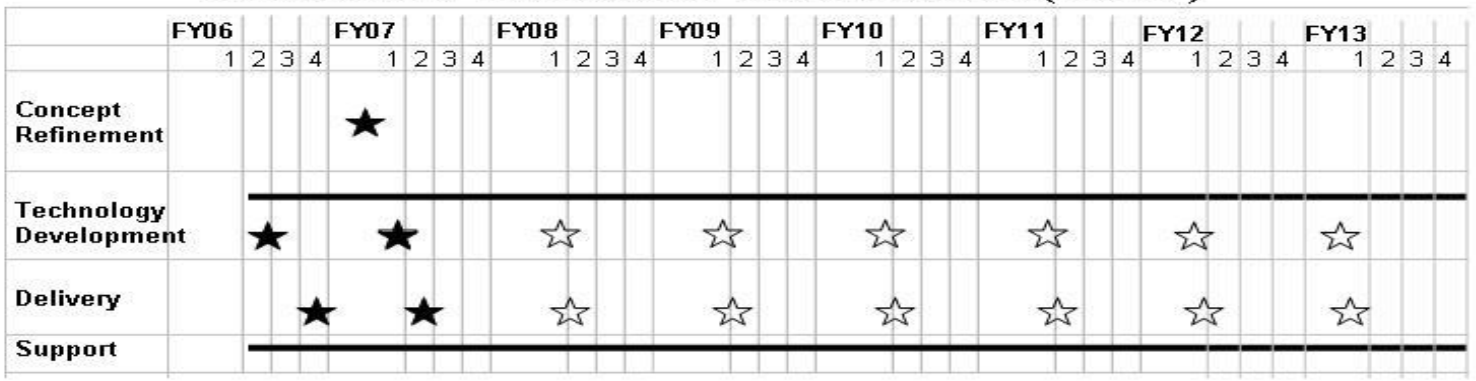
Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

Exhibit R-4: M&S Foundations (MSF)



As of: 10 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4567 M&S Foundations

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) MSF concept refinement		1Q		
(U) MSF development	2-4Q	1-4Q	1-4Q	1-4Q
(U) ASNE Services/Support (Web and Desktop)	1-4Q	1-4Q	1-4Q	1-4Q
(U) Tools (Operational exercise & Training support)	1-4Q	1-4Q	1-4Q	1-4Q
(U) Environmental Data Resources	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4991 Accelerated Acquisitions	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4991 Accelerated Acquisitions	4.755	4.481	5.157	5.155	5.284	5.366	5.471	5.581	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Accelerated Acquisition (AA) focuses on reducing the time and resources required to provide material solutions to the Warfighter. Examples include more efficient and coordinated processes for design, development, test and evaluation, maintainability and sustainment.

AA's objective is to improve interoperability of weapon systems and platforms through more rigorous interoperability evaluation in a replicated battlefield environment. The AA thrust area includes the Air Force-Integrated Collaborative Environment (AF-ICE) which connects combat system engineering sites and replicates Joint Force Combat Systems to create a network testbed to assess network centric systems and Command, Control, Communication, Computers and Intelligence (C4I).

In addition, AA provides the capability to improve both Service and Joint system performance in a System-of-Systems environment. AF-ICE will use this network to build upon existing Service and Joint combat system engineering and test sites, such as C4I hardware in the loop and computer-program-in-the-loop engineering sites (including Design Activities, software support activities, test & evaluation facilities and training commands). AF-ICE will develop the concept of operations, business rules, and procedures to enable acquisition managers to effectively use the network. The AF-ICE initiative supports the Homeland Defense Testbed, Command & Control (C2) Constellation, Node Additions, and various other activities that use the network infrastructure located around the country.

The AF-ICE will coordinate activities involving Air Force engineering and test sites. AF-ICE will ensure that accurately represented C4I networks are established for system development and testing activities and will evaluate those systems for interoperability and integration into a joint environment.

This project is in Budget Activity 7 - Operational System Development because it enhances operational system developments.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue communications architectures, links and operations support Air Force-Integrated Collaborative Environment (AF-ICE) activities	1.526	1.336	1.950	2.000
(U) Continue to expand existing Infrastructure to support AF-ICE activities to include the management, operations and test support along with contracted personnel to assist in DT/OT activities	1.500	1.656	1.750	1.800
(U) Provide event analysis support to product centers	0.829	0.589	0.750	0.850
(U) Develop and execute various simulations/stimulation environments for test events	0.900	0.900	0.707	0.505
(U) Total Cost	4.755	4.481	5.157	5.155

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 4991 Accelerated Acquisitions

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

Air Force Material Command (AFMC) Wright-Patterson AFB will manage the acquisition and development process for the experimentation, integration, and site activation activities for AA. All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **4991 Accelerated Acquisitions**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AF-ICE Core Development	Various	BOEING, ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		0.457	Nov-05	1.476	Nov-06	2.000	Nov-07	1.987	Nov-08	Continuing	TBD	TBD
AWSIM Support	T&M	NORTHROP GRUMMAN, ESC Hanscom AFB, MA		0.500	Nov-05							0.000	0.500	TBD
AF-ICE Architecture Infrastructure	Various	ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		1.600	Nov-05	1.849	Nov-06	1.800	Nov-07	1.750	Nov-08	Continuing	TBD	TBD
HLD Testbed/AF-ICE Activities Support	C/CPFF	Solipsys, ESC Hanscom AFB, MA		0.200	Dec-05							0.000	0.200	TBD
AF-ICE Simulator/Stimulator Dev/Analysis/Support	Various	ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		0.500	Dec-05	1.156	Jan-07	1.357	Jan-08	1.418	Jan-09	Continuing	TBD	TBD
	C/CPFF	RAYTHEON, ESC Hanscom		0.298	Dec-05							0.000	0.298	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

PROJECT NUMBER AND TITLE: 4991 Accelerated Acquisitions

Various	Various	AFB, MA Mitre, ESC Hanscom AFB, MA		0.300	Oct-05					0.000	0.300	TBD
ITSP Support	Various	ESC Hanscom AFB, MA		0.500	Mar-06					0.000	0.500	TBD
Subtotal Product Development			0.000	4.355		4.481	5.157	5.155		Continuing	TBD	TBD
Remarks:												
(U) Support												
46th Test Squadron	Project Order	Various		0.400	Nov-05					0.000	0.400	TBD
Subtotal Support			0.000	0.400		0.000	0.000	0.000		0.000	0.400	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000	0.000	0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	4.755		4.481	5.157	5.155		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 4991 Accelerated Acquisitions

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AF-ICE Schedule

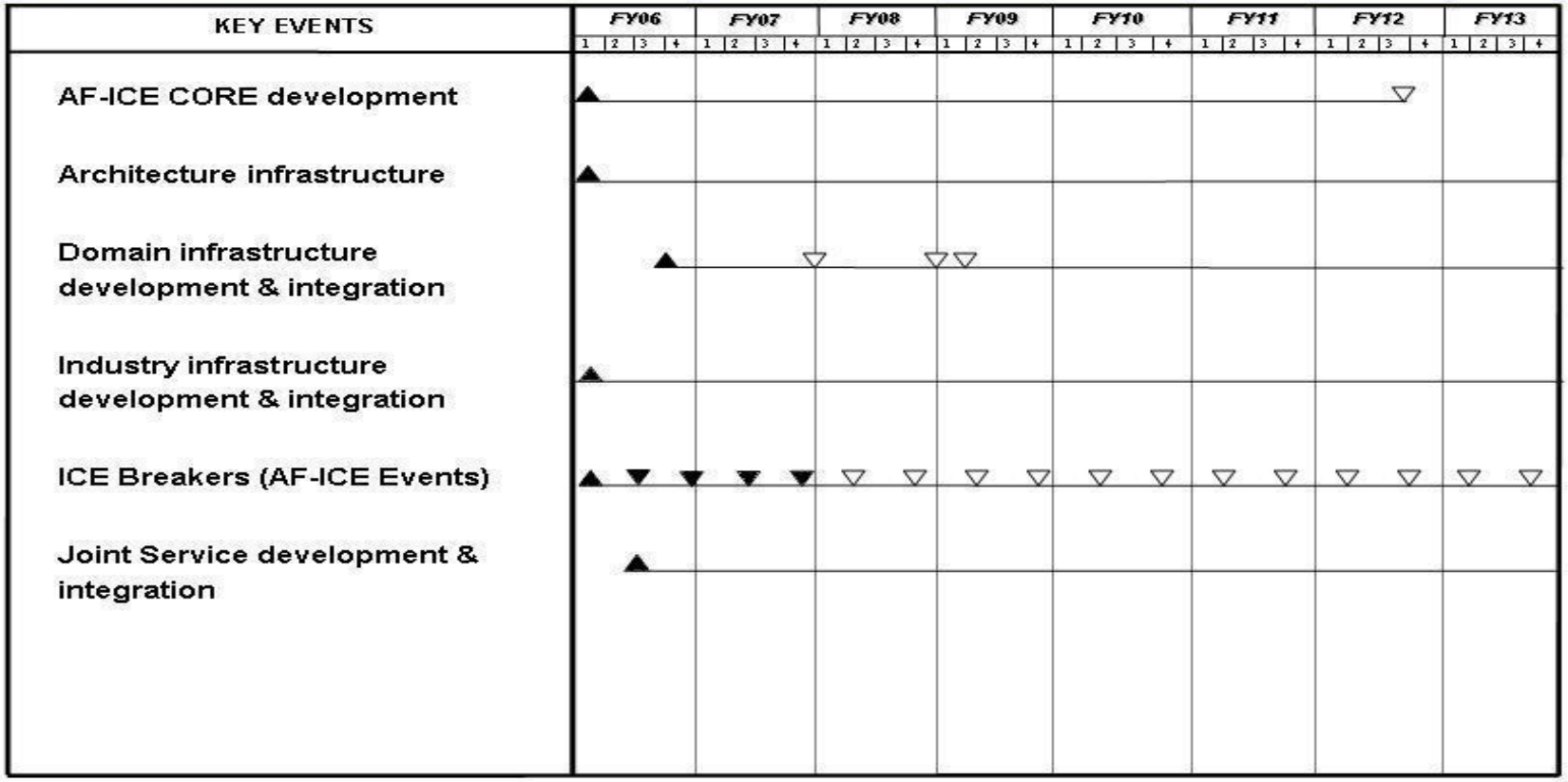

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4991 Accelerated Acquisitions

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AF-ICE CORE development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Event planning, development, integration, and infrastructure support	1-4Q	1-4Q	1-4Q	1-4Q
(U) AF-ICE events	1-4Q	1-4Q	1-4Q	1-4Q
(U) Joint Service development & integration	2-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

PROJECT NUMBER AND TITLE: 5004 New and Emerging Capabilities

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5004 New and Emerging Capabilities	0.000	0.996	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

New and Emerging Warfighting Capabilities (NEWC) focuses on future capabilities and force structure. Examples include Science & Technology, analysis, concept exploration and futures wargaming. Numerous models are being developed for a broad range of areas including acquisition, analysis, test and evaluation, and training.

In FY07, this Program Element (PE) contains the Congressional add that enables the development of Synthetic Theater Operations Research Model (STORM). STORM will replace the current Air Force theater level campaign model, THUNDER, with enhanced capability to feed aerospace representations in the joint anaylsis effects and support Quadrennial Defense Reviews.

This program is in Budget Activity 7 - Operational System Development, Research Category because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) STORM development	0.000	0.996	0.000	0.000
(U) Total Cost	0.000	0.996	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable										

(U) D. Acquisition Strategy

All major contracts for model development were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **5004 New and Emerging Capabilities**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
STORM Development	T&M	AFSAA, Rosslyn, VA		0.000		0.996	Feb-07	0.000				0.000	0.996	0.966
Subtotal Product Development			0.000	0.000		0.996		0.000		0.000		0.000	0.996	0.966
Remarks:														
(U) Support														
												Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
												Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Management														
												Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		0.996		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2007**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **5004 New and Emerging Capabilities**

STORM

As of: 9 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **5004 New and Emerging Capabilities**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) STORM Development		1-4Q		

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 5135 Warfighter Readiness	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5135 Warfighter Readiness	13.435	13.686	11.572	17.717	16.255	18.973	19.339	19.732	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Warfighter Readiness (WR) focuses on putting the Warfighter in a simulated environment to improve warfighting decision-making, execution, skills and processes. Examples include operational training, mission rehearsal, operational decision-making, mission execution, concept development and wargaming.

WR includes the Air and Space Constructive Environment (ACE), which is the constructive back plane for live and virtual assets to work within for Distributed Mission Operations (DMO). Distributive Mission Operations (DMO) is the Air Force's contribution to the Joint National Training Concept (JNTC). WR's capabilities provided within the environment are the AF's contribution to the Joint Training Confederation's battle staff training environment used to support Combatant Commanders, Joint Task Force, and Component Commander staff readiness training. The capabilities support Joint/Service exercises including, but not limited to: Joint National Training Concept (JNTC), Yama Sakura, Reception, Staging, Onward-movement & Integration (RSO&I), Ulchi Focus Lens, Roving Sands, Austere Challenge, Flexible Leader, Blue Flag, Joint Expeditionary Force Experiment, and Red/Virtual Flag.

Other capabilities will provide for Intelligence, Surveillance, and Reconnaissance (ISR) training and exercise supported by using a virtual ISR system for command and staff level training. The simulation provides commanders, staffs and operators with a common training system for the employment, tasking, exploitation and dissemination of imagery. The environment also provides models simulating electronic combat, electronic warfare, targeting, ISR representation, and intelligence integral to the Air and Space Operations Center training.

WR also includes the Air Force Modeling & Simulation Training Toolkit (AFMSTT) modernization. AFMSTT provides: the Air Warfare Simulation System (AWSIM) which interfaces to Command, Control, Communications, Computers, and Intelligence (C4I) to Theater Battle Management Core System (TBMCS) and the Graphical Input Aggregate Control (GIAC), the Logistics Simulation (LOGSIM), the Intelligence Management Controller Node (IMCN), the AWSIM Analysis Tool (AAT), and the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS). AFMSTT's capabilities require modernization to support Air Force Title X requirements.

In addition, project 5135 supports the Requirements Integration (RI) (formerly known as Joint Model Transition) which supports the development and upgrade of models selected through a board process. The selection process allows the board to influence the direction of model development and integration for the modeling and simulation community. Emphasis is placed on standardization, integration, capabilities improvement, joint applicability and acceptance.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 5135 Warfighter Readiness

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) AFMSTT Modernization	9.801	8.640	8.124	11.236
(U) Distributed Mission Operations Integration (DMOI)	3.284	4.546	3.000	6.000
(U) Perform RI cost-benefit analysis, develop and integrate models, simulations and interface standards	0.350	0.500	0.448	0.481
(U) Total Cost	13.435	13.686	11.572	17.717

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

Electronic Systems Center (ESC) at Hanscom AFB, MA will manage full and open acquisition and model development process for all WR activities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **5135 Warfighter Readiness**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AFMSTT	Various	ESC, Hanscom AFB, MA		9.801	Jan-06	8.640	Dec-06	8.124	Dec-07	11.236	Dec-08	Continuing	TBD	TBD
DMOI	Various	ESC, Hanscom AFB, MA		3.284	Jan-06	4.546	Dec-06	3.000	Dec-07	6.000	Dec-08	Continuing	TBD	TBD
RI	Various	General Services Administration (GSA)and Office of Aerospace Studies (OAS), Kirtland AFB, NM		0.350	Dec-05	0.500	Dec-06	0.448	Dec-07	0.481	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	13.435		13.686		11.572		17.717		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	13.435		13.686		11.572		17.717		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 5135 Warfighter Readiness

Exhibit R-4: Warfighter Readiness (WR)

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **5135 Warfighter Readiness**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AFMSTT Modernization	1-4Q	1-4Q	1-4Q	1-4Q
(U) DMOI Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) RI - perform cost-benefit analysis, develop and integrate models, simulations and interface standards according to Modeling & Simulation Strategic Plan (MSSP) and architecture	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207605F
PE TITLE: Wargaming and Simulation Centers

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207605F Wargaming and Simulation Centers

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.087	6.570	6.490	3.902	7.206	7.310	7.452	7.603	Continuing	TBD
2888	Distributed Mission Operations Center (DMOC)	6.087	6.570	6.490	3.902	7.206	7.310	7.452	7.603	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The United States Air Force (USAF) Distributed Mission Operations Center (DMOC) is an Air Combat Command, Air Warfare Center, 505th Command and Control Wing organization. It provides Joint interoperability training and testing to geographically separated Live, Virtual, and Constructive (LVC) assets--real-world weapon systems, warfighter-in-the-loop (WITL), and computer-driven simulations. Responsibilities include: integrating DMO training and test events, networks, scenarios, and databases in support of service, joint and coalition warfighters. DMOC is the lead integrator for AF DMO and virtual contributions to the Joint National Training Capability (JNTC). Additionally, it is the lead agency for Virtual Flag (VF) exercises and the DMO Multi-Level Security (MLS) Testbed.

This program is categorized as Budget Activity (BA) 7 because it provides for development of technology in support of Distributed Mission Operations.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	6.278	6.595	6.457	3.878
(U)	Current PBR/President's Budget	6.087	6.570	6.490	3.902
(U)	Total Adjustments	-0.191	-0.025		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.025		
	Congressional Increases				
	Reprogrammings	-0.015			
	SBIR/STTR Transfer	-0.176			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207605F Wargaming and Simulation Centers	PROJECT NUMBER AND TITLE: 2888 Distributed Mission Operations Center (DMOC)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2888	Distributed Mission Operations Center (DMOC)	6.087	6.570	6.490	3.902	7.206	7.310	7.452	7.603	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The United States Air Force (USAF) Distributed Mission Operations Center (DMOC) is an Air Combat Command, Air Warfare Center, 505th Command and Control Wing organization. It provides Joint interoperability training and testing to geographically separated Live, Virtual, and Constructive (LVC) assets--real-world weapon systems, warfighter-in-the-loop (WITL), and computer-driven simulations. Responsibilities include: integrating DMO training and test events, networks, scenarios, and databases in support of service, joint and coalition warfighters. DMOC is the lead integrator for AF DMO and virtual contributions to the Joint National Training Capability (JNTC). Additionally, it is the lead agency for Virtual Flag (VF) exercises and the DMO Multi-Level Security (MLS) Testbed.

This program is categorized as Budget Activity (BA) 7 because it provides for development of technology in support of Distributed Mission Operations.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue to maintain core structure to support users conducting RDT&E, mission rehearsal, and concepts of operation development	4.884	5.348	5.284	3.901
(U) Continue to support requirements definition, test support, scenario development, analysis, system engineering support, and Verification, Validation and Accreditation (VV&A) of core systems	0.681	0.685	0.655	0.000
(U) Communications connectivity between DMOC and various other modeling & simulation (M&S) facilities	0.207	0.212	0.349	0.000
(U) Program Management Office support	0.315	0.325	0.201	0.000
(U) Total Cost	6.087	6.570	6.489	3.901

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

The Distributed Mission Operations Center supports AF DMO and the JNTC by awarding full and open contracts that manage the acquisition, development, testing, and integration of DMO standards, training, model and simulation, multi-level security testbed, and exercises on the DMO Networks (DMON).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207605F Wargaming and Simulation Centers**

PROJECT NUMBER AND TITLE: **2888 Distributed Mission Operations Center (DMOC)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Mission Rehearsals/Concept of Operations (Brief/Debrief and Mission Replay tools, Rapid Scenario Generation, Next Generation Threat System Dev, DMO "Flag" events)	CPFF	Lockheed Martin/505 Distributed Warfare Group (DWG), Kirtland AFB, NM		4.884	Oct-05	5.348	Oct-06	5.284	Oct-07	3.901	Oct-08	Continuing	TBD	TBD
Verify, Validate, and Accredit Core Systems (Common Battle Space Infrastructure, DMO Standards, MLS)	CPFF	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.681	Oct-05	0.685	Oct-06	0.655	Oct-07	0.000		Continuing	TBD	TBD
Communications Connectivity (DMO Architecture, JNTC Warfighter Capability, LVC Range Integration)	CPFF	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.207	Oct-05	0.212	Oct-06	0.349	Oct-07	0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	5.772		6.245		6.288		3.901		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Program Management Support	ITSP	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.315	Oct-05	0.325	Oct-06	0.201	Oct-07	0.000		Continuing	TBD	TBD
Subtotal Management			0.000	0.315		0.325		0.201		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	6.087		6.570		6.489		3.901		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207605F Wargaming and Simulation Centers**	PROJECT NUMBER AND TITLE **2888 Distributed Mission Operations Center (DMOC)**

UNCLASS

U.S. AIR FORCE

As of 8 Jan 07

Capabilities Schedule

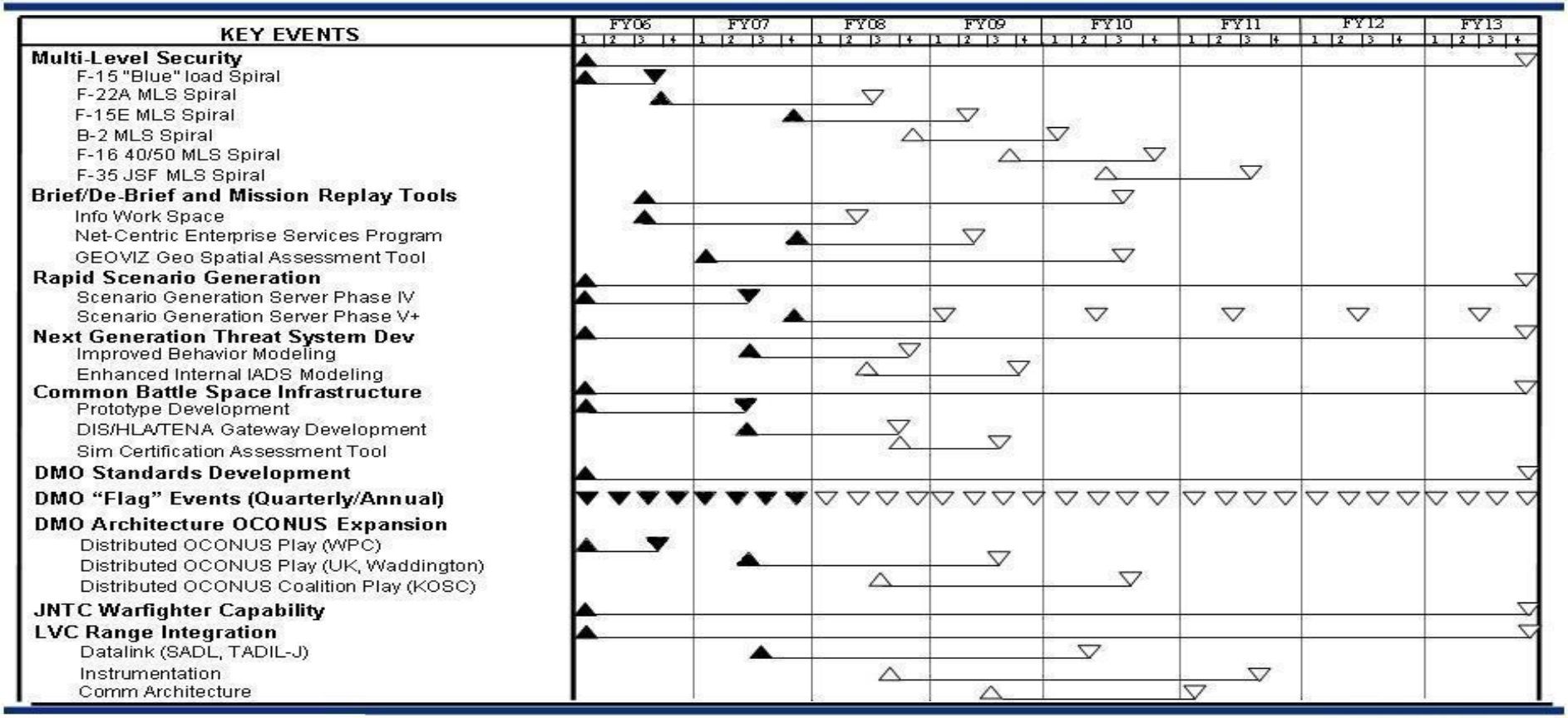

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207605F Wargaming and Simulation Centers**	PROJECT NUMBER AND TITLE **2888 Distributed Mission Operations Center (DMOC)**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) MLS	1-4Q	1-4Q	1-4Q	1-4Q
(U) Brief/Debrief and Mission Replay Tools	3-4Q	1-4Q	1-4Q	1-4Q
(U) Scenario Generation/NGTSD/CBSI	1-4Q	1-4Q	1-4Q	1-4Q
(U) Distributed Mission Operations (DMO)/Integration of Virtual and Blue Flags	1-4Q	1-4Q	1-4Q	1-4Q
(U) JNTC Warfighter Capability	1-4Q	1-4Q	1-4Q	1-4Q
(U) LVC Range Integration	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207697F
PE TITLE: Distributed Training and Exercises

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	4.045	6.115	7.522	7.569	7.604	7.571	7.718	7.876	0.000	0.000
5190 JFCOM Wargaming	4.045	6.115	7.522	7.569	7.604	7.571	7.718	7.876	0.000	0.000

(U) A. Mission Description and Budget Item Justification

In September 03 the AF/CV directed the establishment of an 11-person AF Liaison Office (LNO) at USJFCOM with representatives from across the AF to increase participation in joint transformation activities including joint concept development and experimentation and joint Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTMLPF) recommendations. Air Force A5XS ensures accurate representation of air and space capabilities in joint activities, through modeling and simulation and wargaming activities.

This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	4.162	6.138	1.692	1.710
(U) Current PBR/President's Budget	4.045	6.115	7.522	7.569
(U) Total Adjustments	-0.117			
(U) Congressional Program Reductions		-0.023		
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.117	-0.172		
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5190 JFCOM Wargaming	4.045	6.115	7.522	7.569	7.604	7.571	7.718	7.876	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

In September 03 the AF/CV directed the establishment of an 11-person AF Liaison Office (LNO) at USJFCOM with representatives from across the AF to increase participation in joint transformation activities including joint concept development and experimentation and joint Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTMLPF) recommendations. Air Force A5XS ensures accurate representation of air and space capabilities in joint activities, through modeling and simulation and wargaming activities.

This program is categorized in Budget Activity (BA) 7 because it supports the development efforts of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/STORM)	1.440	1.585	1.692	1.710
(U) Provides for capabilities, Requirements, and Risk Assessment (CRRA)	1.380	1.580	1.730	1.840
(U) Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation	0.542	1.230	1.740	1.790
(U) Supplies platforms for software in operational environments and for programmed replacement costs	0.683	1.720	2.360	2.229
(U) Total Cost	4.045	6.115	7.522	7.569

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

All contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207697F Distributed Training and Exercises**

PROJECT NUMBER AND TITLE: **5190 JFCOM Wargaming**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Various	TBD	TBD		4.045		6.115		7.522		7.569		Continuing	TBD	TBD
Subtotal Product Development			0.000	4.045		6.115		7.522		7.569		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	4.045		6.115		7.522		7.569		Continuing	TBD	TBD

Note: Funding is for a continuous series of updates and modifications. There is no contract award associated with this funding.

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

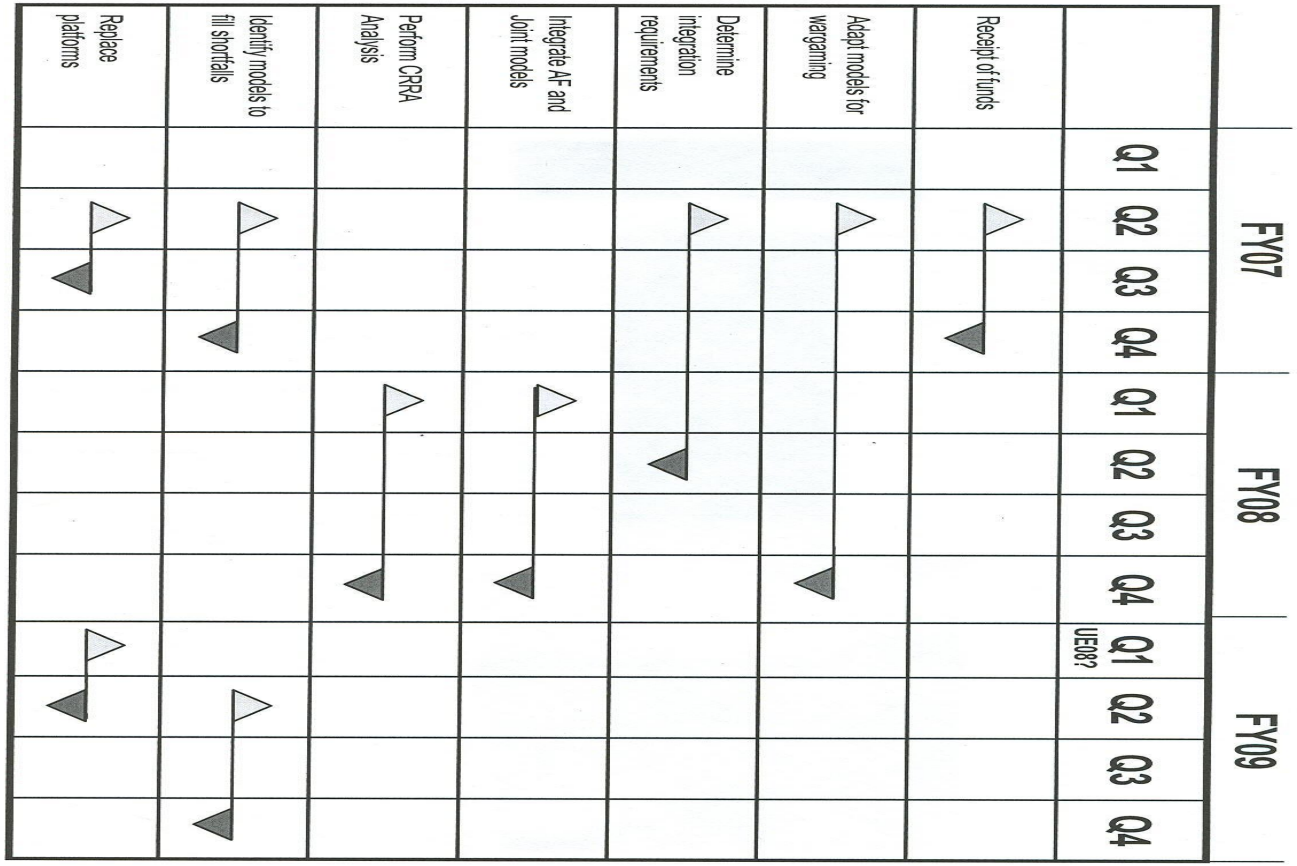


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

AF Liaison Office (LNO) to USJFCOM

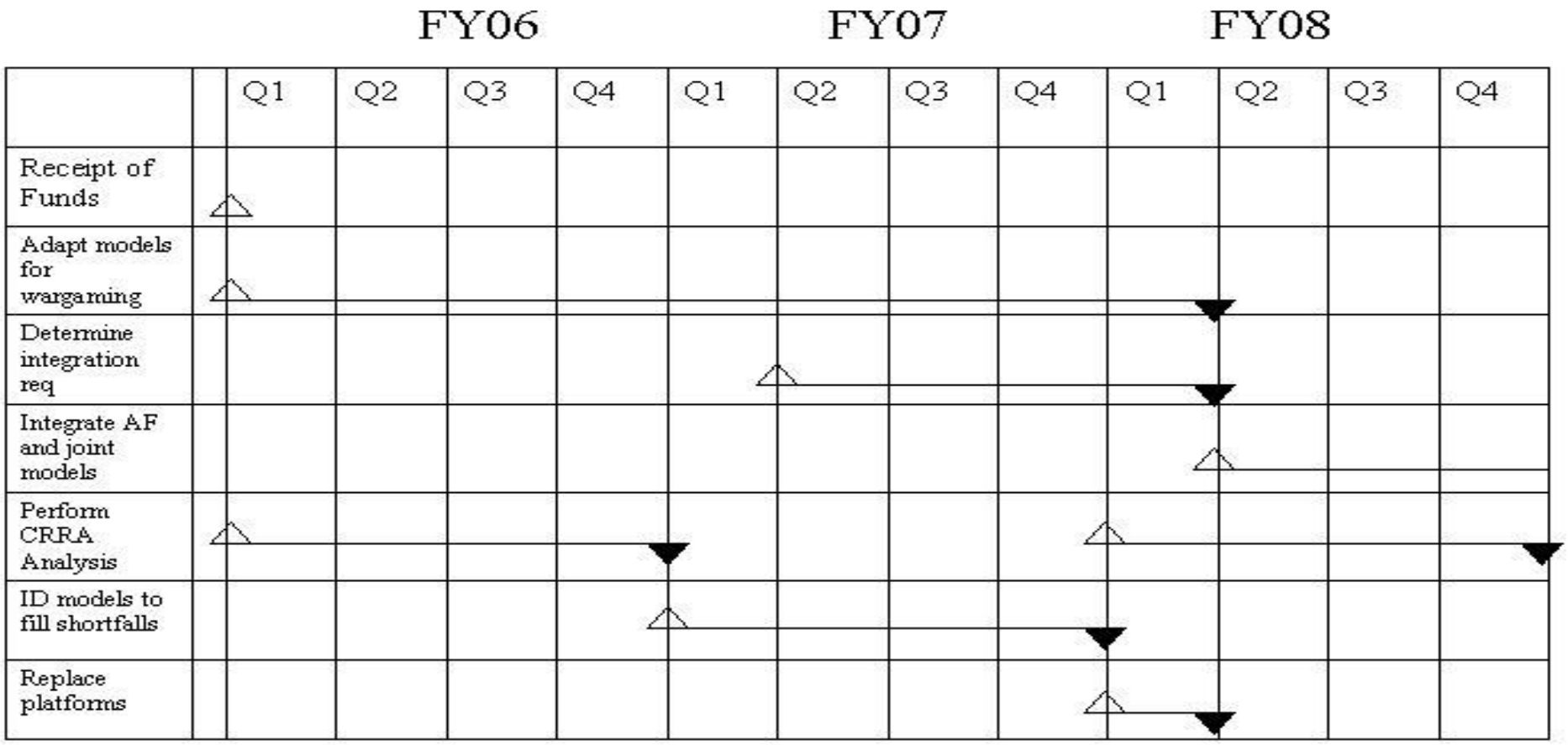


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207697F Distributed Training and Exercises**	PROJECT NUMBER AND TITLE **5190 JFCOM Wargaming**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Adapt STORM/THUNDER and JWARS for wargaming	1-4Q	1-4Q	1-4Q	1-4Q
(U) Determine other model integration/adaptation requirements		2-3Q	2-3Q	2-3Q
(U) Perform CRRA analysis biannually, integratin wargaming/CRAA processes.	1-4Q		1-4Q	
(U) Joint Concept Development and Implementation		3-4Q	3-4Q	3-4Q

PE NUMBER: 0208006F
PE TITLE: Mission Planning Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	115.002	129.259	105.371	99.028	99.213	99.964	101.896	103.967	Continuing	TBD
3858	Mission Planning Systems (MPS)	115.002	129.259	105.371	99.028	99.213	99.964	101.896	103.967	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program provides automated mission-planning tools and support for fixed and rotary wing aircraft and guided munitions. It will replace two closed architecture legacy mission planning systems (the Unix-based MPS (Unix-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). JMPS will enable the mission planning cycle to be compressed by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/critical targets and conducting combat search and rescue. MPS will support a variety of Air Force aircraft and weapons including (but not limited to) the following: A-10, B-1, B-2, B-52, C-5, C-17, C-130, E-3, E-8, F-16, F-15, F-117, F-22A, F-35, KC-10, KC-135, RC-135, U-2, HH-60, CSAR-X, Air-to-Ground Munitions (AGM) -130, AGM-142, Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Standoff Munitions (JASSM), Miniature Air Launched Decoy (MALD), Predator, and Global Hawk as well as Army and Navy platforms. Additionally, elements of Mission Planning Systems software will be utilized to continue development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. JMPS will significantly benefit command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.

Mission Planning Systems uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (increment content is described below) to provide capabilities to individual platforms. Additionally, the JMPS architecture ensures common components are utilized among all service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Migrating all platforms to JMPS will eliminate stovepipe systems. The JMPS framework and common components will require continuous upgrades to: 1) reduce timelines for route planning; 2) transmit near real-time intelligence data to the platforms; 3) increase the accuracy of the mapping products; 4) provide a Windows-based, COTS-based, user friendly product; and 5) retain compatibility with changes to avionics and operational flight programs. JMPS is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It will be developed incrementally using the following approach:

a. Increment I - this was the initial development effort, which provided the framework for basic flight planning for all platforms.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems

b. Increment II - provides for the initial migration of legacy mission planning capability to JMPS for the F-15 and RC-135.

c. Increment III - continues the migration of additional aircraft platforms (F22-A, F-16, B-1B, etc) and weapons (JASSM, etc) to JMPS. It upgrades the framework and develops new common components (e.g. Weather, Electronic Warfare, Airdrop, Precision Guided Munitions) and unique platform capabilities. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

d. Increment IV - continues the JMPS migration for additional platforms (Tanker Airlift Special Mission (TASM), Intelligence, Surveillance & Reconnaissance (ISR) aircraft, etc..) while upgrading the framework and Common Components Capabilities (e.g. Enhanced Air Refueling, Precision Guided Munitions Planning Software (PGMPS), etc..). It will continue to develop new unique platform capabilities while also conducting engineering studies to plan and support the migration of future platforms to JMPS.

e. Increment V - completes the migration to JMPS for additional platforms (e.g. B-2, B-52, etc.) while developing new and improved JMPS capabilities for all platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades.

f. Net centric capabilities are/will be developed to provide web based JMPS mission planning to stay in concert with current C2 strategies.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities to support and ultimately replace the currently fielded PFPS and Unix-MPS systems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	119.860	146.396	103.021	96.405
(U)	Current PBR/President's Budget	115.002	129.259	105.371	99.028
(U)	Total Adjustments	-4.858	-17.137		
(U)	Congressional Program Reductions		-16.647		
	Congressional Rescissions	-0.004	-0.490		
	Congressional Increases				
	Reprogrammings	-1.430			
	SBIR/STTR Transfer	-3.424			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE: 3858 Mission Planning Systems (MPS)	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3858 Mission Planning Systems (MPS)	115.002	129.259	105.371	99.028	99.213	99.964	101.896	103.967	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Mission planning involves the creation of a flight plan based on threats, targets, terrain, weather, aircraft performance capability, and configuration. It is an essential task that must be completed prior to any fixed or rotary wing aircraft sortie. The planner must have the ability to plan weapon, cargo, passenger, and/or fuel delivery, calculate fuel requirements, and assess the route based on known enemy threat location and type. Mission planners must be able to optimize and de-conflict flight routes with other aircraft; review, print, and brief the mission plan; and download pertinent flight information to on-board aircraft avionics.

The Mission Planning Systems (MPS) program provides automated mission-planning tools and support for fixed and rotary wing aircraft and guided munitions. It will replace two closed architecture legacy mission planning systems (the Unix-based MPS (Unix-MPS) and the PC-based Portable Flight Planning Software (PFPS)), with a single multi-service open architecture system more commonly referred to as the Joint Mission Planning System (JMPS). JMPS will enable the mission planning cycle to be compressed by providing an improved integrated planning environment, reducing the time required to respond to changing situations and urgent needs such as striking time sensitive/critical targets and conducting combat search and rescue. MPS will support a variety of Air Force aircraft and weapons including (but not limited to) the following: A-10, B-1, B-2, B-52, C-5, C-17, C-130, E-3, E-8, F-16, F-15, F-117, F-22A, F-35, KC-10, KC-135, RC-135, U-2, HH-60, CSAR-X, Air-to-Ground Munitions (AGM) -130, AGM-142, Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Standoff Munitions (JASSM), Miniature Air Launched Decoy (MALD), Predator, and Global Hawk as well as Army and Navy platforms. Additionally, elements of Mission Planning Systems software will be utilized to continue development of a Joint Precision Airdrop System (JPADS) in conjunction with the Army. JMPS will significantly benefit command and control performance by enhancing information superiority for the warfighter and by providing unique capabilities in support of both precision engagement and dominant maneuver.

Mission Planning Systems uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (increment content is described below) to provide capabilities to individual platforms. Additionally, the JMPS architecture ensures common components are utilized among all service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Migrating all platforms to JMPS will eliminate stovepipe systems. The JMPS framework and common components will require continuous upgrades to: 1) reduce timelines for route planning; 2) transmit near real-time intelligence data to the platforms; 3) increase the accuracy of the mapping products; 4) provide a Windows-based, COTS-based, user friendly product; and 5) retain compatibility with changes to avionics and operational flight programs. JMPS is a collaborative program with the Army and Navy to leverage technical solutions and business practices for all Department of Defense (DoD) platforms. It will be developed incrementally using the following approach:

a. Increment I - this was the initial development effort, which provided the framework for basic flight planning for all platforms.

b. Increment II - provides for the initial migration of legacy mission planning capability to JMPS for the F-15 and RC-135.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208006F Mission Planning Systems**	PROJECT NUMBER AND TITLE **3858 Mission Planning Systems (MPS)**

c. Increment III - continues the migration of additional aircraft platforms (F22-A, F-16, B-1B, etc) and weapons (JASSM, etc) to JMPS. It upgrades the framework and develops new common components (e.g. Weather, Electronic Warfare, Airdrop, Precision Guided Munitions) and unique platform capabilities. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

d. Increment IV - continues the JMPS migration for additional platforms (Tanker Airlift Special Mission (TASM), Intelligence, Surveillance & Reconnaissance (ISR) aircraft, etc..) while upgrading the framework and Common Components Capabilities (e.g. Enhanced Air Refueling, Precision Guided Munitions Planning Software (PGMPS), etc..). It will continue to develop new unique platform capabilities while also conducting engineering studies to plan and support the migration of future platforms to JMPS.

e. Increment V - completes the migration to JMPS for additional platforms (e.g. B-2, B-52, etc.) while developing new and improved JMPS capabilities for all platforms. It will also complete a variety of studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades.

f. Net centric capabilities are/will be developed to provide web based JMPS mission planning to stay in concert with current C2 strategies.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities to support and ultimately replace the currently fielded PFPS and Unix-MPS systems.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Increment II - Continues the migration of mission planning capability to JMPS	4.739	0.000	0.000	0.000
(U)	Increment III - Continues the migration of mission planning capability to JMPS	73.980	73.918	10.754	2.349
(U)	Increment IV - Continues the migration of mission planning capability to JMPS	13.380	29.853	69.008	63.107
(U)	Increment V - Completes the migration of mission planning capability to JMPS	0.000	0.000	0.000	8.159
(U)	NetCentric Capability - develops new capability to provide information across all JMPS platforms	1.192	1.367	1.259	1.275
(U)	Test, Training, and Certification	7.365	9.367	9.047	8.792
(U)	FFRDC (Mitre)	5.421	5.365	5.783	6.073
(U)	Program Office Support	8.925	9.389	9.520	9.273
(U)	Total Cost	115.002	129.259	105.371	99.028

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Appn (U) OPAF PE 0208006F (Other Procurement Air Force, WSC	16.085	16.225	16.985	22.870	24.445	23.342	22.886	17.506	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208006F Mission Planning Systems**	PROJECT NUMBER AND TITLE **3858 Mission Planning Systems (MPS)**

(U) C. Other Program Funding Summary ($ in Millions)

833040, Theater Air Control
System Improvement)

(U) D. Acquisition Strategy

Mission Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network-centric, mission planning system tailored for numerous Air Force platforms using competition and multiple contract vehicles.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208006F Mission Planning Systems**

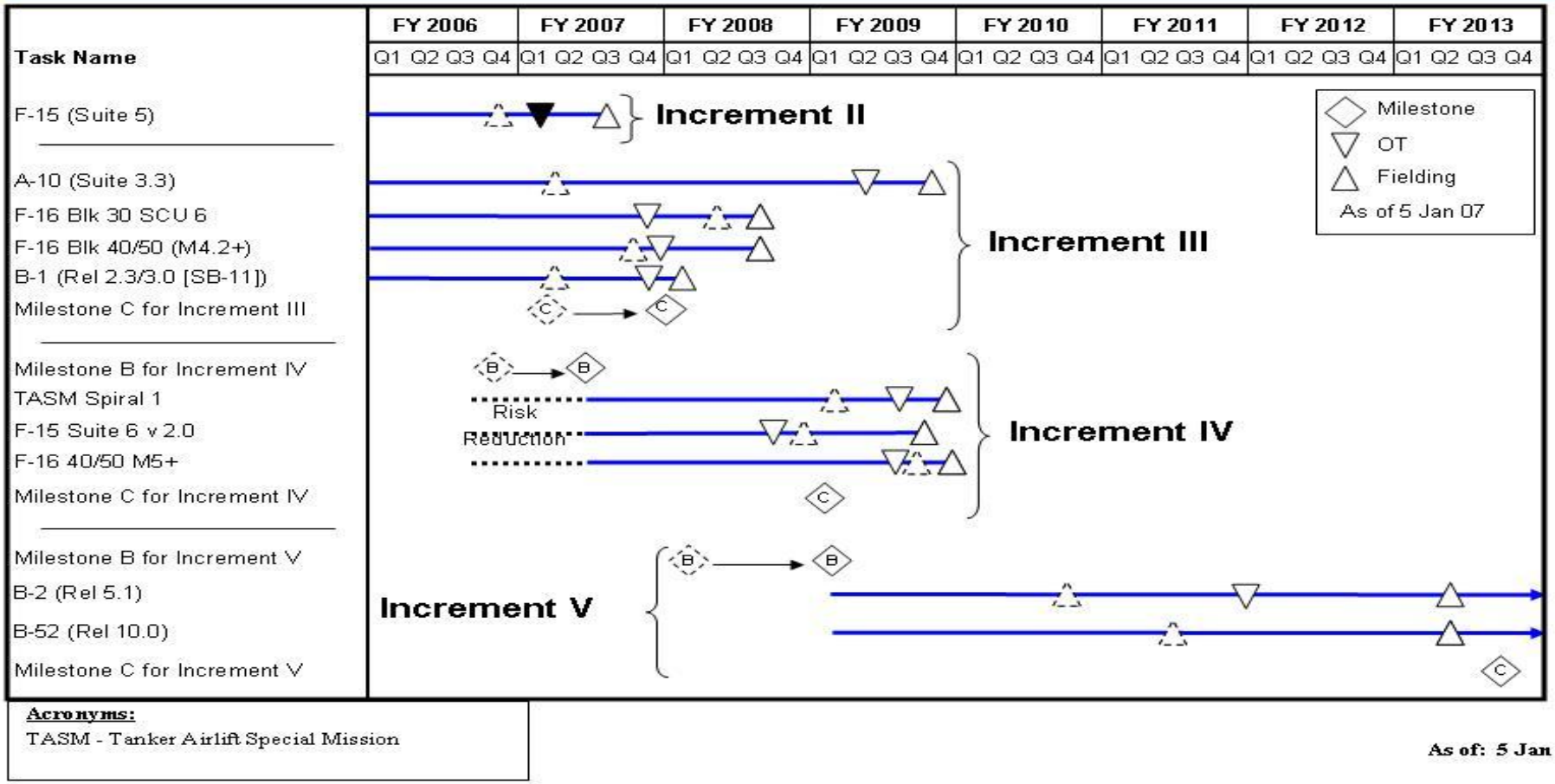
PROJECT NUMBER AND TITLE: **3858 Mission Planning Systems (MPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Mission Planning Enterprise Contract	C/Various	Various	28.596	74.770	Nov-05	90.159	Nov-06	67.100	Nov-07	64.185	Nov-08	Continuing	TBD	TBD
Systems Engineering and Integration	C/Various	Various	15.973	18.521	Nov-05	14.979	Nov-06	13.922	Nov-07	10.704	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			44.569	93.291		105.138		81.022		74.889		Continuing	TBD	TBD
Remarks:														
(U) Support														
Software Engineering Institute (SEI)	C/T&M	Pittsburgh, PA	0.457	0.500	Dec-05	0.518	Nov-06	0.480	Nov-07	0.464	Nov-08	Continuing	TBD	TBD
Tecolote	C/T&M	Bedford, MA	1.814	0.322	Nov-05	0.789	Nov-06	0.759	Nov-07	0.800	Nov-08	Continuing	TBD	TBD
Subtotal Support			2.271	0.822		1.307		1.239		1.264		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
46TW	PO	Eglin AFB, FL	10.674	6.157	Nov-05	7.943	Nov-06	7.665	Nov-07	7.323	Nov-08	Continuing	TBD	TBD
JITC	FFP/CPAF	Indian Head, MO	0.000	0.000	Jan-06	0.057	Jan-07	0.055	Jan-08	0.059	Jan-09	Continuing	TBD	TBD
Type I Training	FPAF	Hill AFB, UT	0.000	1.208	Nov-05	1.367	Nov-06	1.326	Nov-07	1.411	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			10.674	7.365		9.367		9.046		8.793		Continuing	TBD	TBD
Remarks:														
(U) Management														
FFRDC (MITRE)	SS/T&M	Bedford, MA	16.459	5.421	Nov-05	5.365	Nov-06	5.783	Nov-07	6.073	Nov-08	Continuing	TBD	TBD
Program Office Support	C/T&M	Various	21.945	8.103	Nov-05	8.082	Nov-06	8.281	Nov-07	8.009	Nov-08	Continuing	TBD	TBD
Subtotal Management			38.404	13.524		13.447		14.064		14.082		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			95.919	115.002		129.259		105.371		99.028		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE: 3858 Mission Planning Systems (MPS)

U.S. AIR FORCE

Mission Planning Systems Schedule



Acronyms:
TASM - Tanker Airlift Special Mission

As of: 5 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208006F Mission Planning Systems**	PROJECT NUMBER AND TITLE **3858 Mission Planning Systems (MPS)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) F-15A-E Suite 5 Fielding		3Q		
(U) FDDR for Increment II		3Q		
(U) A-10 Suite 3 Fielding				4Q
(U) F-16 Block 30, SCU6 Fielding			3Q	
(U) F-16 (Block 40, M4.2+ and Block 50, M4.2+) Fielding			3Q	
(U) B-1 SB-11 Fielding			1Q	
(U) Milestone C for Increment III			1Q	
(U) Milestone B for Increment IV		3Q		
(U) F-15 Suite 6 Fielding				4Q
(U) TASM Spiral I Fielding				4Q
(U) Milestone C for Increment IV				1Q
(U) Milestone B for Increment V				1Q

PE NUMBER: 0208021F
PE TITLE: Information Warfare Support

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.250	24.649	12.111	12.322	12.601	12.787	14.876	15.182	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	7.141	16.480	12.111	12.322	12.601	12.787	14.876	15.182	Continuing	TBD
4871	Information Operations Technology	7.109	8.169	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

Funding for the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transferred to JFCOM's PE 33166D beginning in FY08.

FY08 - 13 funding decrease in BPAC 670374 as a result of alignment and correction of IW Support to JFCOM's PE 33166D.

(U) A. Mission Description and Budget Item Justification

This Program Element funds research and development of information operations (IO), electronic support, and intelligence capabilities required to execute counterspace and information operations in support of combatant commanders. As directed by SECAF and approved by OSD, programs that are supported include the Information Operations Planning Capability-Joint (IOPC-J), the Information Warfare Planning Capability (IWPC), the Counter Communications System (CCS) and the Rapid Attack Identification Detection and Reporting System (RAIDRS), and Counter Space Electronic Support.

IWPC is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL). AF specific AOC planning functions may continue under requirements being explored by ACC and the C2ISR center during JEFX-08 that will include kinetic and IO effects.

CCS provides ground-based deployable capabilities for denying satellite communications to our adversaries.

RAIDRS provides a family of ground-based systems that rapidly detect, locate, characterize, identify and report attacks against DoD-used space assets.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This PE funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support

an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	14.972	24.758	26.498	26.944
(U)	Current PBR/President's Budget	14.250	24.649	12.111	12.322
(U)	Total Adjustments	-0.722	-0.109		
(U)	Congressional Program Reductions		-0.016		
	Congressional Rescissions		-0.093		
	Congressional Increases				
	Reprogrammings	-0.305			
	SBIR/STTR Transfer	-0.417			

(U) Significant Program Changes:

In FY07 the program received additional funding as a SECAF directed, effort to provide required electronic support and intelligence capabilities in support of counterspace operations.

Funding decreased in FY08 - 13 as a result of the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transfer to JFCOM's PE 33166D beginning in FY08.

FY08 - 13 funding decrease in BPAC 670374 as a result of alignment and correction of IW Support to JFCOM's PE 33166D.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE: 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	7.141	16.480	12.111	12.322	12.601	12.787	14.876	15.182	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

FY08 - 13 funding decrease in BPAC 670374 as a result of alignment and correction of IW Support to JFCOM's PE 33166D.

(U) A. Mission Description and Budget Item Justification

The Information Warfare Planning Capability (IWPC) is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic and kinetic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL).

This project funds the development of an evolving suite of interoperable IO planning and decision support capabilities comprised of, software, hardware, and communications products. This project will identify and implement an open, scalable system architecture that will accommodate the expansive growth in the IO mission area. The project builds functional software modules that are designed to be interoperable with baseline C2 systems such as the Theater Battle Management Control System (TBMCS) and other AOC tools. IWPC will participate in the Joint Expeditionary Force Experiment (JEFX) as part of the overall IWPC software development and integration effort into the AOC. In anticipation of a future joint spiral, IWPC 4.0 plus the Information Operations Navigator tool (ION) was installed at AF and other critical DoD sites for evaluation and trial of what could become a joint planning tool. This was done using FY06-07 funds from OSD.

IWPC will complete development, testing and fielding in FY07-FY08 concluding with version 4.2. Following final acceptance, AF sites will receive a technical refresh of all previously fielded versions of software to version 4.2. Combatant Comand (COCOM) IWPC sites will utilize FY07 funds provided by OSD to upgrade to version 4.2. Until agreements are finalized with JFCOM only AF sites will be sustained after FY-07. The sustainment of IWPC will be done under a new O&M contract.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This project is in Budget Activity 7, Operational System Development, because it studies, develops, and demonstrates IO prototypes. It identifies existing military and commercial research and development efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) **B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U) IWPC Software Development and Integration	2.291	0.178	0.000	2.199
(U) AOC Integration	2.274	4.198	0.188	0.190
(U) IWPC Software Testing and Evaluation	0.541	0.560	0.000	0.000
(U) JEFX System integration	2.035	2.080	2.173	0.000
(U) Counterspace Electronic Support/Intelligence	0.000	9.464	9.750	9.933
(U) Total Cost	7.141	16.480	12.111	12.322

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) IWPC Operations & Maintenance, AF (3400) PE 28021	1.210	1.154	0.885	0.900	0.900	0.900	0.900	0.900	Continuing	TBD
(U) Counterspace Electronic Support and Intelligence Operations and Maintenance (3400) PE 28021F	0.000	12.330	12.603	12.739	12.954	13.173			Continuing	TBD

(U) D. Acquisition Strategy

These efforts will use an evolutionary acquisition strategy using contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208021F Information Warfare Support**

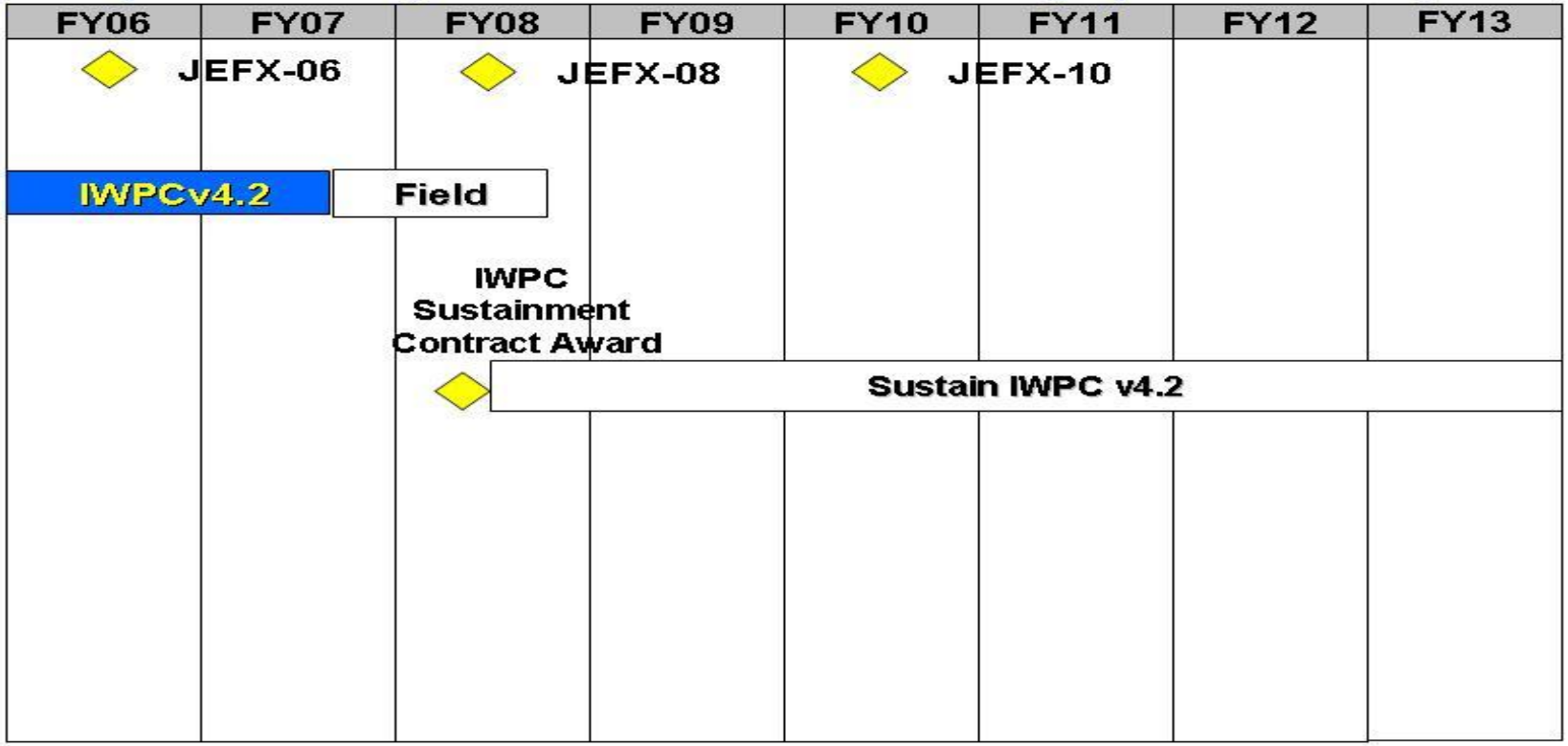
PROJECT NUMBER AND TITLE: **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
JEFX - Various	Various	Lackland AFB TX/Moutain View CA		0.000	Oct-05	0.000	Oct-06	2.173	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Information Technologies Support Program II (ITSP II)	Various	Lackland AFB TX		0.679	Oct-05	0.679	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
IWPC	Various	General Dynamics, Lackland AFB TX/Moutain View CA		5.199	Oct-05	4.909	Oct-06	0.188	Oct-07	2.389	Oct-08	Continuing	TBD	TBD
IWPC bridge development	T&M	MITRE, Lackland AFB TX		0.394	Oct-05	0.415	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Counterspace Electronic Support Intel R&D	TBD	TBD		0.000	N/A	9.464	Nov-06	9.750	Nov-07	9.933	Nov-08	Continuing	TBD	TBD
System Program Office Costs	Various	Lackland AFB TX		0.328	Oct-05	0.453	Oct-06	0.000	Oct-07	0.000	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	6.600		15.920		12.111		12.322		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test	T&M	46th Test Squadron, Eglin AFB FL		0.541	Nov-05	0.560	Nov-06	0.000	Nov-07	0.000	Nov-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.541		0.560		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	7.141		16.480		12.111		12.322		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

IWPC Program Schedule

Delivering what we promised when we promised — *War-winning Capabilities…On Time, On Cost*



Integrity - Service - Excellence

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

CS ES & Intel Program Schedule

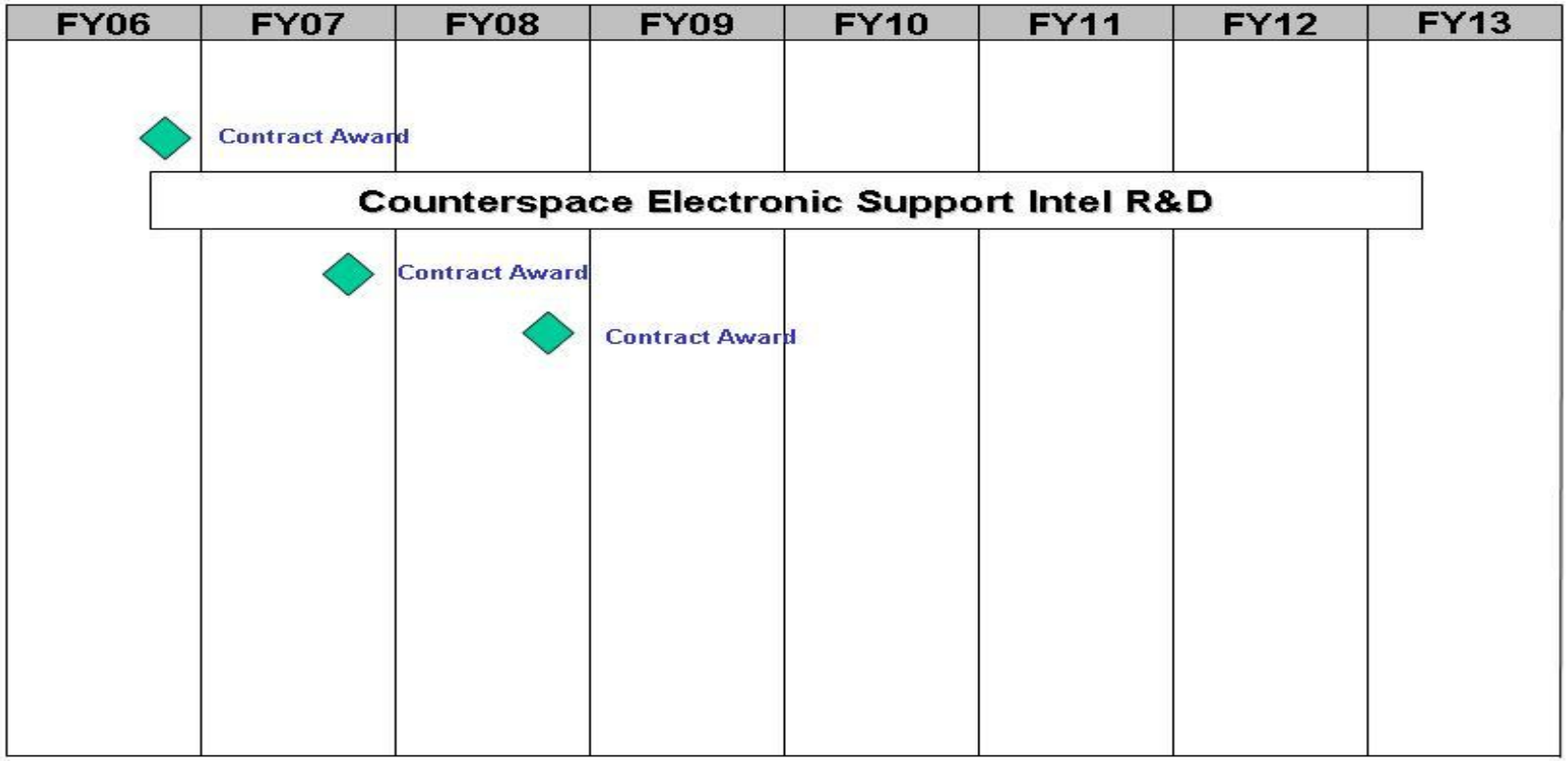


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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) JEFX 06 Main Exercise	3Q			
(U) IWPC v4.2 Development test & integration	1-4Q	1-3Q		
(U) IWPC v4.2 Fielding		3Q	1-3Q	
(U) JEFX 08			2Q	
(U) IWPC 4.0 Sustainment Contract Award		2Q		
(U) IWPC v4.0 and v4.2 Sustainment		2-4Q	1-4Q	1-4Q
(U) **** Counter Space Electronic Support ***	1Q	1Q	1Q	1Q
(U) Contract Award	4Q			
(U) Intel support and R&D	4Q	1-4Q	1-4Q	1-4Q
(U) Contract Award		4Q		
(U) Contract Award			4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0208021F Information Warfare Support

PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871 Information Operations Technology	7.109	8.169	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Funding for the Information Operations Planning Capability Joint (IOPC-J) BPAC 674871 transferred to JFCOM's PE 33166D beginning in FY08

(U) A. Mission Description and Budget Item Justification

The Information Operations Planning Capability (IOPC-J) will be a suite of tools developed to a joint integrated baseline. It will leverage existing capabilities but will also require system and software development activities. The suite will be comprised of Joint IO planning capabilities and Service-unique applications based on shared access to Service/Agency/joint-provided data sources in support of the Joint Forces Commander's (JFC) overall campaign plan and across the spectrum of military and peacekeeping operations. Studies and software interface documentation has already been completed that will accommodate joint IO applications and will be a possible follow-on to the AF's Information Warfare Planning Capability 4.X. The Information Warfare Planning Capability (IWPC) v4.2 will serve as a joint users' initial capability,becoming an incremental pathfinder for the first developmental version of IOPC-J's baseline capabilities containing the complete AOC strategy to task planning.

This project funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) IOPC-J Software Development and Integration	4.274	4.893	0.000	0.000
(U) Site Integration	2.275	2.576	0.000	0.000
(U) IOPC-J Software Testing and Evaluation	0.560	0.700	0.000	0.000
(U) Total Cost	7.109	8.169	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) IW Supt Operations and maintenance, AF 3400 and PE 28021	2.000	2.177	0.823	0.755	0.788	0.732	0.721	0.709	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208021F Information Warfare Support**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
IOPC-J development	TBD	TBD		7.109	Apr-06	8.169	Apr-07	0.000	N/A	0.000	N/A	Continuing	TBD	TBD
Subtotal Product Development			0.000	7.109		8.169		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail														
(U) Support														
TBD												Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail														
(U) Test & Evaluation														
TBD												Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail														
(U) Management														
TBD												Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail														
(U) Total Cost			0.000	7.109		8.169		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

IOPC-J Program Schedule

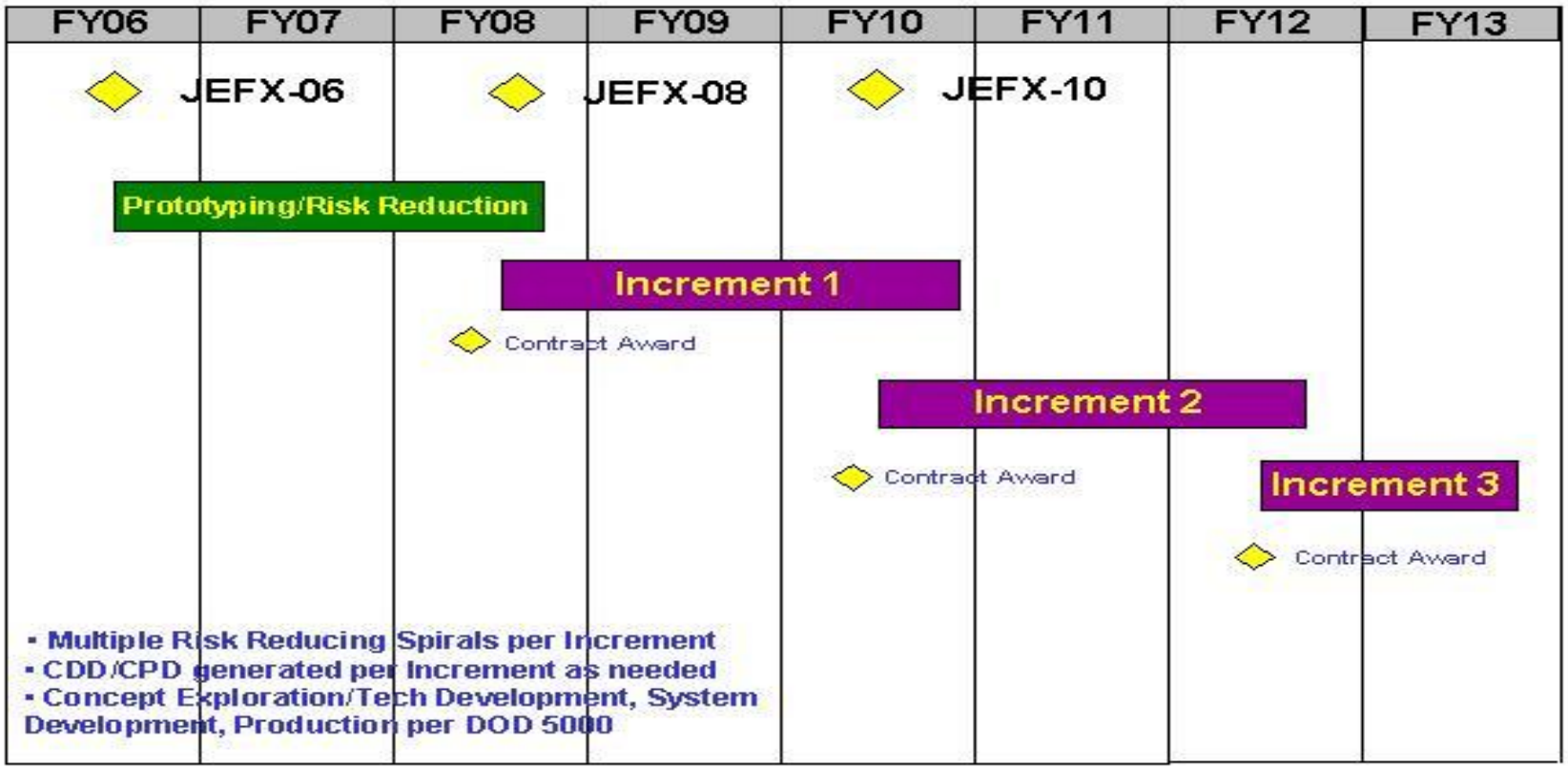

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) JEFX-06	3Q			
(U) Prototyping / Risk Reduction	3-4Q	1-4Q	1-3Q	
(U) JEFX-08			3Q	
(U) IOPC-J Increment 1 Contract			3-4Q	1-4Q
(U) Increment 1 Contract Award			2Q	
(U) IOPC-J Software Increment 1			3-4Q	1-4Q

PE NUMBER: 0302015F
PE TITLE: E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.281	0.282	19.529	4.105	11.665	4.667	1.864	6.041	0.000	210.293
4777 E-4B Aircraft Modernization	14.281	0.282	19.529	4.105	11.665	4.667	1.864	6.041	0.000	210.293

(U) A. Mission Description and Budget Item Justification

The E-4B National Airborne Operations Center (NAOC) modernization program upgrades the fleet of highly modified Boeing 747-200 aircraft to add new capabilities and improve reliability for its two primary missions (nuclear command and control and senior national leader support). The E-4B NAOC fleet satisfies the military requirement to provide a highly survivable alternate operations center to the National Military Command Center (NMCC) located in the Pentagon. The E-4B NAOC fleet also satisfies the military need for an airborne operations center with communications capabilities that will permit national leadership to monitor and control military and civil national assets during all phases of national conflict or disaster. Developmental modifications include, but are not limited to, upgrades and enhancements to aircraft structures, propulsion system, fuel system, environmental control system, electrical generation and distribution systems, flight safety and navigation systems (with their associated communications equipment), and the related aircraft operations center facilities, equipment, and communications necessary for the E-4B fleet to execute its primary mission as an alternate NMCC.

Modifications currently underway or planned for accomplishment under this program include:

- Modification Block 1 (Mod Blk 1): IOC was declared September 2006. FY07 RDT&E funding will be used to final incorporation of technical data in support of the fielded prototype aircraft.

- The E-4B's nuclear command and control mission is supported by a group of twenty-three, fixed ground entry points/stations (GEPs) (NAOC Ground Communications Network, PE: 0302052F) that provide networked connectivity between the E-4B and various high value ground sites. An ultra high frequency (UHF) radio link is used to connect airborne elements of the network with the ground-based portions of the circuit. The UHF radio link between airborne elements and the GEPs is in the process of converting from an analog to a digital format to both reduce long term network costs and to provide additional communication capabilities to its users.

Currently, the E-4B crew must temporarily install one of three sets of pre-production equipment to access this digital broadband capability. Following the modification, each of the E-4B aircraft will have a system that is both fully integrated into the E-4B's external communication and data distribution systems and is lighter than the carry-on equipment. An airborne modem will need to be developed since a device suitable for the E-4B mission requirements is not commercially available. The C3 UHF Digitization modernization will provide Internet protocol (IP) based connectivity to the Internet at both the UNCLAS and the SECRET levels. It will also provide Video Teleconferencing Conferencing (VTC) capabilities, Voice over IP (VoIP), and access to Secure Internet Protocol Router Network (SIPRNET) with data rate processing up to 1.544Mbps. Digital Northstar provides more flexibility and utility than the current analog UHF/FDM system, including on-the-fly circuit changes, digital bulk encryption to protect the network from monitoring and intrusion, forward error correction, dynamic bandwidth management, and high-speed data transfer.

The goal of the Northstar system is to eventually phase out the analog capability at the GEPs in favor of the digital UHF wave form. This transition to a digital

only system will not occur before all airborne users have a digital UHF capability similar to that provided by this E-4B modification. The E-4B will retain an analog Northstar UHF capability following the installation of this modification.

- The SHF Multiplexor (MUX) combines secure and non-secure digital signals into one data stream for transmission over the Frequency Division Multiple Access (FDMA) modem or USC-28. The current SHF MUX is an FCC-100 derivative and is prone to intermittent disconnects and poor performance. Defense Information System Agency (DISA) recommended replacing the MUX with a higher reliability device. The anticipated multiplexor replacement is a dual V-100 MUX. A temporary MUX replacement kit was developed and testing confirmed the dual V-100 as the viable replacement for the old SHF MUX. The technical risk for this modification is not hardware but integration. The technical risk of integrating the new multiplexer into the E-4B communication management system is sufficiently high to warrant using RDT&E dollars for the first modification.

- Family of Advanced Beyond-Line-Of-Sight Terminals (FAB-T) will be installed to incorporate Command Post Terminal Replacement (CPTR) capabilities. FAB-T will replace the E-4B Milstar terminal and will provide access to protected wideband Advanced Extremely High Frequency (AEHF) satellite networks. An UHF SATCOM radio Remote Control Head will be acquired and installed to support the UHF radio (AFSATCOM) currently associated with MILSTAR because FAB-T does not support that radio. FAB-T Increment 1 increases data rate capability from Low Data Rate (LDR) to Expanded Data Rate (XDR) and replaces all of the E-4B current MILSTAR equipment except the antenna and antenna control unit. The FAB-T installation will meet or exceed all E-4B airborne environmental and S/V requirements.

- The Presidential National Voice Conferencing (PNVC) system provides survivable, near commercial quality voice conferencing capability for the President and other national/military leaders. The PNVC system replaces Survivable Emergency Conferencing Network (SECN). This modification replaces the following SECN equipment: ANDVT, MILSTAR Summing Device (MSD) KY-99s, and the MSD Remote Control Head.

- The STU-IIIR is a National Security Agency (NSA)-approved Type I cryptographic device used to secure voice and data and is the only STU-III device that is certified for airborne operation. STU-IIIR replacement is driven by the expiration of the current maintenance contract as well as by the established cessation date for keying support of existing STU-IIIs. This modification supports the E-4B Airborne Operations Center Communications Upgrade ORD that validates the need for secure voice and data to subscribers both within and outside the aircraft. NAOC will lose this secure communication capability without this modification. The anticipated STU-IIIR replacement is the STE-RI.

The E-4B program is categorized as a Budget Activity 7 - Operational System Development, because it develops modifications for a fielded system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	18.639	0.283		
(U)	Current PBR/President's Budget	14.281	0.282	19.529	4.105
(U)	Total Adjustments	-4.358			
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.001		
	Congressional Increases				
	Reprogrammings	-2.630			
	SBIR/STTR Transfer	-1.728			

(U) Significant Program Changes:

During the FY07 budget process the Department made the decision to transition the E-4B missions to other existing and planned DoD assets and retire the E-4B fleet beginning FY09 at the rate of one per year. Upon further analysis, the Department decided to delay retirement of the last three aircraft and directed the Air Force to install Modification Block 1 (Mod Block 1) on a third aircraft. This will leave an all-modified fleet of three aircraft beginning in the FY08/09 timeframe. The Air Force is currently analyzing this path forward in order to develop a cost-effective plan while minimizing mission and acquisition risk. Accordingly, additional modifications will be required through FY13 to ensure the aircraft remains mission capable.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER	PROJECT NUMBER AND TITLE: 4777 E-4B Aircraft Modernization	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4777 E-4B Aircraft Modernization	14.281	0.282	19.529	4.105	11.665	4.667	1.864	6.041	0.000	210.293
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The E-4B National Airborne Operations Center (NAOC) modernization program upgrades the fleet of highly modified Boeing 747-200 aircraft to add new capabilities and improve reliability for its two primary missions (nuclear command and control and senior national leader support). The E-4B NAOC fleet satisfies the military requirement to provide a highly survivable alternate operations center to the National Military Command Center (NMCC) located in the Pentagon. The E-4B NAOC fleet also satisfies the military need for an airborne operations center with communications capabilities that will permit national leadership to monitor and control military and civil national assets during all phases of national conflict or disaster. Developmental modifications include, but are not limited to, upgrades and enhancements to aircraft structures, propulsion system, fuel system, environmental control system, electrical generation and distribution systems, flight safety and navigation systems (with their associated communications equipment), and the related aircraft operations center facilities, equipment, and communications necessary for the E-4B fleet to execute its primary mission as an alternate NMCC.

Modifications currently underway or planned for accomplishment under this program include:

- Modification Block 1 (Mod Blk 1): IOC was declared September 2006. FY07 RDT&E funding will be used to final incorporation of technical data in support of the fielded prototype aircraft.

- The E-4B's nuclear command and control mission is supported by a group of twenty-three, fixed ground entry points/stations (GEPs) (NAOC Ground Communications Network, PE: 0302052F) that provide networked connectivity between the E-4B and various high value ground sites. An ultra high frequency (UHF) radio link is used to connect airborne elements of the network with the ground-based portions of the circuit. The UHF radio link between airborne elements and the GEPs is in the process of converting from an analog to a digital format to both reduce long term network costs and to provide additional communication capabilities to its users.

Currently, the E-4B crew must temporarily install one of three sets of pre-production equipment to access this digital broadband capability. Following the modification, each of the E-4B aircraft will have a system that is both fully integrated into the E-4B's external communication and data distribution systems and is lighter than the carry-on equipment. An airborne modem will need to be developed since a device suitable for the E-4B mission requirements is not commercially available. The C3 UHF Digitization modernization will provide Internet protocol (IP) based connectivity to the Internet at both the UNCLAS and the SECRET levels. It will also provide Video Teleconferencing Conferencing (VTC) capabilities, Voice over IP (VoIP), and access to Secure Internet Protocol Router Network (SIPRNET) with data rate processing up to 1.544Mbps. Digital Northstar provides more flexibility and utility than the current analog UHF/FDM system, including on-the-fly circuit changes, digital bulk encryption to protect the network from monitoring and intrusion, forward error correction, dynamic bandwidth management, and high-speed data transfer.

The goal of the Northstar system is to eventually phase out the analog capability at the GEPs in favor of the digital UHF wave form. This transition to a digital only system will not occur before all airborne users have a digital UHF capability similar to that provided by this E-4B modification. The E-4B will retain an analog

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

Northstar UHF capability following the installation of this modification.

- The SHF Multiplexor (MUX) combines secure and non-secure digital signals into one data stream for transmission over the Frequency Division Multiple Access (FDMA) modem or USC-28. The current SHF MUX is an FCC-100 derivative and is prone to intermittent disconnects and poor performance. Defense Information System Agency (DISA) recommended replacing the MUX with a higher reliability device. The anticipated multiplexor replacement is a dual V-100 MUX. A temporary MUX replacement kit was developed and testing confirmed the dual V-100 as the viable replacement for the old SHF MUX. The technical risk for this modification is not hardware but integration. The technical risk of integrating the new multiplexer into the E-4B communication management system is sufficiently high to warrant using RDT&E dollars for the first modification.

- Family of Advanced Beyond-Line-Of-Sight Terminals (FAB-T) will be installed to incorporate Command Post Terminal Replacement (CPTR) capabilities. FAB-T will replace the E-4B Milstar terminal and will provide access to protected wideband Advanced Extremely High Frequency (AEHF) satellite networks. An UHF SATCOM radio Remote Control Head will be acquired and installed to support the UHF radio (AFSATCOM) currently associated with MILSTAR because FAB-T does not support that radio. FAB-T Increment 1 increases data rate capability from Low Data Rate (LDR) to Expanded Data Rate (XDR) and replaces all of the E-4B current MILSTAR equipment except the antenna and antenna control unit. The FAB-T installation will meet or exceed all E-4B airborne environmental and S/V requirements.

- The Presidential National Voice Conferencing (PNVC) system provides survivable, near commercial quality voice conferencing capability for the President and other national/military leaders. The PNVC system replaces Survivable Emergency Conferencing Network (SECN). This modification replaces the following SECN equipment: ANDVT, MILSTAR Summing Device (MSD) KY-99s, and the MSD Remote Control Head.

- The STU-IIIR is a National Security Agency (NSA)-approved Type I cryptographic device used to secure voice and data and is the only STU-III device that is certified for airborne operation. STU-IIIR replacement is driven by the expiration of the current maintenance contract as well as by the established cessation date for keying support of existing STU-IIIs. This modification supports the E-4B Airborne Operations Center Communications Upgrade ORD that validates the need for secure voice and data to subscribers both within and outside the aircraft. NAOC will lose this secure communication capability without this modification. The anticipated STU-IIIR replacement is the STE-RI.

The E-4B program is categorized as a Budget Activity 7 - Operational System Development, because it develops modifications for a fielded system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Mod Blk 1 - AIU prototype installation (formerly called Block 5A)	14.281			
(U)	Mod Blk 1 - resolve Category II deficiencies on prototype		0.282		
(U)	C-3 UHF - Prototype design, kit manufacturing, and install			3.109	4.105
(U)	STU III - Prototype design, kit manufacturing and install			16.420	
(U)	Total Cost	14.281	0.282	19.529	4.105

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4381 (AIU--formerly Blk 5A)	11.366								0.000	11.366
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 9709 (GATM Phase II)	0.745									
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4389 C-3 UHF Digitization			2.470	2.354						
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4391 SHF MUX Upgrade						0.287	0.396			
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4393 STU III Replacement				12.663						
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4400 FAB-T								1.860		

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

(U) C. Other Program Funding Summary ($ in Millions)

(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4401 PNVC				0.781
(U) Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 9709D CNS/ATM	3.500	8.000	5.000	

(U) D. Acquisition Strategy

Implementation of modifications will be contracted under the sole source Product Support Integration (PSI) with Boeing - Wichita.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

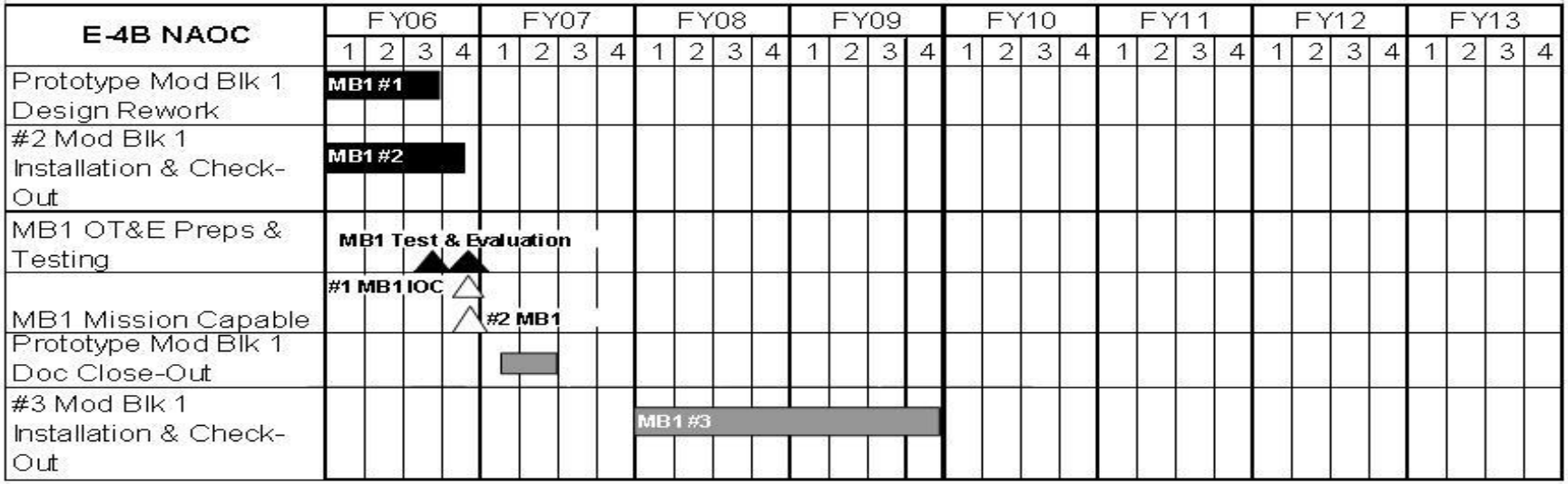
PE NUMBER AND TITLE: **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**

PROJECT NUMBER AND TITLE: **4777 E-4B Aircraft Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Boeing - Wichita	Sole Source CPIF	Wichita Development & Modification Center, Wichita, KS		12.859	Mar-06	0.282	Mar-07	18.667	Jan-08	3.674	Jan-09	0.000	35.482	13.263
Subtotal Product Development			0.000	12.859		0.282		18.667		3.674		0.000	35.482	13.263
Remarks:														
(U) Support														
Communications interoperability engineering, requirements development and initial operator training	Various MIPRs	DISA and other DoD Activities at Arlington, VA		0.811	Apr-06							0.000	0.811	0.811
Subtotal Support			0.000	0.811		0.000		0.000		0.000		0.000	0.811	0.811
Remarks:														
(U) Test & Evaluation														
Mod Blk 1 test plan development and test execution	Project Order	605th Flight Test Squadron at Eglin AFB, FL		0.180	Feb-06							0.000	0.180	0.180
Subtotal Test & Evaluation			0.000	0.180		0.000		0.000		0.000		0.000	0.180	0.180
Remarks:														
(U) Management														
E-4B Program Office contractor support	Small Business T&M	Efficiency Management and Engineering Company at Oklahoma City, OK		0.431	Jan-06			0.862	Jan-08	0.431	Jan-09	0.000	1.724	0.431
Subtotal Management			0.000	0.431		0.000		0.862		0.431		0.000	1.724	0.431
Remarks:														
(U) Total Cost			0.000	14.281		0.282		19.529		4.105		0.000	38.197	14.685

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

Modification Block 1 Schedule



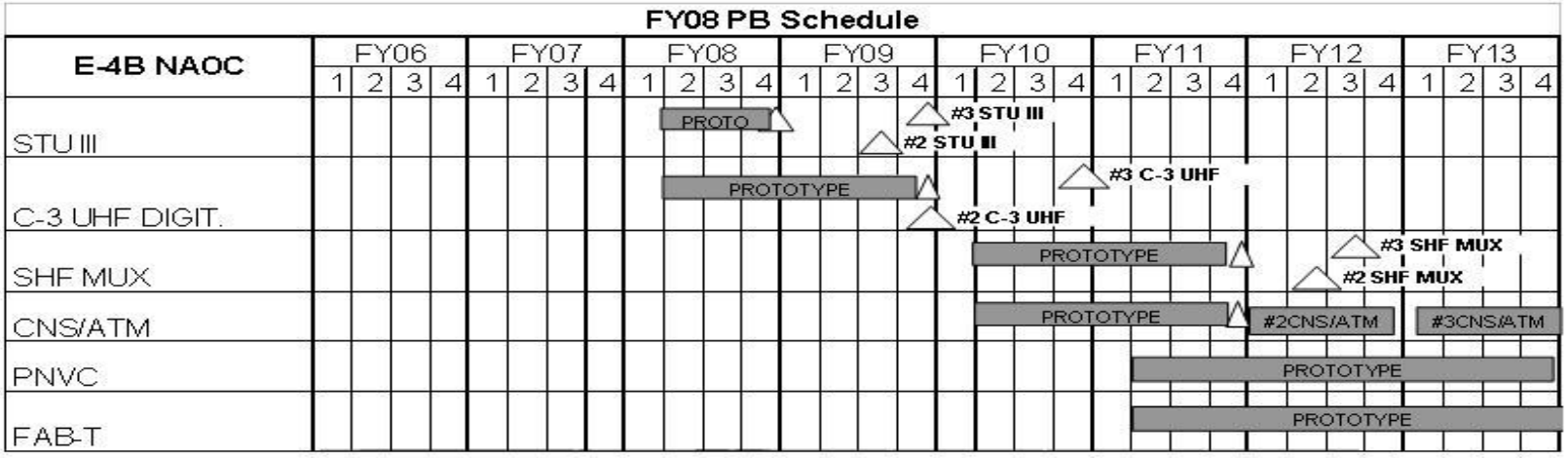
MB1: Modification Block 1
MC: Mission Capable
OT&E: Operational Test & Evaluation
PDM: Programmed Depot Maintenance

*PDM availabilities scheduled on a 4-year cycle with a normal 01Apr input date and a 12 month length.
** Aircraft 787 PDM input has been slipped to 10 Oct 06

Planned Activity(s)
Completed Activity
Completed Event
Planned Event

10 Jan 2007

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**



STU:	Secure Telephone Units
UHF:	Ultra High Frequency
SHF:	Super High Frequency
MUX:	Multiplexer
CNS:	Communication Navigation Surveillance
ATM:	Air Traffic Management
FAB-T:	Family of Advanced Beyond-Line-of-Sight Terminals
PNVC:	Presidential National Voice Conferencing

Planned Activity(s)
Completed Activity
Completed Event
Planned Event

10 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER	PROJECT NUMBER AND TITLE: 4777 E-4B Aircraft Modernization

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Modification Block I (Mod Blk 1)	1-4Q			
(U) -- Prototype Mod Blk1 Design Rework	1-4Q			
(U) -- #2 Mod Blk 1 Installation & Check-Out	1-4Q			
(U) -- Prototype Mod Blk 1 OT&E Preparations & Testing	3-4Q			
(U) -- Initial Operational Capability (IOC) of #1 Mod Blk 1 aircraft	4Q			
(U) -- #2 Mod Blk 1 aircraft mission capable	4Q			
(U) Mod Blk 1 Prototype design documentation close-out		1Q		
(U) C-3 UHF Digiitalization Prototype dev begins (design & kit)			2-4Q	
(U) -- C-3 UHF Digitalization Prototype dev continues & install				1-4Q
(U) SHF MUX Prototype design dev, kit manufacturing & install			2-4Q	

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PE NUMBER: 0303112F
PE TITLE: Aircomm

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303112F Aircomm

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	0.000	2.022	1.216	0.914	0.304	0.304	0.000	0.000	0.000
4787	Air Force Communications (AIRCOM)	0.000	0.000	2.022	1.216	0.914	0.304	0.304	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

Air Force Communications Agency's Airborne Networking Integration effort horizontally synchronizes existing and future airborne networking (AN) projects with mission priorities to deliver enhanced combat capability and transform to net-centric warfare. This project is in Budget Activity 07, Operational System Development, because it addresses integration and transition of airborne networking capabilities to a network-centric environment

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	2.022	1.216
(U)	Total Adjustments	0.000	0.000		
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303112F Aircomm	PROJECT NUMBER AND TITLE: 4787 Air Force Communications (AIRCOM)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4787	Air Force Communications (AIRCOM)	0.000	0.000	2.022	1.216	0.914	0.304	0.304	0.000	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Air Force Communications Agency's Airborne Networking Integration effort horizontally synchronizes existing and future airborne networking (AN) projects with mission priorities to deliver enhanced combat capability and transform to net-centric warfare. This project is in Budget Activity 07, Operational System Development, because it addresses integration and transition of airborne networking capabilities to a network-centric environment

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Iniate/continue capabilities-based end-to-end mission tread analysis	0.000	0.000	1.000	0.600
(U) Initiate/continue modeling & simulation of airborne networking capabilites			1.022	0.616
(U)				
(U) Total Cost	0.000	0.000	2.022	1.216

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

The Airborne Networking Integration effort will use a mixture of fixed-price and cost-reimbursement contracts for mission thread analysis. Fee-for-service entities such as Air Force Integrated Collaborative Environment will provide modeling, simulation and analysis support.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303112F Aircomm**

PROJECT NUMBER AND TITLE: **4787 Air Force Communications (AIRCOM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
													0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Support														
Mission Thread Anaylsis	TBD	ESC Hanscom AFB, MA	0.000	0.000	N/A	0.000	N/A	1.000	Oct-07	0.600	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		1.000		0.600		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Airborne Networking Modeling/Simulation	MIPR	AFMC WPAFB, OH	0.000	0.000	N/A	0.000	N/A	1.022	Dec-07	0.616	Dec-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		1.022		0.616		Continuing	TBD	TBD
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		2.022		1.216		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303112F Aircomm	PROJECT NUMBER AND TITLE 4787 Air Force Communications (AIRCOM)

Exhibit R-4 BPAC 4787 Airborne Networking Integration

ID	Task Name
1	**Mission Thread Analysis**
2	Analyze Global Strike Missions
3	Analyze Global Mobility Missions
4	
5	**Mission Thread Model and Simulation**
6	M&S of Global strike Missions
7	M&S of Global Mobility Missions

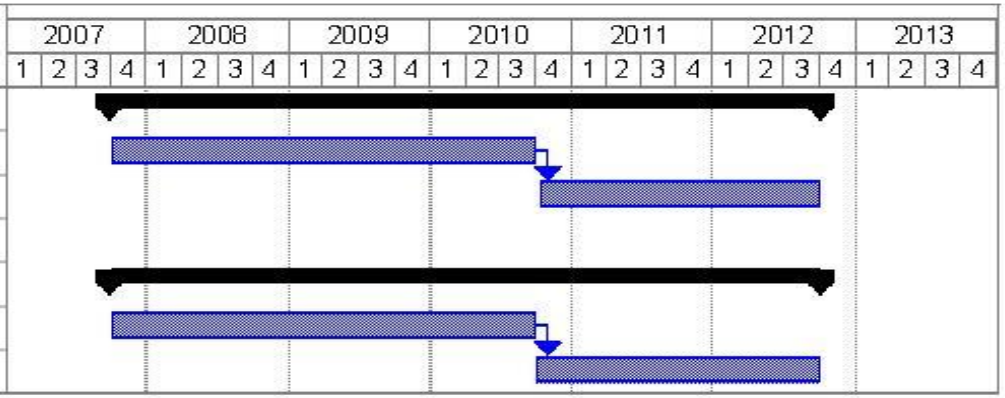

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303112F Aircomm	PROJECT NUMBER AND TITLE: 4787 Air Force Communications (AIRCOM)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Mission Thread Analysis/Modeling & Simulation			1-4Q	1-4Q

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PE NUMBER: 0303131F
PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	48.234	63.765	103.846	32.818	3.020	10.132	8.140	4.879	Continuing	TBD
2832	MEECN System Improvements	3.303	3.097	3.329	3.292	3.020	2.539	2.587	2.641	Continuing	TBD
4610	Minuteman MEECN Program (MMP)	2.581	22.512	36.520	15.317	0.000	0.000	0.000	0.000	0.000	TBD
5047	Ground Element MEECN System (GEMS)	42.350	38.156	63.997	14.209	0.000	7.593	5.553	2.238	0.000	TBD

(U) A. Mission Description and Budget Item Justification

Minimum Essential Emergency Communications Network (MEECN) systems provide assured communications connectivity between the President and the strategic deterrent forces in stressed environments. Modernization efforts upgrade network ground, airborne, and missile communication elements. Currently, MEECN includes the following programs:

- MEECN Systems Improvements (MSI) is a long-range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC), and the Navy) to develop positions for current and future requirements/issues based on available technology.
- Minuteman MEECN Program (MMP) is the combination of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) upgrade efforts along with a new Minuteman ICBM LCC Extremely High Frequency (EHF) communications capability. The MMP system will be upgraded to provide a capability for the Missile Combat Crew Members to have operator control in the LCC to switch among various EHF/AEHF satellite constallations and be compatible with Advanced EHF (AEHF). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at frequencies above 20 GHz.
- Ground Element MEECN Systems (GEMS) provides a secure, survivable inter-site and intra-site and mobile VLF and EHF communication to bomber, tanker and other communications facilities with strategic responsibilities. GEMS replaces existing mission-deficient, unstainable systems. GEMS will also be upgraded to AEHF with the XDR waveform.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	48.327	64.109	44.232	13.227
(U)	Current PBR/President's Budget	48.234	63.765	103.846	32.818
(U)	Total Adjustments	-0.093	-0.344		
(U)	Congressional Program Reductions		-0.102		
	Congressional Rescissions	-0.001	-0.242		
	Congressional Increases				
	Reprogrammings	-0.092			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

FY 08-09: Restructure of GEMS Program due to late delivery of security software/hardware.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 2832 MEECN System Improvements

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2832 MEECN System Improvements	3.303	3.097	3.329	3.292	3.020	2.539	2.587	2.641	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

- MEECN System Improvements (MSI) is a long range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC), and Navy) to develop positions for current and future requirements/issues based on available technology.
- Trade-off analysis is also performed to identify benefits and drawbacks of maintaining current systems. Studies are conducted to monitor communications system technology and potential integration complexities into current and future capabilities. The MEECN architecture is currently evaluating/planning modernization of the VLF/LF cryptographic capability and the application of using Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) in mobile configurations and the Distributed Ground Network command and control nodes.
- MSI provides pro-active support to the Nuclear and National C2 community:
  -- Supports the ASD/NII study on a Distrbuted Ground Network for New Triad Missions
  -- Develops an Air Force National Command and Control (NC2) Roadmap for FY10 POM budget inputs
  -- Provides support for JCS Vol VII Emergency Action Message (EAM) updates
- This project also supports the Continuing Evaluation Program (CEP) for technical analysis of the currently fielded Nuclear Command, Control, and Communication (NC3) systems. CEP is a key factor in determining Assured MEECN Interoperability (AMI). The program implements a detailed test program for Emergency Action Message (EAM) injection and reception. It conducts multiple evaluations on a continuing year-round basis. Following test data collection, analysis is performed to ensure the strategic communication systems meet JCS-directed platform connectivity requirements.
- This program is in Budget Activity 07, Operational System Development, because it supports work on currently fielded weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continuing Evaluation Program (CEP) Studies	0.280	0.280	0.290	0.290
(U) Nuclear Command & Control Performance Study (NC2 Roadmap) & simulator for testing of communication architectures	1.980	2.050	1.850	1.850
(U) Vol VII EAM format updates	0.000	0.000	0.550	0.550
(U) Analytical Support	1.043	0.767	0.639	0.602
(U) Total Cost	3.303	3.097	3.329	3.292

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) None

(U) D. Acquisition Strategy

Johns Hopkins University is on contract to provide an NC2 Roadmap in terms of the New Triad. An AEHF satellite simulator (test equipment) is being acquired through MIT Lincoln Labs.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **2832 MEECN System Improvements**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
CEP Analysis			0.275	0.280	Oct-05	0.280	Oct-06	0.290	Oct-07	0.290	Oct-08	Continuing	TBD	
NC2 Roadmap	MIPR	Johns Hopkins Univ, MD		0.730	Nov-05	0.800	Dec-06	1.850	Dec-07	1.850	Dec-07	Continuing	TBD	
Simulation/Modeling Equipment	MIPR	Lincoln Labs, Bedford, MA		1.250	Feb-06	1.250	Nov-06						2.500	
Vol VII EAM Format Updates		GDCS, Needham, MA						0.550	Jun-08	0.550	Jun-09		1.100	
Subtotal Product Development			0.275	2.260		2.330		2.690		2.690		Continuing	TBD	0.000
Remarks:														
(U) Support														
SE/TA Integrated Technical Support Program (ITSP)	Various	Various	5.591	0.896	Dec-05	0.632	Dec-06	0.500	Dec-07	0.500	Dec-08	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.487	0.147	Nov-05	0.135	Nov-06	0.139	Nov-07	0.102	Nov-08	Continuing	TBD	
Subtotal Support			6.078	1.043		0.767		0.639		0.602		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
						0.000							0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			6.353	3.303		3.097		3.329		3.292		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

MSI Schedule

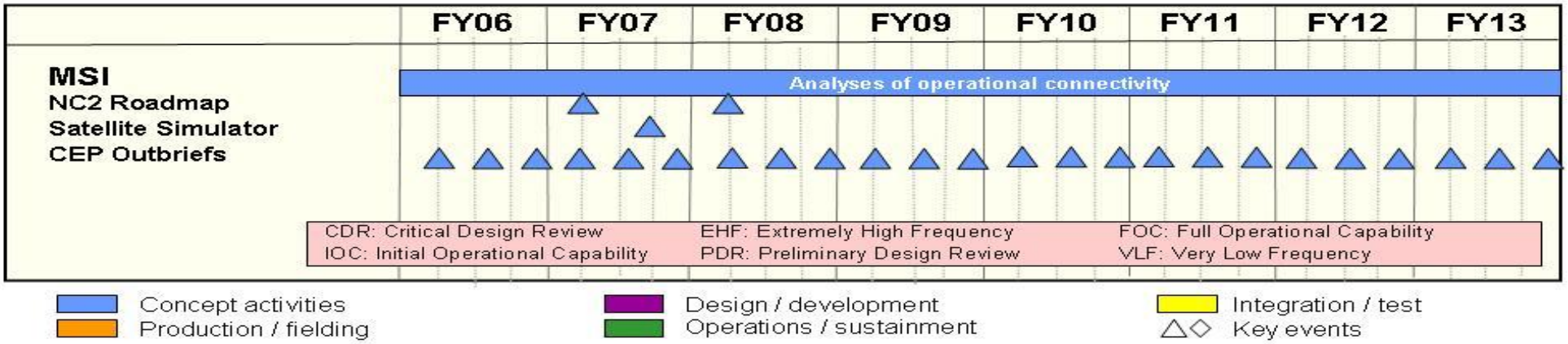

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) NC2 Roadmap		2Q	2Q	
(U) CEP Outbriefs	1-4Q	1-4Q	1-4Q	1-4Q
(U) AEHF Satellite Simulator		3Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 4610 Minuteman MEECN Program (MMP)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4610	Minuteman MEECN Program (MMP)	2.581	22.512	36.520	15.317	0.000	0.000	0.000	0.000	0.000	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project implements a Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) capability and a Minuteman ICBM Extremely High Frequency (EHF) communications capability. The Extremely High Frequency (EHF) terminal provides both receive and report-back capability. Specifically, the MMP effort replaces the Ultra High Frequency (UHF) satellite link with a MILSTAR EHF link and adds a High Data Rate (HIDAR) capability for VLF/LF.

The MMP system will be upgraded to provide a capability for Missile Combat Crew Members to have operator control in the Launch Control Center to switch among various EHF/AEHF satellite constallations and be compatible with Advanced EHF (AEHF). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at frequencies above 20 GHz.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	MMP Upgrade Technology Development	1.381	12.445		
(U)	System Development and Demonstration (SDD) to include: AEHF terminal integration, AEHF modem design, cryptographic upgrade, weapon system hardness analysis, hardware development and software development for AEHF and improved operator control, analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA).		6.870	31.222	13.932
(U)	Analytical Support	1.200	3.197	5.298	1.385
(U)	Total Cost	2.581	22.512	36.520	15.317

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	MPAF, Missile Modifications (MEECN, PE 0303131F, BA 03, P-012)	2.886			14.911	7.027					24.824

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

(U) D. Acquisition Strategy

The ICBM Prime Integrating Contract (through OO-ALC, Hill AFB, UT) was used as a contracting vehicle for the Minuteman MEECN Program (MMP) and will continue in an advisory role for integration support for the MMP Upgrade program.

Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. The MMP Upgrade System Development Demonstration (SDD) effort will also be a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **4610 Minuteman MEECN Program (MMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
MMP Development	SS/CPAF	Northrup Grumman	46.069										46.069	
MMP Upgrade Concept Development	Open Competition	TBD	0.898										0.898	
MMP Upgrade Technology Development	FFP	Rockwell Collins & Raytheon		1.381	Aug-06	12.445	Oct-06						13.826	
MMP Upgrade System Development and Demonstration (SDD)	Open Competition	TBD				6.870	Sep-07	31.222	Oct-07	13.932	Oct-08	Continuing	TBD	
Subtotal Product Development			46.967	1.381		19.315		31.222		13.932		Continuing	TBD	0.000
Remarks:														
(U) Support														
SETA	LOE	Various	1.100	0.900	Apr-06	0.900	Feb-07	1.500	Feb-08	0.700	Feb-09	Continuing	TBD	
MITRE			0.795	0.189	Nov-05	1.707	Nov-06	1.500	Nov-07	0.500	Nov-08		4.691	
PMA				0.105		0.390		0.698		0.185			1.378	
Subtotal Support			1.895	1.194		2.997		3.698		1.385		Continuing	TBD	0.000
Remarks: Various Award Dates														
(U) Test & Evaluation														
Various	Various	Various		0.006		0.200		1.600					1.806	
Subtotal Test & Evaluation			0.000	0.006		0.200		1.600		0.000		0.000	1.806	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			48.862	2.581		22.512		36.520		15.317		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

MMP Schedule

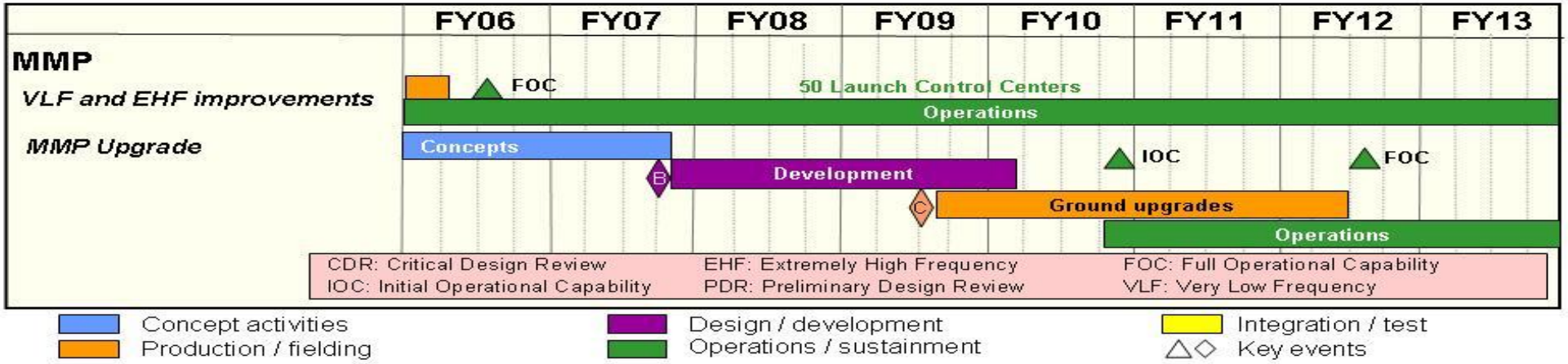

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) MMP Operational Deployment Complete	3Q			
(U) Award MMP Upgrade Technology Development	4Q			
(U) Award MMP Upgrade Program System Design & Development		4Q		
(U) Continue SDD			1-4Q	1-4Q
(U) M/S C				3Q

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 5047 Ground Element MEECN System (GEMS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5047	Ground Element MEECN System (GEMS)	42.350	38.156	63.997	14.209	0.000	7.593	5.553	2.238	0.000	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Ground Element MEECN Systems (GEMS) will be comprised of EHF/AEHF, VLF/LF, HF, UHF and Aircrew Alerting components and will provide secure, survivable inter-site, intra-site and mobile communications to bomber, tanker, reconnaissance and other communications facilities with strategic responsibilities. GEMS terminals will be developed and fielded to replace strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals. GEMS will also replace the Aircraft Alerting Communications Electromagnetic Pulse System/Electromagnetic Pulse Hardened Dispersal Communications (AACE/EHDC) systems.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	System Development and Demonstration (SDD) contract to include: EHF, VLF, HF and UHF terminal integration; EHF, VLF, HF and UHF modem design; cryptographic upgrade; weapon system hardness analysis; EHF, VLF, HF and UHF hardware development; EHF, VLF, HF and UHF software development; analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA); and pager/klaxon system development.	38.722	33.612	59.518	11.966
(U)	Analytical Support	3.628	4.544	4.479	2.243
(U)	Total Cost	42.350	38.156	63.997	14.209

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-053)			10.700	69.791	73.362	21.755	36.622	32.251	0.000	244.481

(U) D. Acquisition Strategy

Two Concept and Technology Demonstration (C&TD) contracts were awarded to separate vendors following full and open competition. Rockwell Collins of Rapid City, IA was awarded the SDD (CPAF) and production contract on 23 Jun 05.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **5047 Ground Element MEECN System (GEMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SDD Contract	CPAF	Rockwell Collins, IA	11.436	38.722	Jan-06	33.612	Dec-06	59.518	Dec-07	11.966	Dec-08		155.254	
Subtotal Product Development			11.436	38.722		33.612		59.518		11.966		0.000	155.254	0.000
Remarks:														
(U) Support														
ITSP	SETA Contract	Various	1.750	1.451	Dec-05	1.603	Dec-06	1.900	Dec-07	0.700	Dec-08	Continuing	TBD	
MITRE	MIPR	Bedford, MA	1.010	1.208	Nov-05	1.515	Nov-06	1.200	Nov-07	0.300	Nov-08	Continuing	TBD	
PMA			0.258	0.719		0.426		0.479		0.483			2.365	
Subtotal Support			3.018	3.378		3.544		3.579		1.483		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
				0.250		1.000		0.900		0.760			2.910	
Subtotal Test & Evaluation			0.000	0.250		1.000		0.900		0.760		0.000	2.910	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			14.454	42.350		38.156		63.997		14.209		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **5047 Ground Element MEECN System (GEMS)**

GEMS Schedule

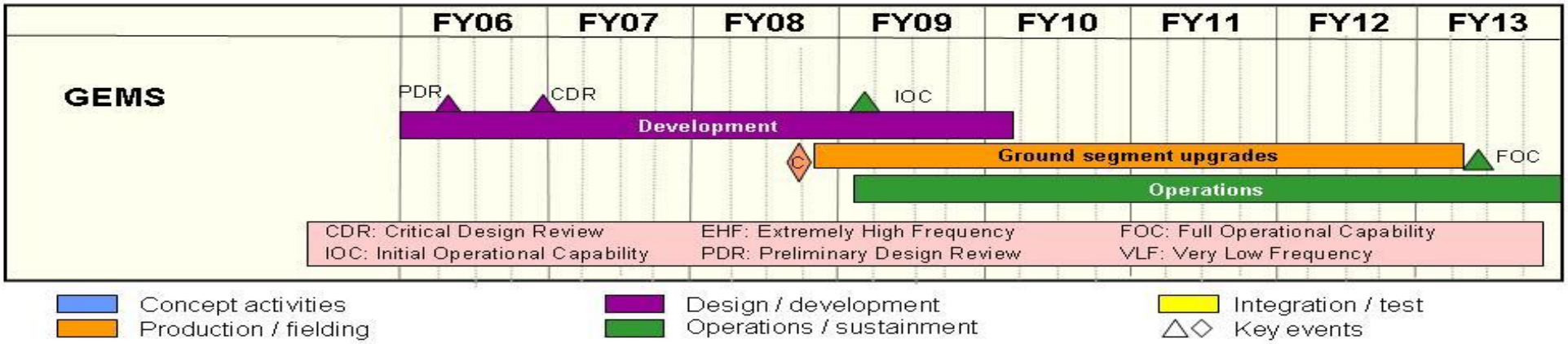

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 5047 Ground Element MEECN System (GEMS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) SDD	1-4Q	1-4Q	1-4Q	1-4Q
(U) Preliminary Design Review	2Q			
(U) Critical Design Review	4Q			
(U) Development Testing		1-4Q		
(U) Production Installation			4Q	1-4Q
(U) IOC				1Q

PE NUMBER: 0303140F
PE TITLE: Information Systems Security Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303140F Information Systems Security Program

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	103.288	184.610	229.657	194.981	264.302	183.898	202.868	196.816	Continuing	TBD
4579	Adv Security Solutions & Technologies (ASST)	4.100	1.992	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4861	AF Electronic Key Management System (AF EKMS)	3.273	2.331	4.767	3.178	3.082	2.989	2.293	2.208	Continuing	TBD
5100	Cryptographic Modernization	86.871	173.868	214.285	178.955	248.207	167.748	187.158	180.917	Continuing	TBD
5231	AF Key Management Infrastructure (AF KMI)	0.000	0.709	4.415	5.282	5.267	5.295	5.398	5.508	0.000	0.000
7820	Computer Security RDT&E: Firestarter	9.044	5.710	6.190	7.566	7.746	7.866	8.019	8.183	Continuing	TBD

NOTES:
1. In FY05, the Air Force funding for Project 674579, ASST, was terminated. However, it has continued to receive Congressional adds in FY05, FY06, and FY07. Its Mission Statement has been revised annually to reflect the work of the current Congressional adds under the Project.
2. Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), was split in FY07 to properly reflect the DoD KMI Program as a next-generation system rather than an upgrade to the current DoD EKMS. The AFEKMS stayed in BPAC 674861; the AF KMI moved to the new BPAC 675231.

(U) A. Mission Description and Budget Item Justification

The overall focus of the RDT&E efforts within this program is two-fold. Focus one is to provide the capability to protect and defend USAF Command, Control, Communications, Computers, and Intelligence, Surveillance, and Reconnaissance (C4ISR) and Weapon Systems from Information Warfare (IW) attacks and to ensure their recovery from such attacks. To this end, the project does research and development of information protection tools and transitions them to operational systems. Focus two is transforming electronic key delivery and DoD cryptographic devices to meet the next generation warfighting requirements. This includes: 1. a totally "man-out-of-the-loop" electronic crypto key distribution system -- from the actual generation of the key in the Key Processor all the way into the using End Crypto Unit (ECU). Thus, eliminating the current key vulnerability to compromise by individuals transporting or loading key; and 2. a reduced inventory of cryptographic devices that are more robust, stronger, able to communicate extremely large amounts of data at greatly increased data rates, be upgraded more easily and less expensively, and are net-centric and Global Information Grid-compatible.

Project 674579, Advanced Security Solutions and Technologies, was originally established to develop defensive information warfare solutions for AF Command and Control (C2), Intelligence, Surveillance, and Reconnaissance (ISR) systems. The AF funding for the Project was terminated in FY05, but the funding line continued that year with two Congressional adds -- as well as in FY06 with three Congressional adds: the Center for Infrastructure Assurance and Security (CIAS), Cybersecurity Defend and Attack Exercises, and Homeland Defense and Civil Support Threat Information Collection. In FY07 it received only one Congressional add for the Cybersecurity Defend and Attack Exercises. These adds are being managed by the Air Intelligence Agency (AIA) under the CIAS umbrella. They will

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

bring a multi-disciplinary (AF, academic, and civil) approach to the planning and execution of joint military base/local civil agency Cybersecurity Defend and Attack Exercises.

Project 674861, AFEKMS, is part of an NSA-led DoD EKMS program that has allowed DoD to migrate from the previous legacy manual system of generation, distribution, accounting, training, and material management of cryptographic keying materials to the current DoD EKMS. EKMS equipment procurement and fielding is well underway. The R&D portion of the AFEKMS Program will support EKMS software upgrade, maintenance, and repair throughout the life of the fielded Capability Increment (CI-2) KMI. The warfighter will continue to use EKMS for the next several years -- having access to it through the old EKMS hierarchy or through the new KMI hierarchy and its interfaces back to EKMS until the fielding of Capability Increment CI-3 KMI. CI-3 KMI will replace all of the EKMS functions.

Project 675100, AF Crypto Modernization, is part of a Joint Program led by NSA to replace, modernize, and transform the Type 1 Cryptographic Inventory throughout DoD. Not only will algorithms be upgraded, but reprogrammable chips will be used in the Crypto Devices. Thus, the next generation of algorithm upgrades will incur only the cost to reprogram those chips. The total inventory will be greatly reduced by doing a box-for-family of systems/functions replacement rather than the current box-for-box replacement, and the logistics requirements will be greatly simplified and reduced. The total inventory and logistics requirements are also reduced by going to multi-purpose, Joint solution crypto devices instead of the current Service-unique inventories.

Project 675231, AF KMI, is part of another Joint Program led by NSA to provide a broad-scale replacement of the current EKMS. It will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and DoD, other Service, and AF Enterprise objectives. KMI will improve protection of security-related information by greatly enhancing confidentiality, integrity, and non-repudiation beyond that provided by the legacy EKMS. It will take the man "out-of-the-loop" in the distribution of crypto key materials.

Project 677820, Computer Security RDT&E: Firestarter, encompasses the R&D of information protection technology and tools to defend C4ISR systems, with emphasis on computer and network systems security, damage assessment and recovery, and secure distributed computing capabilities. It provides access control, integrity, assured services that continue to meet the warfighters' requirements. In FY06 this project received a Congressional add of $5M to support its on-going development of secure interoperable distributed agent computing (aka Worldwide Infrastructure Security Environment [WISE]).

This program is in budget activity 7, Operational System Development, because it addresses the development and transition of information security, protection and defensive capabilities and technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	116.532	183.523	319.016	201.193
(U)	Current PBR/President's Budget	103.288	184.610	229.657	194.981
(U)	Total Adjustments	-13.244			
(U)	Congressional Program Reductions	0.000	-0.212		
	Congressional Rescissions		-0.701		
	Congressional Increases		2.000		
	Reprogrammings	-10.003			
	SBIR/STTR Transfer	-3.241			

(U) Significant Program Changes:

BPAC 674579, ASST, supports one Congressional add in FY07 Execution: the Cybersecurity Defend and Attack Exercises.

BPAC 675100, Cryptographic Modernization (CM), is a large umbrella capabilities-based AF program to support the overall NSA Cryptographic Modernization Initiative (CMI) to modernize and transform the current Type 1 Cryptographic Inventory throughout DoD. As such, it is composed of a sizeable number of individual cryptographic development programs that are staggered throughout the life of the AF CM Program. These development programs are centrally-managed, but decentrally-executed. The number of scheduled and on-going development programs varies from year-to-year leading to an unusual funding profile across the FYDP. However, detailed analysis of the requirements for the on-going development programs for any given year fully justifies the funding profile.

BPAC 675100, Cryptographic Modernization (CM) FY08: Funding reduced to support higher DoD priorities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4579	Adv Security Solutions & Technologies (ASST)	4.100	1.992	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Project 674579, Advanced Security Solutions and Technologies, was originally established to develop defensive information warfare solutions for AF Command and Control (C2), Intelligence, Surveillance, and Reconnaissance (ISR) systems. The AF funding for Project 674579 was terminated in FY05. However, the Project remains active because of Congressional adds in FY05, FY06 and FY07. In FY06 the project line received three Congressional adds: Center for Infrastructure Assurance and Security (CIAS), Cybersecurity Defend and Attack Exercises, and Homeland Defense and Civil Support Threat Information Collection. All three FY06 plus-ups are being managed by Air Intelligence Agency (AIA) under the CIAS umbrella. In FY07 the project line received only on Congressional add for the Cybersecurity Defend and Attack Exercises.

The Center for Infrastructure Assurance and Security (CIAS) at the University of Texas at San Antonio (UTSA) has multiple funding sources, and is a multidisciplinary information assurance research and development, academic, and operationally-based program. It brings AF, academic, and civilian expertise to create a joint approach to technical and policy issues, civil threat information collection and reporting, as well as conducting joint military base/local civil agency Cybersecurity Defend and Attack Exercises. The aim of the work is to determine the degree of reliance of military establishments on locally-operated services, how military bases and posts currently participate in testing the local critical infrastructures, and how they would participate and respond to attacks to local critical infrastructure.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Managed the Center for Infrastructure Assurance and Security (CIAS) (Congressional Add)	1.000	0.000	0.000	0.000
(U) Managed the Homeland Defense and Civil Support Threat Information Collection (Congressional Add)	1.000	0.000	0.000	0.000
(U) Manage the Cybersecurity Defend and Attack Exercises (Congressional Add)	2.100	1.992	0.000	0.000
(U) Total Cost	4.100	1.992	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
N/A										

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

(U) D. Acquisition Strategy

Congressional adds are for specific efforts to be done for AIA under the Center for Infrastructure Assurance and Security Program (CIAS) at either University of Texas at San Antonio or St. Mary's University in San Antonio.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **4579 Adv Security Solutions & Technologies (ASST)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Center for Infrastructure Assurance and Security (CIAS) Projects (Congressional Add)	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment	University of TX San Antonio, San Antonio, TX	7.782	1.000	Sep-06	0.000		0.000		0.000		0.000	8.782	8.782
Homeland Defense and Civil Support Threat Information Collection (Congressional Add)	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment	St. Mary's University, San Antonio, TX	0.000	1.000	Sep-06	0.000		0.000		0.000		0.000	1.000	1.000
Cybersecurity Defend and Attack Exercises (Congressional Add)	FY03 Information Warfare Broad Area Announcement (IW BAA) Grant Amendment	University of TX San Antonio, San Antonio, TX	0.000	2.100	Sep-06	1.992	Sep-07	0.000		0.000		0.000	4.092	TBD
Subtotal Product Development			7.782	4.100		1.992		0.000		0.000		0.000	13.874	TBD
Remarks:														
(U) Total Cost			7.782	4.100		1.992		0.000		0.000		0.000	13.874	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **4579 Adv Security Solutions & Technologies (ASST)**

Exhibit R-4: BPAC 4579, ASST

Fiscal Year	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11				FY12				FY13			
	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	1	2	3	4
Manage CIAS Congressional Add)																																
Manage Homeland Defense and Civil Support Threat Information Collection (Congressional Add)																																
Manage Cybersecurity Defend and Attack Exercised (Congressional Add)																																

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **4579 Adv Security Solutions & Technologies (ASST)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Managed the Center for Infrastructure Assurance and Security (CIAS)	1-4Q			
(U) Managed the Homeland Defense and Civil Support Threat Information Collection	1-4Q			
(U) Managed the Cybersecurity Defend and Attack Exercises	1-4Q	1-4Q		

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4861	AF Electronic Key Management System (AF EKMS)	3.273	2.331	4.767	3.178	3.082	2.989	2.293	2.208	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

NOTE:
Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), was split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stayed in BPAC 674861; the AF KMI moved to a new BPAC, 675231.

(U) A. Mission Description and Budget Item Justification

The AFEKMS Program consists of multiple developments supporting the Air Force requirements/portion of the DoD EKMS Program. (The National Security Agency [NSA] acts as the Executive Agency for the DoD EKMS Program.) AFEKMS, in concert with the overarching DoD EKMS Program , provides a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material, voice callwords, and communications security (COMSEC) publications for the current generation of DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for current generation of weapon systems. EKMS replaced the previous manual distribution and management system providing cryptographic keying material for U.S. DoD Information Assurance. Information Assurance emphasizes confidentiality, access control, multi-level secure databases, trusted computing and information integrity. AFEKMS has a three-tier hierarchical structure. This tiered structure provides 'wholesale' to 'retail' to 'consumer' capability to distribute, manage and account for COMSEC keying material. Tier 1 installations comprise the wholesale generation and control capability. Tier 2 installations comprise the local distribution network and Tier 3 comprises the retail where keying material leaves the AFEKMS and enters the consumer End Cryptographic Units (ECUs).

EKMS improved protection of national security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy manual key management systems. EKMS has and continues to greatly accelerate availability of crypto key materials through electronic transmission versus the manual handling and shipping of materials. While the current EKMS level-of-effort is directed at enhancing current and developing systems, the ultimate goal is for it to provide a temporary bridge to the DoD Key Management Infrastructure (KMI) Capability Increment (CI)-2, and then a migration path to the "full-up" KMI CI-3. Once KMI CI-3, with its advanced key generation/key distribution capability is fielded and operational, KMI interfaces to EKMS will be severed. Beginning KMI CI-2 functionality is expected in 2009.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue program office contract support to the AFEKMS Program for planning: upgrade/improvements to the EKMS necessary to support the capabilities needed to bridge transition to the Key Management Infrastructure (KMI); EKMS continued deployment (Phase 5); interface and integration of key management into weapon systems; and tech refresh	1.286	0.860	1.777	1.015

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)

(U) B. Accomplishments/Planned Program ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue End User Application Software Development: Common User Application Software (CUAS), Data Management Device (DMD), and computer-based training	1.987	1.471	1.368	0.000
(U)	Tier 2/3 Development: Support for ECU and weapon systems pending transition to KMI	0.000	0.000	1.622	2.163
(U)	Total Cost	3.273	2.331	4.767	3.178

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF Other Procurement PE 0303140F	15.844	12.270	11.149	12.606	21.264	21.382	21.801	22.233	Continuing	TBD

Note: This line includes both AFEKMS and AF KMI Other Procurement (3080) funding.

(U) D. Acquisition Strategy

All major contracts within this Project are open to full and open competition with technology knowledge, expertise, and prior experience on similar projects weighted heavily in the evaluation process.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

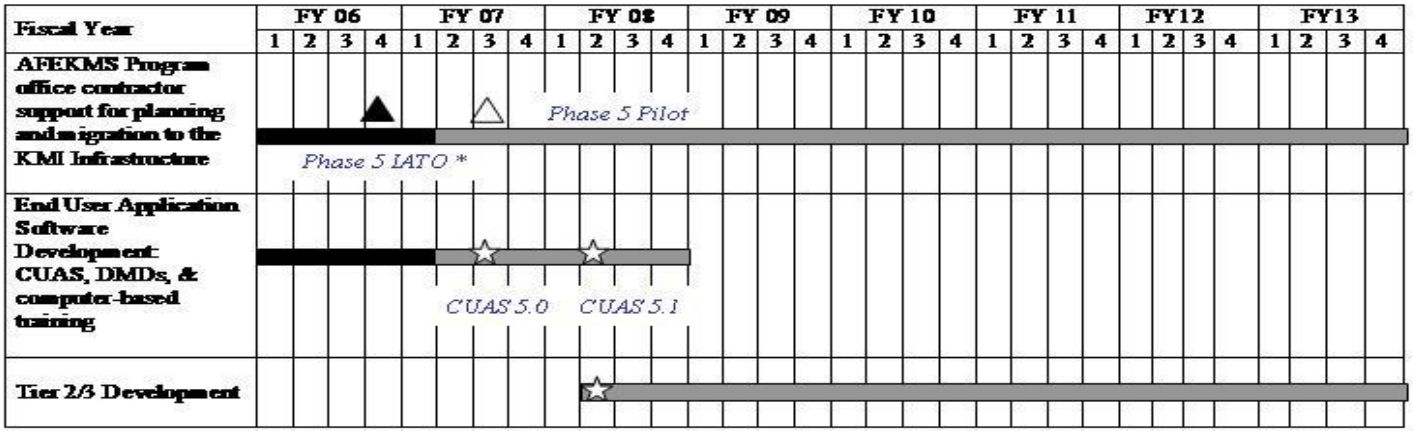
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **4861 AF Electronic Key Management System (AF EKMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AFEKMS Program office contractor support for planning	CPFF	Mitre, San Antonio, TX	2.518	1.286	Jan-06	0.860	Jan-07	1.777	Jan-08	1.015	Jan-09	Continuing	TBD	TBD
End User Application Software Development	T&M	SAIC, San Diego, CA	9.682	1.987	Jan-06	1.471	Jan-07	1.368	Jan-08	0.000			14.508	14.508
Tier 2/3 Development	TBD	TBD	0.000	0.000		0.000		1.622	Jan-08	2.163	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			12.200	3.273		2.331		4.767		3.178		Continuing	TBD	TBD
Remarks:														
(U) N/A														
(U) Total Cost			12.200	3.273		2.331		4.767		3.178		Continuing	TBD	TBD
Remarks: N/A														

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE 4861 AF Electronic Key Management System (AF EKMS)

Exhibit R-4: BPAC 4861, AFEKMS



Notes:

1. **Pilot – Consists of 8 COMSEC Accounts which will be executed to connect to the KMI Tiers above it via IP over SIPRNet rather than the current method using STU IIs/IIIs over the Public Switched Network (PSN)**
2. **IATO – Initial Authority to Operate**
3. **CUAS – Common User Application Software**
4. **DMDs – Data Management Devices**

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AFEKMS Program office contractor support for planning	1-4Q	1-4Q	1-4Q	1-4Q
(U) Phase 5 IATO	4Q			
(U) Phase 5 Pilot		3Q		
(U) End User Application Software Development	1-4Q	1-4Q	1-4Q	
(U) CUAS 5.0 Rollout		3Q		
(U) CUAS 5.1 Rollout			2Q	
(U) Tier 2/3 Development			2Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5100 Cryptographic Modernization	86.871	173.868	214.285	178.955	248.207	167.748	187.158	180.917	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Cryptographic Modernization Program modernizes vulnerable cryptographic devices protecting critical information vital to successful mission operations and national security. In September 2000, the Defense Review Board (DRB) tasked NSA to evaluate the security posture of the cryptographic inventory. Systems with aging algorithms, those approaching non-sustainability, and those generally incompatible with modern key management systems were identified. Priority systems that required immediate replacement were also identified. In addition, NSA documented the need to modernize the cryptographic inventory with capabilities designed to enable network-centric operations. The DoD Cryptographic Modernization Program was established to develop a modern cryptographic base that provides assured security robustness, interoperability, advanced algorithms, releasability, programmability, and compatibility with the future Key Management Infrastructure (KMI). The program supports the transformation to next generation cryptographic capabilities providing U.S. forces and multinational and interagency partners the security needed to protect the flow and exchange of operational decision making information IAW national and international policy/standards, the validated operational requirements of the warfighters, and the Intelligence Communities.

The Cryptographic Modernization Program is a collection of projects accomplished in three phases: Replacement, Modernization, and Transformation. The Replacement Phase of the program focused on updating and/or replacing out-of-date algorithms along with unsustainable cryptographic products as identified in the Chairman Joint Chiefs of Staff Notice (CJCSN) 6510. The Modernization Phase provides a single solution to existing multiple cryptographic end items, as well as updating mid-term aging/unsupportable crypto equipment identified in the Chairman Joint Chiefs of Staff Notice (CJCSN) 6510. Logistics requirements begin to be reduced and manpower efficiencies gained, while incremental capability enhancements and footprint reduction are provided. The third phase of the Cryptographic Modernization Program, Transformation, provides common solutions which enable network-centric capabilities and seamless crypto that is transparent to the user.

This project is in Budget Activity 07, Operation System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Completed KS-60 (KI-22) Cryptographic Modernization analysis and development of replacement	20.953	19.477	0.000	0.000
(U) Complete KG-3X Cryptographic Modernization analysis and development of replacement	6.745	10.765	20.010	0.000
(U) Complete IFF Cryptographic Modernization analysis and development of replacement	9.208	13.276	3.862	0.000
(U) Continue FA-22 Multi-Function Crypto (KOV-20) Cryptographic Modernization analysis and development	0.000	5.507	15.507	11.501
(U) Continue Remote Rekey (CI-13) Cryptographic Modernization analysis and development of replacement	3.345	9.950	19.417	14.667
(U) Continue Studies and Analyses	18.378	25.283	19.693	16.826

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE 5100 Cryptographic Modernization

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue Space Cryptographic Modernization analyses and development of replacements	17.216	44.560	57.024	47.149
(U)	Wireless Cryptographic Modernization analysis	0.000	0.200	0.000	0.000
(U)	KM Crypto Interface Modernization analyses	0.000	1.284	0.000	0.000
(U)	KM Network Equipment Modernization analyses	0.000	0.200	0.000	0.000
(U)	KM Equipment Modernization development	0.000	0.000	6.050	4.403
(U)	KEESEE Cryptographic Modernization analysis (broken out into the following five individual Crypto Mod development programs after FY07)	11.026	35.022	0.000	0.000
(U)	Initiate KOK-13 Combat Key Generator (formerly known as the earlier CM initiative KOK-13 Key Generation Modernization)	0.000	0.000	10.677	9.077
(U)	Initiate Secure Voice Project (includes Secure Voice Transitional Development and an Enhanced Airborne STE)	0.000	0.000	14.517	34.075
(U)	Initiate Secure Data Link Crypto (includes Miniaturization and Crypto Modernized Waveforms [for example, JTIDS-Link 16], and KG-13A [for EPLRS/SADL])	0.000	0.000	28.990	24.296
(U)	Initiate Telemetry Analyses and Development of Replacements	0.000	0.000	4.938	12.908
(U)	Initiate Secure Crypto Enterprise Management (SCEM)	0.000	0.000	1.200	0.200
(U)	High Speed Optical Crypto analysis	0.000	0.200	0.000	0.000
(U)	Continue Advanced Cryptographic Modernization analysis and development (includes High Speed Optical Crypto, Common Crypto Engines/Modules, and Smart Munitions	0.000	8.144	12.400	3.853
(U)	Total Cost	86.871	173.868	214.285	178.955

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF Other Procurement PE 0303140F	0.000	56.994	115.234	157.983	199.795	261.362	266.481	271.768	Continuing	TBD

(U) D. Acquisition Strategy

The Crypto Modernization portfolio of component and system acquisition projects are executing using a variety of approaches that vary from an evolutionary acquisition strategy using spiral development (for new system development) to incremental improvement leveraging leading-edge, certified non-developmental items (for modernization). Contract type is selected for each of the individual projects based upon its acquisition approach and its unique technology risks. A mixture of fixed-price and cost-reimbursement contracts have been selected which maximize the best value for the Government.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5100 Cryptographic Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
KS-60 (KI-22)	MIPRed to OO-ALC 526 GSSG. OO-ALC put on a CPAF contract.	OO-ALC/526 GSSG/GMGV, Hill AFB, UT	31.942	20.953	Jan-06	19.477	Jan-07	0.000		0.000		0.000	72.372	72.372
KG-3X	MIPRed to ESC/GIGSG/KM. ESC puts on a CPAF contract.	ESC/GIGSG/KM, Hanscom AFB, MA	1.872	6.745	Jan-06	10.765	Jan-07	20.010	Jan-08	0.000		0.000	39.392	39.392
IFF	MIPRed to CPSG/ZC. CPSG puts on two CPFF contracts.	CPSG/ZC, Lackland AFB, TX	21.542	9.208	Jan-06	13.276	Jan-07	3.862	Jan-08	0.000		0.000	47.888	47.888
F/A-22, Multi Function Crypto (KOV -20)	MIPRed to ASC/YF. ASC puts two separate CPFF delivery orders to an existing CNI 2010 FFP contract.	ASC/YFAAF-22 SPO, Wright Patterson AFB, OH	0.000	0.000	Jan-06	5.507	Feb-07	15.507	Feb-08	11.501	Feb-09	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5100 Cryptographic Modernization**

Remote Rekey (CI-13)	MIPRed to CPSG/CZ. CPSG will put on a TBD Contract.	CPSG/ZC, Lackland AFB, TX	0.000	3.345	Jan-06	9.950	Jan-07	19.417	Jan-08	14.667	Jan-09	Continuing	TBD	TBD
Studies and Analyses	MIPRed to CPSG/CZ. CPSG puts on three T&M contracts.	CPSG/ZC, Lackland AFB, TX	20.890	18.378	Jan-06	25.283	Jan-07	19.693	Jan-08	16.826	Jan-09	Continuing	TBD	TBD
Space Crypto Mod	MIPRed to CPSG/CZ. CPSG puts on a CPFF contract.	CPSG/ZC, Lackland AFB, TX	9.829	17.216	Jan-06	44.560	Jan-07	57.024	Jan-08	47.149	Jan-09	Continuing	TBD	TBD
Wireless Cryptographic Modernization analysis	TBD	TBD	0.000	0.000		0.200	Feb-07	0.000		0.000		0.000	0.000 0.200	0.200
KM Crypto Interface Modernization analyses	TBD	TBD	0.000	0.000		1.284	Feb-07	0.000		0.000		0.000	0.000 1.284	TBD
KM Network Equipment Modernization analyses	TBD	TBD	0.000	0.000		0.200	Feb-07	0.000		0.000		0.000	0.000 0.200	TBD
KM Equipment Modernization development	TBD	TBD	0.000	0.000		0.000		6.050	Feb-08	4.403	Feb-09	Continuing	0.000 TBD	TBD
KEESEE Cryptographic Modernization analysis (broken out into the following five individual Crypto Mod development programs after FY07)			0.000	11.026	Feb-06	35.022	Feb-07	0.000		0.000		0.000	0.000 46.048	8.382
KOK-13 Combat Key Generator (formerly known as the earlier CM initiative, KOK-13 Key Generation Modernization) *	TBD	TBD	0.000	0.000		0.000		10.677	Feb-08	9.077	Feb-09	0.000	0.000 19.754	6.886
Secure Voice Project (includes Secure Voice	TBD	TBD	0.000	0.000		0.000		14.517	Feb-08	34.075	Feb-09	Continuing	0.000 TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5100 Cryptographic Modernization**

Transitional Development and an Enhanced Airborne STE)												0.000	
Secure Data Link Crypto (includes Miniaturization and Crypto Modernized Waveforms [for example, JTIDS-Link 16], and KG-13A [for EPLRS/SADL])	TBD	TBD	0.000	0.000	0.000		28.990	Feb-08	24.296	Feb-09	Continuing	0.000 TBD	TBD
Telemetry Analyses and Development of Replacements	TBD	TBD		0.000	0.000		4.938	Feb-08	12.908	Feb-09	Continuing	0.000 TBD	TBD
Secure Crypto Enterprise Management (SCEM)	TBD	TBD	0.000	0.000	0.000		1.200	Feb-08	0.200	Feb-09	Continuing	0.000 TBD	TBD
High Speed Optical Crypto analysis	TBD	TBD	0.000	0.000	0.200	Feb-07	0.000		0.000		0.000	0.000 0.200	0.200
Advanced Cryptographic Modernization analysis and development (includes High Speed Optical Crypto, Common Crypto Engines/Modules, and Smart Munitions	TBD	TBD	0.000	0.000	8.144	Feb-07	12.400	Feb-08	3.853	Feb-09	Continuing	0.000 TBD	TBD
Subtotal Product Development			86.075	86.871	173.868		214.285		178.955		Continuing	0.000 TBD	TBD
Remarks:	* NOTE: Early efforts within the AF CM Program to scope requirements, determine work needed to provide modernization and/or transformation solutions, consider viable solutions, etc. are considered "in-house efforts" and labeled "CM Initiatives". If no requirements are found or work already underway will provide a solution, the initiative is closed out. Some initiatives will point to a common solution, and be merged to form and initiate a new CM project. For some initiatives, individual solutions will be able to be crafted within on-going projects, and the work under the initiative will be dispersed across on-going or newly initiated projects.												
(U) Total Cost			86.075	86.871	173.868		214.285		178.955		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 3 of 3)

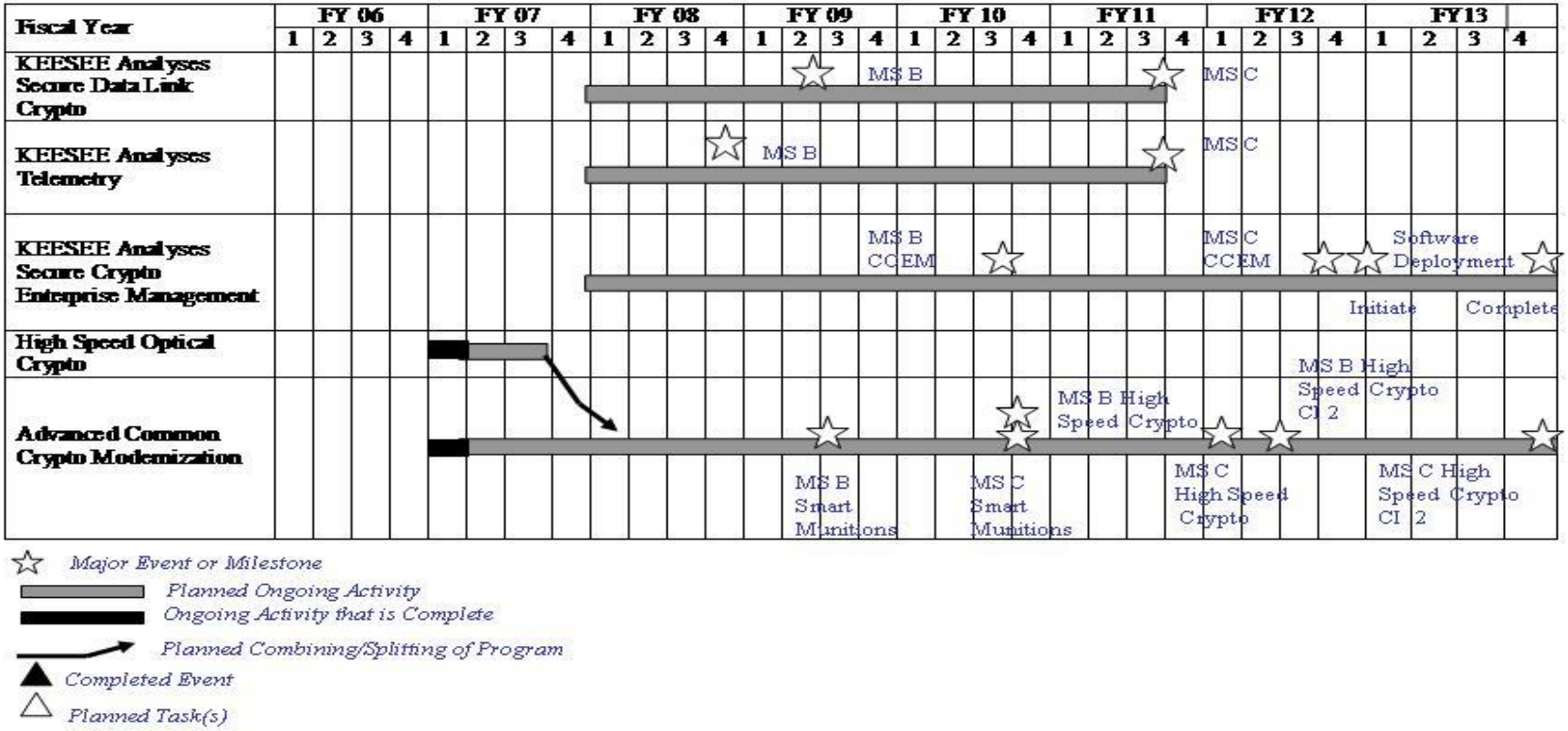


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 2 of 3)

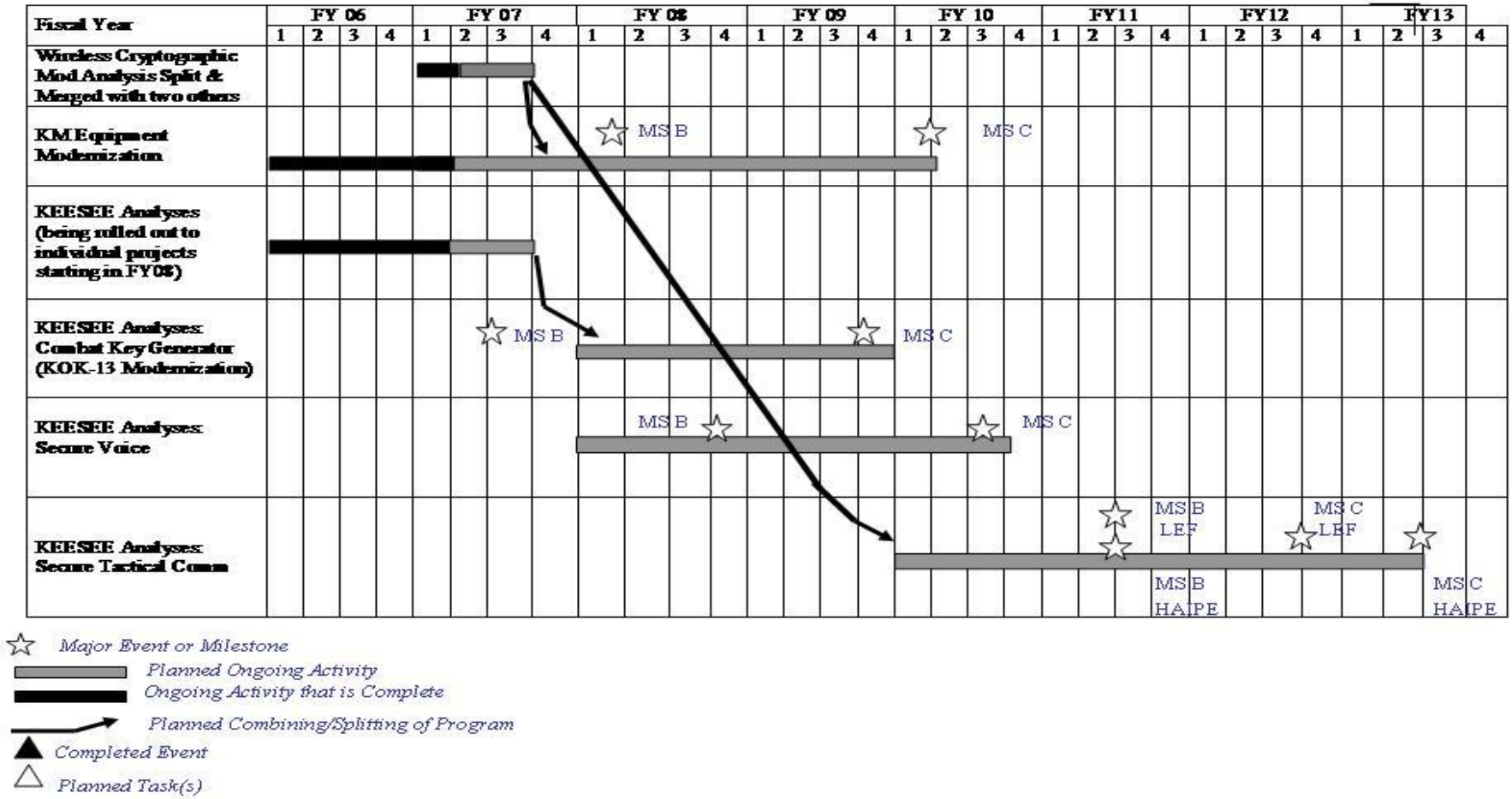


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 1 of 3)

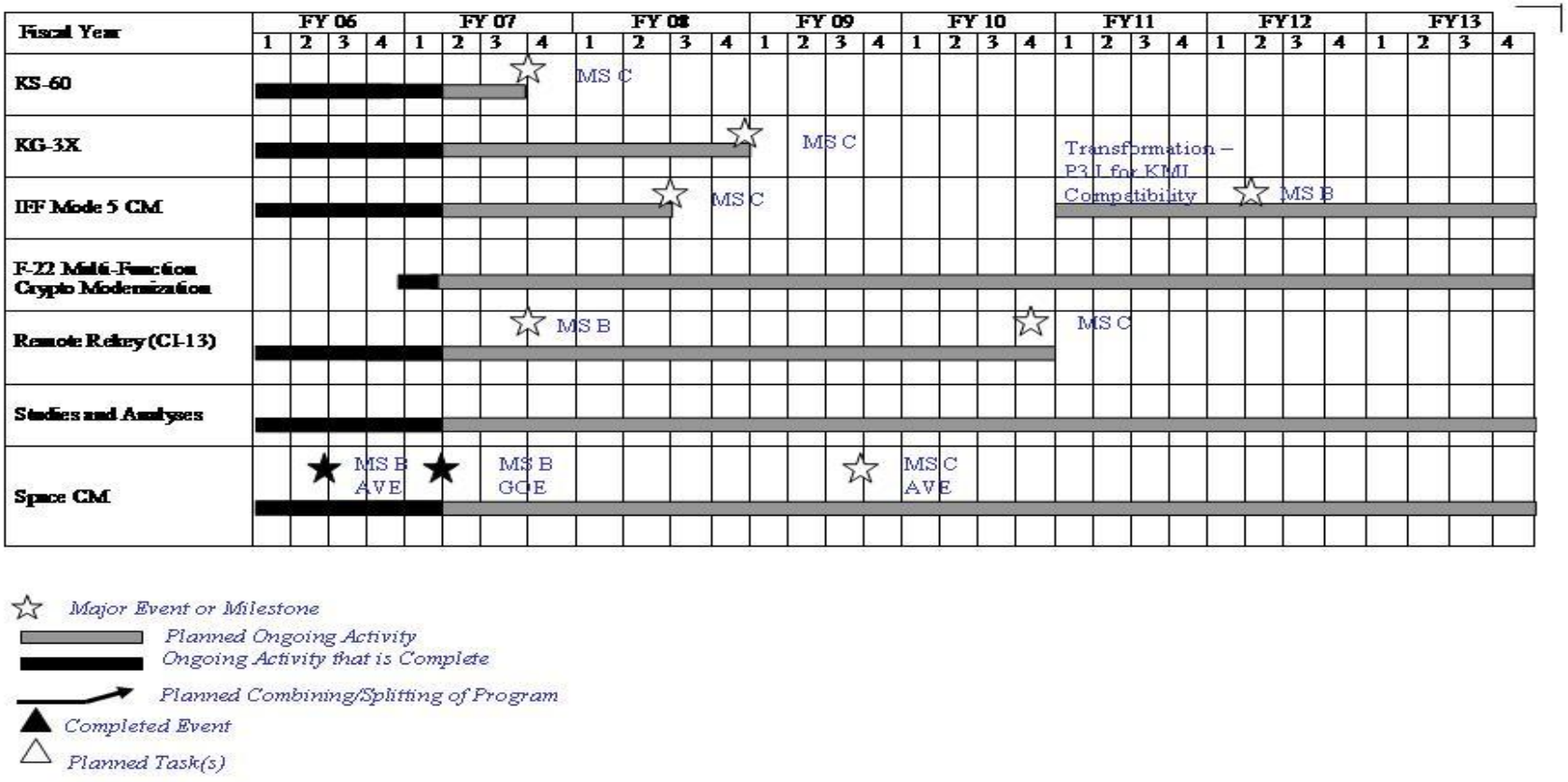


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5100 Cryptographic Modernization**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) Completed KS -60 (KI-22) Cryptographic Modernization	1-4Q	1-3Q		
(U) Complete KG-3X Cryptographic Modernization	1-4Q	1-4Q	1-4Q	
(U) Continue IFF Mode 5 Cryptographic Modernization	1-4Q	1-4Q	1-2Q	
(U) Continue F/A-22 Multi Function Crypto (Crypto Mod of KOV-20 Box)		1-4Q	1-4Q	1-4Q
(U) Continue Remote Rekey (CI-13) Cryptographic Modernization	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue Studies and Analyses	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue Space Cryptographic Modernization	1-4Q	1-4Q	1-4Q	1-4Q
(U) Wireless Cryptographic Modernization analyses		1-4Q		
(U) KM Network Interface Modernization analyses		1-4Q		
(U) KM Equipment Modernization Development			1-4Q	1-4Q
(U) KEESEE Cryptographic Modernization analysis broken out into the following five individual Crypto Mod development programs after FY07)	1-4Q	1-4Q		
(U) Initiate/Complete KOK-13 Combat Key Generator (formerly known as the earlier CM initiative KOK-13 Key Generation Modernization) *			1-4Q	1-4Q
(U) Initiate Secure Voice Project (includes Secure Voice Transitional Development and an Enhanced Airborne STE)			1-4Q	1-4Q
(U) Initiate Secure Data Link Crypto (includes Miniaturization, and Crypto Modernized Waveforms [for example, JTIDS-Link 16], and KG-13A [for EPLRS/SADL])			1-4Q	1-4Q
(U) Initiate Telemetry Analyses and Replacement Developments			1-4Q	1-4Q
(U) Initiate Secure Crypto Enterprise Management (SCEM)			1-4Q	1-4Q
(U) High Speed Optical Crypto analysis		1-4Q		
(U) Continue Advanced Cryptographic Modernization analysis and development (includes High Speed Optical Crypto, Common Crypto Engines/Modules, and Smart Munitions		1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5231	AF Key Management Infrastructure (AF KMI)	0.000	0.709	4.415	5.282	5.267	5.295	5.398	5.508	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

NOTE:
Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI) was split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stayed in BPAC 674861; the AF KMI moved to this new BPAC, 675231. However, since the transformational key generation/key provisioning capability will not be built into KMI until Capability Increment (CI)-3, EKMS will continue to provide this capability via a number of temporary interfaces created for that purpose.

(U) A. Mission Description and Budget Item Justification

The Air Force Key Management Infrastructure (AF KMI) Program consists of multiple developments supporting the AF requirements/portion of the DoD Key Management Infrastructure (KMI). (The National Security Agency [NSA] acts as the Executive Agency for the DoD KMI Program.) AF KMI, in concert with this overarching DoD KMI Program, will provide a secure and flexible capability for the electronic generation, distribution, accounting, and management of: key material; voice callwords; and communications security (COMSEC) publications for all DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for the Services' weapon systems. KMI represents a broad-scale replacement of the current Electronic Key Management System (EKMS). The new KMI will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and other DoD, fellow Service, and AF enterprise objectives. It thereby will assure a viable support infrastructure for future weapons and C4I programs to incorporate key management into their system designs.

The AF Key Management Infrastructure (KMI) Program's R&D efforts will include: building the AF KMI architecture; defining all of its linkages; building the linkage interfaces that will allow them to communicate; and other "last mile" development. (See NOTE below for detailed explanation of the "last mile" work.)

The DoD KMI will greatly improve protection of National, Security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy EKMS key management system. KMI will greatly accelerate the availability of crypto key materials through electronic transmission versus shipping of materials, will enhance mission responsiveness and flexibility, and will take the man "out-of-the-loop" in the distribution of crypto key materials.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

NOTE: In parallel, DoD and the Services are developing a new generation of End Crypto Units (ECUs) under the Joint Crypto Modernization Initiative that will be capable of direct interaction with the KMI. (See BPAC 675100, this PE, for the AF CM Program supporting this Initiative). In some cases these new ECUs, although needing to be supported by KMI, will not be KMI network-connected. "Last mile" transport of black (aka benign, or encrypted) keying material from a KMI client to a new generation ECU will need to be handled in the early years by one of two data transfer devices. CPSG and NSA are exploring new key delivery

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5231 AF Key Management Infrastructure (AF KMI)**

methods for KMI CI-3: "Mobile" COMSEC Accounts that can be wheeled out to platforms and remote ECUs; a new Simple Key Loader (SKL) for Special Operations that carries more keys and is smaller and lighter; and a method called "over-the-air-keying (OTAK)" to ultimately replace the data transfer devices.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Provide program office contract support for Air Force Key Management planning and systems integration, and migration to the Key Management Infrastructure	0.000	0.709	1.553	2.460
(U)	Develop the next generation Last Mile Systems: End user key delivery devices; user node application software; and related computer-based training	0.000	0.000	2.862	2.822
(U)	Total Cost	0.000	0.709	4.415	5.282

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) See AF Other Procurement PE 33140F	15.844	12.270	11.149	12.606	21.264	21.382	21.801	22.233	Continuing	TBD

Note: this line includes both AFEKMS and AF KMI Other Procurement (3080) money.

(U) D. Acquisition Strategy

All major contracts within this Project are awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

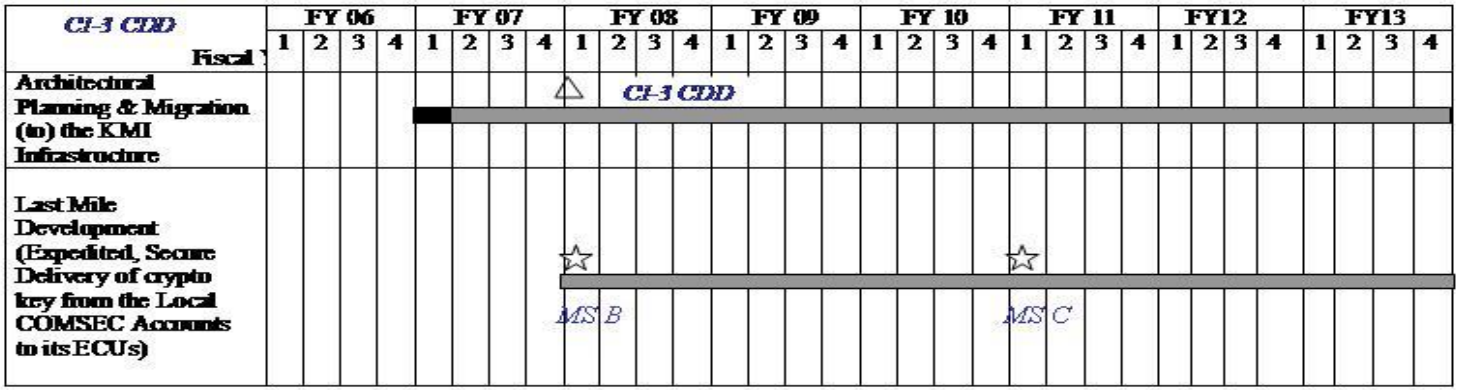
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5231 AF Key Management Infrastructure (AF KMI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Architectural Planning & Migration (to) the KMI Infrastructure	CPFF	MITRE, San Antonio, TX	0.000	0.000		0.709	Jan-07	1.553	Jan-08	2.460	Jan-09	Continuing	TBD	TBD
Last Mile Development	CPFF	TBD	0.000	0.000		0.000		2.862	Jan-08	2.822	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.709		4.415		5.282		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.709		4.415		5.282		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)

Exhibit R-4: BPAC 5321, AF KMI



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Architectural Planning & Migration (to) the KMI Infrastructure		1-4Q	1-4Q	1-4Q
(U) CI-3 CDD		4Q		
(U) Develop next generation Last Mile Systems			1-4Q	1-4Q
(U) MS B			1Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
7820	Computer Security RDT&E: Firestarter	9.044	5.710	6.190	7.566	7.746	7.866	8.019	8.183	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Firestarter program provides research and development (R&D) of Information Assurance (IA) technologies and tools needed to protect and defend Air Force Network-Centric Command, Control, Communications, Computer, and Intelligence (C4I) systems from Computer Network Attacks, and ensure recovery from those attacks. As one of the Air Force managers for IA R&D, the PMO ensures that the emphasis of the program is directed toward information/computer/network security; damage assessment and recovery; dynamic security policy enforcement; and active response and attribution. These areas of emphasis are realized through cyberspace surveillance; cyber indications and warning (CI&W); high-speed and host-based intrusion detection; fusion and correlation of attack indicators; decision support; recovery; cyber forensics; and active response. Current Air Force systems, such as the Combat Information Transport System/Base Information Protection (CITS/BIP) and Information Warfare Planning Capability (IWPC), leverage this technology to meet their information protection needs/requirements. Additionally, this program utilizes IA technology investments by the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA), Department of National Intelligence (DNI), Disruptive Technology Office (DTO), and the Department of Homeland Security (DHS), Advanced Research Project Activity (ARPA) to jump-start its development of solutions to existing Air Force IA requirements. This program coordinates and cooperates with the JTF-GNO, STRATCOM, DISA, NSA and other services to ensure Global Information Grid (GIG) IA requirements are being met.

This program is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Completed development of secure agent frameworks for Enterprise Defense to support protection of the warfighter C4ISR systems	0.310	0.544	0.000	0.000
(U)	Completed IP v6 Risk Mitigation	0.195	0.204	0.000	0.000
(U)	Complete development of cyber forensic tools and methodologies	0.278	0.408	0.320	0.000
(U)	Continue development of technology for self-healing, self-regenerative systems (to include automated system recovery)	0.458	0.624	0.670	0.830
(U)	Continue development of information attack correlation methodologies	0.602	0.662	0.768	0.630
(U)	Continue development of methodologies for Steganography Detection and Dynamic Quarantine of Worms	0.122	0.188	0.408	0.522
(U)	Continue effort to transition DARPA/DTO/ARPA information assurance (IA) technology into AF Information Protection, Detection, & Response architecture	0.254	0.449	0.616	0.660

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue effort to develop metrics for reliable information assurance (IA) measurement and testing	0.136	0.159	0.276	0.290
(U)	Continue development of secure interoperable distributed agent computing (including FY06 Congressional Add for Worldwide Infrastructure Security Environment [WISE])	5.510	0.501	0.526	0.650
(U)	Continue effort to provide active response, dynamic policy Enforcement and computer/network attack attribution	0.324	0.487	0.617	0.624
(U)	Continue effort to provide dynamic, cost effective, risk mitigation information assurance techniques for wireless networks and systems	0.266	0.347	0.330	0.457
(U)	Continue effort to provide IA/Cyber modeling and simulation for mission impact assessment and dynamic network security planning	0.210	0.271	0.260	0.472
(U)	Continue effort to provide secure coalition IA data management, collaboration, and visualization	0.327	0.391	0.415	0.584
(U)	Continue effort to provide Internet Protocol (IP) Telephony (Voice Over IP) security tools	0.052	0.272	0.280	0.333
(U)	Continue Cyber Security Bots (Cybercraft)	0.000	0.203	0.417	0.832
(U)	Initiate Integrated Airborne Network Security IO Platform	0.000	0.000	0.287	0.682
(U)	Total Cost	9.044	5.710	6.190	7.566

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
N/A										

(U) D. Acquisition Strategy

All major contracts within this project are awarded after full and open competition utilizing evolutionary capability and incremental development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **7820 Computer Security RDT&E: Firestarter**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
FFRDC (MITRE)	CPFF	Multiple Locations		0.304	Jan-06	0.323	Jan-07	0.370	Jan-08	0.396	Jan-09	Continuing	TBD	TBD
Multiple Contractors	CPFF	Multiple Locations		8.184	Jan-06	4.674	Jan-07	5.020	Jan-08	6.325	Jan-09	Continuing	TBD	TBD
Multiple Universities	CPFF	Multiple Locations		0.556	Jan-06	0.713	Jan-07	0.800	Jan-08	0.845	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	9.044		5.710		6.190		7.566		Continuing	TBD	TBD
Remarks: Multiple contractors & multiple universities reflect on-going efforts with over a dozen contractors & universities. Each has a different contract date depending on when that particular contract was awarded.														
(U) Total Cost			0.000	9.044		5.710		6.190		7.566		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter

Exhibit R-4: BPAC 7820, Firestarter (p 1 of 2)

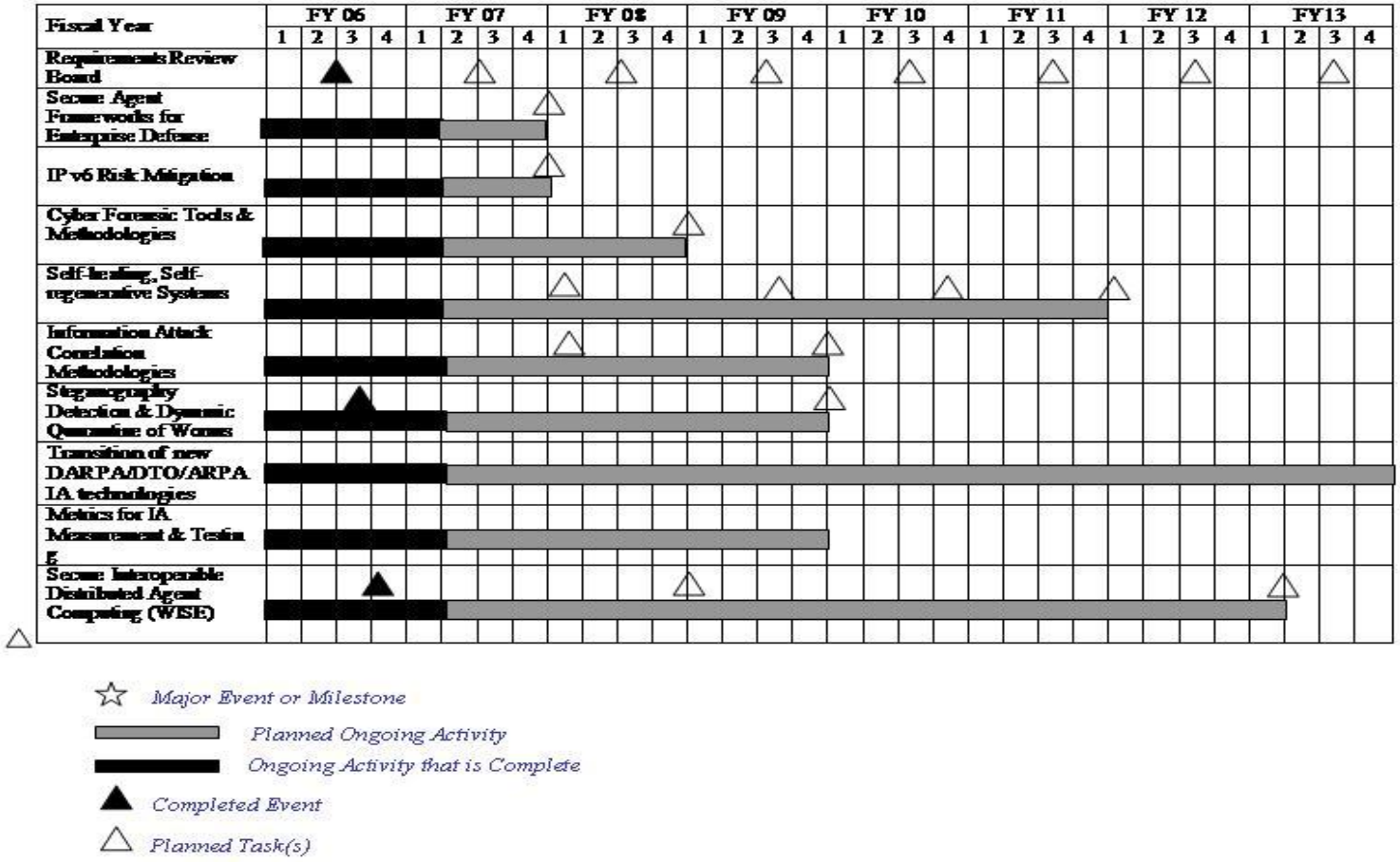


Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter

Exhibit R-4: BPAC 7820, Firestarter (p 2 of 2)

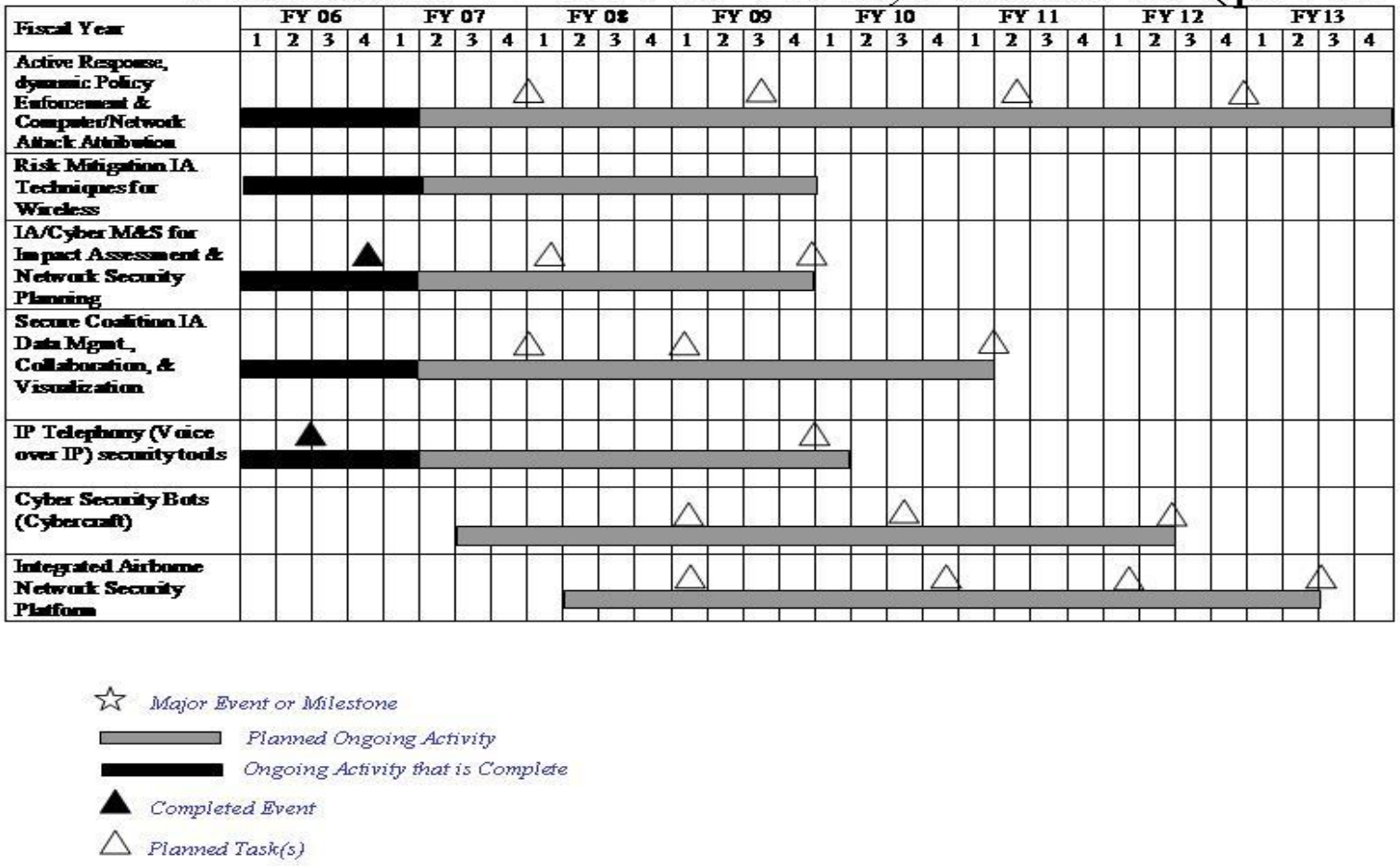


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Requirements Review Boards	2Q	2Q	2Q	2Q
(U) Completed development of secure agent frameworks for Enterprise Defense	1-4Q	1-4Q		
(U) Completed IPv6 Risk Mitigation	1-4Q	1-4Q		
(U) Complete development of cyber forensic tools and methodologies	1-4Q	1-4Q	1-4Q	
(U) Continue development of technology for self-healing, self-regenerative systems	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue information attack correlation methodologies	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue development of methodologies for steganography detection and dynamic quarantine of worms	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue DARPA/ DTO/ARPA information assurance Technology transition	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue to develop metrics for reliable IA measurement and testing	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue secure interoperable distributed agent computing (partial Congressional add)	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue to develop active response, dynamic policy enforcement, and computer/network attack attribution	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue risk mitigation IA techniques for wireless networks and systems	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue IA/Cyber modeling and simulation for mission impact assessment and dynamic network security planning	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue secure coalition IA data management collaboration and visualization	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue Internet Protocol (IP) Telephony (Voice Over IP) security tools	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue Cyber Security Bots (Cybercraft)		3-4Q	1-4Q	1-4Q
(U) Initiate Integrated Airborne Network Security IO platform			2-4Q	1-4Q

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PE NUMBER: 0303141F
PE TITLE: Global Combat Support System (GCSS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	22.696	19.820	10.631	4.415	3.763	4.056	3.724	3.684	Continuing	TBD
5046	Systems Engineering & Integration	22.696	19.820	10.631	4.415	3.763	4.056	3.724	3.684	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Combat Support System-Air Force (GCSS-AF) will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF avoids added costs, removes business processing inefficiencies, reduces deployment footprint, and improves the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	20.262	19.895	20.767	20.856
(U)	Current PBR/President's Budget	22.696	19.820	10.631	4.415
(U)	Total Adjustments	2.434			
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.002	-0.075		
	Congressional Increases				
	Reprogrammings	3.000			
	SBIR/STTR Transfer	-0.564			

(U) Significant Program Changes:

The Air Force added $3M in FY06 to support planned development and integration of Air Force Portal capabilities, including content services, user experience, and data services, including training and enterprise capabilities. A large portion of the RDT&E shown in the FY07 President's Budget (PB) was moved to the Operations and Maintenance request for the FY08 PB, reflecting the GCSS-AF program's transition to operations and sustainment of fielded capability rather than development. The

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303141F Global Combat Support System (GCSS)

funding stayed within the program.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)	PROJECT NUMBER AND TITLE: 5046 Systems Engineering & Integration

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5046	Systems Engineering & Integration	22.696	19.820	10.631	4.415	3.763	4.056	3.724	3.684	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Global Combat Support System-Air Force (GCSS-AF) will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF avoids added costs, removes business processing inefficiencies, reduces deployment footprint, and improves the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Integration Framework (IF) Development	14.770	13.220	7.981	2.615
(U)	Multi-Site Engineering	1.873	3.050		
(U)	Portal Development	4.633			
(U)	Test and Evaluation	0.700	0.500	0.500	0.500
(U)	ESC/NI Program Management and Operations	0.227	1.100	1.150	0.500
(U)	Integrated Requirements Support System (IRSS) Integration	0.493	0.500	0.500	0.500
(U)	Air Force Knowledge Service		1.450	0.500	0.300
(U)	Total Cost	22.696	19.820	10.631	4.415

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Operation & Maintenance, AF; PE 0303141F	54.358	58.967	48.654	53.631	58.860	59.472	60.263	60.789	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)	PROJECT NUMBER AND TITLE: 5046 Systems Engineering & Integration

(U) C. Other Program Funding Summary ($ in Millions)

(U) Other Procurement, AF; PE 0303141F	12.712	28.961	12.432	10.720	18.351	15.494	15.592	14.799	Continuing	TBD

(U) D. Acquisition Strategy

The preponderance of GCSS-AF development, that is system engineering, design, and installation, was provided for in the Indefinite Delivery/Indefinite Quantity (ID/IQ) contract with Firm-Fixed-Price (FFP), Cost Reimbursable (CR), Cost-Plus-Fixed-Fee (CPFF), Cost-Plus-Award-Fee (CPAF), and Labor-Hour (LH) Contract Line Item Numbers (CLINs), awarded after full and open competition in 1996. The program has a two-year contract extension. During this contract extension, there will be a competition for an Operations and Maintenance contract for the fielded capability.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303141F Global Combat Support System (GCSS)**

PROJECT NUMBER AND TITLE: **5046 Systems Engineering & Integration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Presentation Services (Air Force Portal)	Level of Effort	Lockheed Martin IT, Owego, NY	11.752	4.633	Oct-05							0.000	16.385	TBD
Lockheed Martin Systems IF Development	Level of Effort	Lockheed Martin IT, Owego, NY	22.807	14.770	Oct-05	13.220	Oct-06	7.981	Oct-07	2.615	Oct-08	Continuing	TBD	TBD
Multi-Site Enginnering	Level of Effort	Lockheed Martin IT, Owego, NY	5.656	1.873	Oct-05	3.050	Oct-06					0.000	10.579	TBD
IRSS Integration	C/T&M	DFSG/SS, Wright Patterson AFB, OH	3.003	0.493	May-06	0.500	Oct-06	0.500	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
Air Force Knowledge Service Development	Level of Effort	DFSG/SS, Wright Patterson AFB, OH	13.297	0.000		1.450	Oct-06	0.500	Oct-07	0.300	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			56.515	21.769		18.220		8.981		3.415		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test and Evaluation	Statement of Commitment	46th CTF, WP AFB, OH; and JITC, Fort Huachuca, AZ	1.977	0.700	Oct-05	0.500	Oct-06	0.500	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			1.977	0.700		0.500		0.500		0.500		Continuing	TBD	TBD
Remarks:														
(U) Management														
ESC/NI Program Management and Operations	Various Contracts	Hanscom AFB, MA	1.004	0.227	Oct-05	1.100	Oct-06	1.150	Oct-07	0.500	Oct-08	Continuing	TBD	TBD
Subtotal Management			1.004	0.227		1.100		1.150		0.500		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			59.496	22.696		19.820		10.631		4.415		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303141F Global Combat Support System (GCSS)**	PROJECT NUMBER AND TITLE **5046 Systems Engineering & Integration**

Global Combat Support System – Air Force

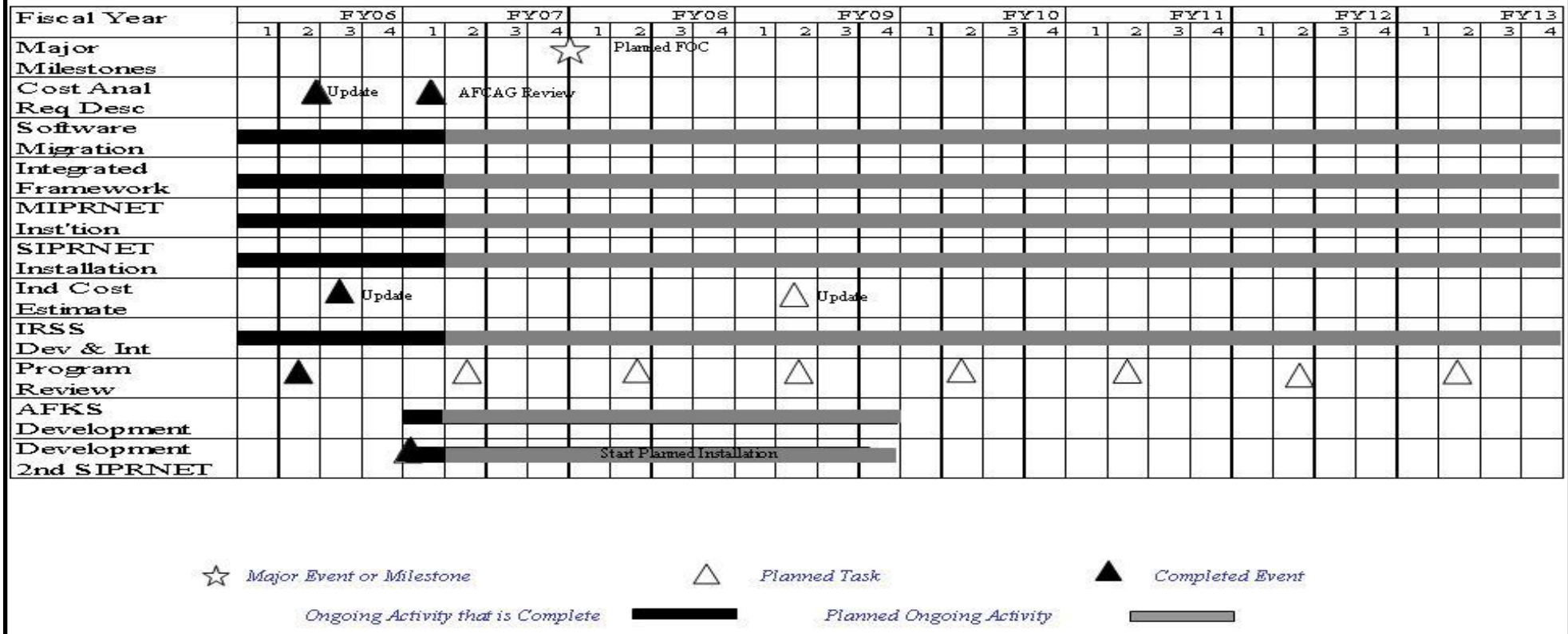

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)	PROJECT NUMBER AND TITLE: 5046 Systems Engineering & Integration	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Planned Full Operational Capability		4Q		
(U) Cost Analysis Requirement Description -- Update/AFCAIG Review	2Q	1Q		
(U) NIPRNet Application Integration and Migration	1-4Q	1-4Q	1-4Q	1-4Q
(U) NIPRNet Integrated Frame Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Secret Internet Protocol Routing Network (SIPRNET) Installation, start to completion	1Q	1-4Q		
(U) Secret Internet Protocol Routing Network (SIPRNET) Application and Data Migration	1-4Q	1-4Q	1-4Q	1-4Q
(U) Independent Cost Estimate -- Update	4Q			2Q
(U) Start and continue IRSS Integration	1-4Q	1-4Q	1-4Q	1-4Q
(U) Annual Program Review	2Q	2Q	2Q	2Q
(U) Develop Air Force Knowledge Service		1-4Q	1-4Q	1-4Q

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PE NUMBER: 0303150F
PE TITLE: WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	3.358	3.290	3.397	3.244	3.234	3.168	3.230	3.295	0.000	0.000
4667	Global Command and Control System - AF	3.358	3.290	3.397	3.244	3.234	3.168	3.230	3.295	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DOD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The GCCS-Air Force program provides C2, intelligence, surveillance, reconnaissance (ISR) and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that make up the COE, and integration of Air Force unique applications with the COE. Integration efforts are directed towards future aerospace C2 concepts supporting requirements for the AOC, including ISR, and intended to automate operational systems with an objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

The GCCS-AF program is actively supporting planning for transition of functionality to DOD's next generation Joint C2 enabler, the Net Enabled Command Capability (NECC) Program. The GCCS-AF program's FY09-13 funding will be used to implement evolving Joint and Air Force GCCS functional capability as well as facilitate transition, development and delivery of functionality to the NECC system.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the NECC system riding on the Global Information Grid.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	13.306	3.348	3.361	3.201
(U)	Current PBR/President's Budget	3.358	3.290	3.397	3.244
(U)	Total Adjustments	-9.948	-0.058		
(U)	Congressional Program Reductions	-0.042	-0.045		
	Congressional Rescissions	-0.052	-0.013		
	Congressional Increases		1.600		
	Reprogrammings	-9.764	-1.600		
	SBIR/STTR Transfer	-0.090			

(U) Significant Program Changes:

The FY06 $10M and the FY07 $1.6M Congressional adds were reprogrammed to the Integrated Command and Control Applications (IC2A) program (PE 64740F) for execution in accordance with Congressional intent.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 4667 Global Command and Control System - AF	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4667	Global Command and Control System - AF	3.358	3.290	3.397	3.244	3.234	3.168	3.230	3.295	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DOD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The GCCS-Air Force program provides C2, intelligence, surveillance, reconnaissance (ISR) and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that make up the COE, and integration of Air Force unique applications with the COE. Integration efforts are directed towards future aerospace C2 concepts supporting requirements for the AOC, including ISR, and intended to automate operational systems with an objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

The GCCS-AF program is actively supporting planning for transition of functionality to DOD's next generation Joint C2 enabler, the Net Enabled Command Capability (NECC) Program. The GCCS-AF program's FY09-13 funding will be used to implement evolving Joint and Air Force GCCS functional capability as well as facilitate transition, development and delivery of functionality to the NECC system.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the NECC system riding on the Global Information Grid.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Integration of Air Force Capabilities into GCCS (COP, DCAPES, ATO Reader, Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT)), Prototype Software Development, GCCS Migration Support	1.558	1.390	1.497	1.344
(U) GCCS-AF(I) Systems Engineering	1.800	1.900	1.900	1.900
(U) Total Cost	3.358	3.290	3.397	3.244

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM	PROJECT NUMBER AND TITLE 4667 Global Command and Control System - AF

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF	11.686	13.789	14.319	14.013	13.924	13.903	14.176	14.456	Continuing	TBD

(U) D. Acquisition Strategy

GCCS-AF is developed and fielded using a spiral acquisition approach, synchronized with Common Operating Environment (COE) and compliant with the GCCS-Joint baseline. All deployment of GCCS-AF capabilities are synchronized with the GCCS-Joint Program fielding schedule, which is led by DISA. The GCCS-AF program is actively supporting DOD planning for transition of functionality to the NECC Program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**

PROJECT NUMBER AND TITLE: **4667 Global Command and Control System - AF**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
WINxB	SS/FFP	Northrop Gruman ITS, Herndon VA	2.911	0.906	Oct-05	0.900	Oct-06	0.900	Oct-07	0.850	Oct-08	Continuing	TBD	
Subtotal Product Development			2.911	0.906		0.900		0.900		0.850		Continuing	TBD	0.000
Remarks:														
(U) Support														
Information Technology Services Program (ITSP)	SS/FFP	Various	2.609	0.200	Oct-05							0.000	2.809	
Program Management Support	FFRDC/SS/FFP	Mitre/ESC	12.216	1.800	Oct-05	1.900	Oct-06	1.900	Oct-07	1.900	Oct-08	Continuing	TBD	
Miscellaneous	SS/BOA	Various	1.706	0.352	Oct-05	0.190	Oct-06	0.297	Oct-07	0.194	Oct-08	Continuing	TBD	
Subtotal Support			16.531	2.352		2.090		2.197		2.094		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Test and Accreditation	MIPR	Multiple	1.210	0.100	Oct-05	0.300	Oct-06	0.300	Oct-07	0.300	Oct-08	Continuing	TBD	
Subtotal Test & Evaluation			1.210	0.100		0.300		0.300		0.300		Continuing	TBD	0.000
Remarks:														
(U) Total Cost			20.652	3.358		3.290		3.397		3.244		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**	**4667 Global Command and Control System - AF**

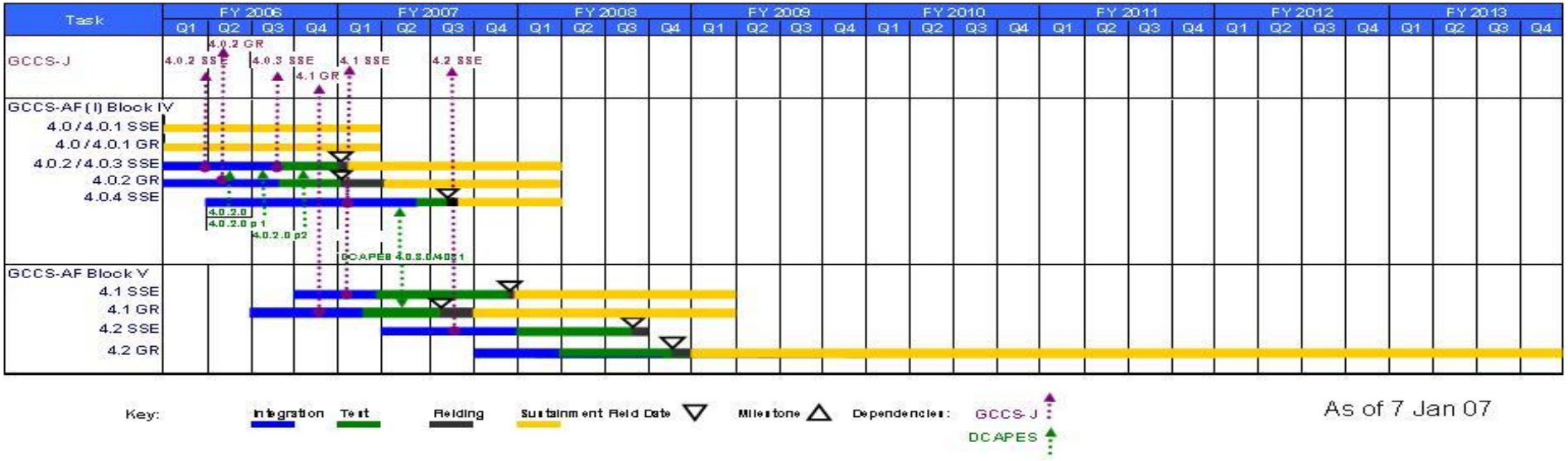

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 4667 Global Command and Control System - AF

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) GCCS-AF v4.0.2: Global Release (GR)/SSE Development/Integration/Fielding/Testing	1-4Q	1Q		
(U) GCCS-AF v4.1: GR/SSE Development/Integration/Fielding/Testing	3-4Q	1-4Q		
(U) GCCS-AF v4.2: GR/SSE Development/Integration/Fielding/Testing		2-4Q	1-4Q	

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PE NUMBER: 0303601F
PE TITLE: MILSATCOM Terminals

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	254.052	269.926	388.491	372.443	357.847	244.604	193.916	192.717	Continuing	TBD
2487 MILSATCOM Terminals	254.052	269.926	388.491	372.443	357.847	244.604	193.916	192.717	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Global SATCOM (WGS), Defense Satellite Communication System (DSCS), Enhanced Polar Systems (EPS), Transformational Communication Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force requirements and maintain essential connectivity for strategic forces. Program RDT&E currently supports the following efforts to include program operations and support:

1) Concept development work to identify commercial/military technology solutions to improve MILSATCOM terminal capabilities for the warfighters. Focus includes increasing throughput, facilitating sustainability, reducing footprint on user platform and supporting network.

2) Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development. Increment 1 program will provide Extremely High Frequency (EHF) voice and data military satellite communications (MILSATCOM) for nuclear and conventional forces as well as airborne and ground command posts with connectivity to MILSTAR and Advanced EHF satellites. Increment 2 will provide robust secure 2-way Ka/Ku band SATCOM capability on High Altitude Endurance (HAE) Intelligence, Surveillance and Reconnaissance (ISR) aircraft to operate with current and future Ku frequency band commercial satellites and Ka band on WGS. Increment 3 will provide XDR+ capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka through TSAT. Increment 4 will provide optical (Lasercom) communication capability via TSAT for Airborne Intelligence, Surveillance, and Reconnaissance (AISR) platforms requiring data in excess of 1 Gbps. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) that provides a multi-beam, multi-band antenna that enables simultaneous connectivity to more than one satellite. This antenna addresses limited aircraft external surface area, historically high antenna integration costs and aerodynamic and low observability restrictions. It enables airborne weapon systems to support the warfighter's need for higher data rates while providing a common solution for each platform.

3) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal development. Develops a transponded Ka-band HDR capability in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate (137 Mbps) provided by the first three WGS satellites.

4) Airborne Lasercom Terminal (ALT) development. ALT has merged with the FAB-T program and has become Increment 4. See Item 2 above for description.

5) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	269.218	271.562	187.419	215.910
(U)	Current PBR/President's Budget	254.052	269.926	388.491	372.443
(U)	Total Adjustments	-15.166			
(U)	Congressional Program Reductions		-0.611		
	Congressional Rescissions	-0.008	-1.025		
	Congressional Increases				
	Reprogrammings	-5.696			
	SBIR/STTR Transfer	-9.462			

(U) Significant Program Changes:

In FY06, the Air Force merged the HDR-RF Airborne development and the Advanced Multi-band Communications Antenna System (AMCAS) with the FAB-T development program in support of evolving the family of terminals concept to merge related programs. HDR-RF Airborne became FAB-T Increment 2 as it reuses major components of Increment 1. The AMCAS antenna will be used on certain platforms in conjunction with FAB-T. In July 06 Air Force merged Airborne Lasercom Terminal (ALT) with FAB-T to become Increment 4 and deferred the flight demonstration to synchronize with TSAT. Increase in FY08/FY09 budget due to conversion of Procurement funds to RDT&E to support the FAB-T replan resulting from issues driven by contractor cost growth, lack of terminal domain expertise at prime contractor level and concurrent development between the terminal, satellite, crypto and command and control segments.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2487 MILSATCOM Terminals	254.052	269.926	388.491	372.443	357.847	244.604	193.916	192.717	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Global SATCOM (WGS), Defense Satellite Communication System (DSCS), Enhanced Polar Systems (EPS), Transformational Communication Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force requirements and maintain essential connectivity for strategic forces. Program RDT&E currently supports the following efforts to include program operations and support:

1) Concept development work to identify commercial/military technology solutions to improve MILSATCOM terminal capabilities for the warfighters. Focus includes increasing throughput, facilitating sustainability, reducing footprint on user platform and supporting network.

2) Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development. Increment 1 program will provide Extremely High Frequency (EHF) voice and data military satellite communications (MILSATCOM) for nuclear and conventional forces as well as airborne and ground command posts with connectivity to MILSTAR and Advanced EHF satellites. Increment 2 will provide robust secure 2-way Ka/Ku band SATCOM capability on High Altitude Endurance (HAE) Intelligence, Surveillance and Reconnaissance (ISR) aircraft to operate with current and future Ku frequency band commercial satellites and Ka band on WGS. Increment 3 will provide XDR+ capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka through TSAT. Increment 4 will provide optical (Lasercom) communication capability via TSAT for Airborne Intelligence, Surveillance, and Reconnaissance (AISR) platforms requiring data in excess of 1 Gbps. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) that provides a multi-beam, multi-band antenna that enables simultaneous connectivity to more than one satellite. This antenna addresses limited aircraft external surface area, historically high antenna integration costs and aerodynamic and low observability restrictions. It enables airborne weapon systems to support the warfighter's need for higher data rates while providing a common solution for each platform.

3) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal development. Develops a transponded Ka-band HDR capability in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate (137 Mbps) provided by the first three WGS satellites.

4) Airborne Lasercom Terminal (ALT) development. ALT has merged with the FAB-T program and has become Increment 4. See Item 2 above for description.

5) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM funding	2.720	3.864	4.357	4.440
(U)	Continue Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development	229.951	248.519	365.185	352.412
(U)	Continue High Data Rate (HDR) RF Ground Terminal development	4.106	9.574	10.907	7.553
(U)	Continue Lasercom Terminals concept development	10.049			
(U)	Continue Joint Terminal Engineering Office (JTEO) Support	7.226	7.969	8.042	8.038
(U)	Total Cost	254.052	269.926	388.491	372.443

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement, Air Force, Project 119992 (Budget Activity 5, P-27 and P-61, PE 0303601F only) (1)	2.696	9.726	0.000	0.000	117.699	342.742	357.348	370.242	Continuing	TBD
(U) Other Procurement, Air Force, 'MILSATCOM Space', Project 836780 (Budget Activity 3, P-66, PE 0303601F only) (1)	27.222	75.112	108.918	106.782	174.218	231.496	138.648	141.396	Continuing	TBD

(1) Spares Included

NOTE: Related RDT&E costs for MILSATCOM satellite systems to which terminal development is linked can be found in RDT&E Budget Item Justification Sheets for the following Program Elements (PEs):

PE 0303110F Defense Satellite Communication System (Space)
PE 0603430F Advanced EHF MILSATCOM (Space)
PE 0603845F Transformational SATCOM (TSAT)
PE 0603432F Polar MILSATCOM (Space)
PE 0603854F Wideband Gapfiller System (RDT&E) Space
PE 0604479F Milstar LDR/MDR SATCOM (Space)
PE 0604240F B-2 (RDT&E)
PE 0101113F B-52 (RDT&E)
PE 0305207F RC-135 (RDT&E)
PE 0207581F Joint STARS (RDT&E)

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

(U) D. Acquisition Strategy

The FAB-T Increment 2 contract to add Ka/Ku SATCOM capability was awarded via sole source to Boeing Corporation due to development work on FAB-T Increment 1 laying the ground work for Increment 2. Future Increments will be competitive.

Advanced Multi-Band Communications Antenna System (AMCAS) began concept development. The results will be used as a basis for awarding a System Design and Development (SDD) contract based on full and open competition in FY08.

The Airborne Lasercom Terminal (ALT) program initiated the Concept and Architecture Development Study phase of the program. ALT has merged with the FAB-T program and has become Increment 4. Risk reduction begins in FY10.

Up to two, 24 month firm fixed price contracts are projected to be awarded in April 2007 for the HDR-RF Ground concept activities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

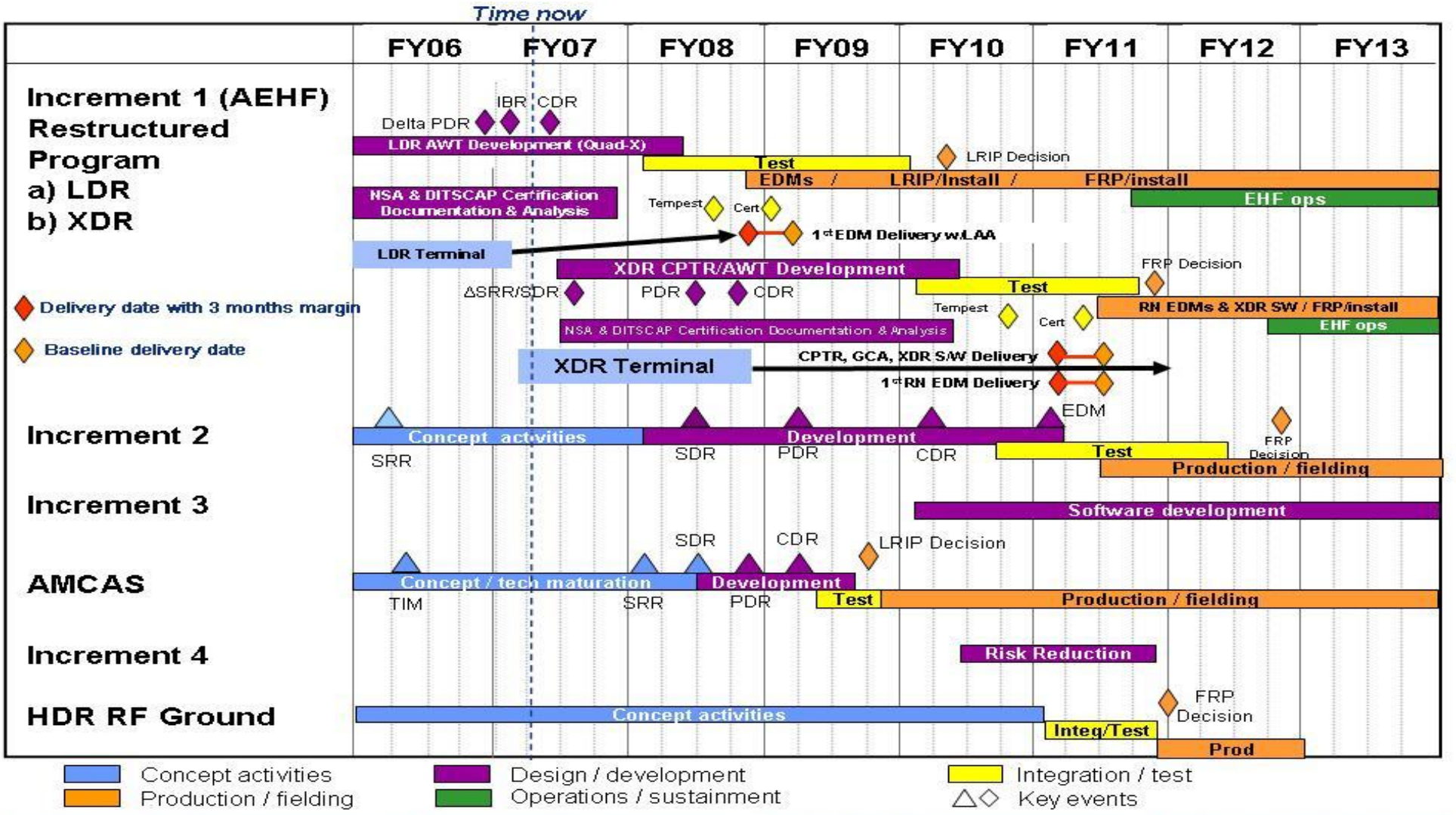
BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals

PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
FAB-T Development	CPAF	Boeing Corp., Anaheim, CA	288.385	191.567	Oct-05	214.300	Jan-07	337.312	Jan-08	304.334	Jan-09	Continuing	TBD	
FAB-T	Various	Various	0.000	18.892	Oct-05	11.188	Jan-07	7.638	Jan-08	29.586	Jan-09	Continuing	TBD	
High Data Rate (HDR) RF Ground Terminal Development	TBD	TBD	0.000	0.000	May-06	4.599	Feb-07	7.634	Jan-08	5.590	Jan-09	Continuing	TBD	
High Data Rate (HDR) RF Air Terminal Development (merged with FAB-T beginning in FY06)	CPAF	Boeing Corp., Anaheim, CA	13.787										13.787	
Lasercom Terminal Development Studies	FFP	Various	25.115	5.280	May-06							Continuing	TBD	
AMCAS Development (merged with FAB-T beginning in FY06)	TBD	TBD										Continuing	TBD	
												0.000	0.000	
Subtotal Product Development			327.287	215.739		230.087		352.584		339.510		Continuing	TBD	0.000
Remarks:														
(U) Support														
Systems Engineering Support	CPAF	MITRE, Bedford MA	176.799	22.026	Nov-05	22.510	Jan-07	20.560	Jan-08	18.227	Jan-09	Continuing	TBD	
Systems Engineering/Functional/Financial Support	Various	Various	201.847	14.593	Oct-05	15.711	Jan-07	12.916	Jan-08	12.472	Jan-09	Continuing	TBD	
Miscellaneous	Various	Various	28.800	1.694	Oct-05	1.618	Jan-07	2.431	Jan-08	2.234	Jan-09	Continuing	TBD	
													0.000	
Subtotal Support			407.446	38.313		39.839		35.907		32.933		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Various Programs	Various	AF Research Lab	25.018	0.000								Continuing	TBD	
Miscellaneous T&E	Various	Various	26.187									Continuing	TBD	
													0.000	
Subtotal Test & Evaluation			51.205	0.000		0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			785.938	254.052		269.926		388.491		372.443		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals



CDR: Critical Design Review
EDM: Engineering Design Model
FRP: Full Rate Production
LRIP: Low Rate Initial Production
PDR: Preliminary Design Review
SDR: System Design Review
SRR: System Requirements Review
TIM: Technical Interchange Meeting

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303601F MILSATCOM Terminals**	PROJECT NUMBER AND TITLE **2487 MILSATCOM Terminals**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) FAB-T (Inc 1) Critical Design Review (CDR)		2Q		
(U) Begin development of FAB-T Increment 2			1Q	
(U) FAB-T (Inc 2) Preliminary Design Review (PDR)				1Q
(U) AMCAS System Design Review (SDR)			2Q	
(U) FAB-T 1st EDM Delivery of LDR terminal				1Q

PE NUMBER: 0304260F
PE TITLE: Airborne SIGINT Enterprise (JMIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	87.762	117.390	139.627	143.982	147.485	149.837	152.744	155.858	Continuing	TBD
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	38.320	49.375	49.501	47.077	32.048	29.824	34.652	Continuing	TBD
5181	U-2 (Airborne SIGINT Development - U-2)	1.972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.972	1.972
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	2.466	18.082	2.740	2.963	3.057	3.116	3.180	Continuing	TBD
5183	Common Development (Airborne SIGINT Development - Common Development)	80.445	53.693	47.652	66.166	70.095	79.695	85.872	91.162	Continuing	TBD
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	4.958	10.480	10.887	11.167	11.429	11.594	11.820	12.060	Continuing	TBD
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.387	8.219	8.584	8.848	9.100	9.276	9.456	9.650	Continuing	TBD
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	4.212	5.047	5.560	6.821	14.167	12.656	5.154	Continuing	TBD

(U) This PE provides signals intelligence (SIGINT) development efforts for all USAF airborne platforms. The funds in this PE are distributed among all Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group (SCWG) in order to build a total SIGINT capability. As a result, the USAF will move funds between BPACs periodically to develop the highest priority projects. This program element will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

(U) A. Mission Description and Budget Item Justification

(U) This Program Element (PE) funds efforts associated with the Airborne SIGINT (Signals Intelligence) Enterprise (ASE). ASE is the SIGINT modernization framework for all USAF airborne SIGINT collection platforms and their appropriate interfaces with the Air Force Distributed Common Ground System (AF DCGS). This PE will allow a synergistic development effort to be accomplished while developing a true Air Force-wide capability. This enterprise will use the Air Force Cryptologic Architecture (AFCA) for planning and decision-making and, in turn, employ the Joint Airborne SIGINT Architecture (JASA) open architecture standards to allow maximum ease of future upgrades and system interoperability. The primary goal of ASE is to produce an architecture-based, capability-focused SIGINT investment strategy for the USAF.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)

(U) This program is Budget Activity 7, Operational Systems Development, because it involves the development of SIGINT capabilities and integration with operational systems such as the RC-135, U-2, MQ-1/MQ-9, RQ-4, Special Programs (Senior Scout and others as required), their associated ground stations and data links, and Compass Bright programs.

(U) Funds in any project may be used to fund initiatives in other projects within this PE at the discretion of the SCWG.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	77.798	117.834	123.304	142.563
(U)	Current PBR/President's Budget	87.762	117.390	139.627	143.982
(U)	Total Adjustments	9.964	0.444		
(U)	Congressional Program Reductions				
	Congressional Rescissions		0.444		
	Congressional Increases				
	Reprogrammings	9.964			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

(U) This PE was established in FY06. The reprogramming of additional FY06 funds was to cover fielding costs associated with the three Airborne Signals Intelligence Payload (ASIP) units developed for the U-2. These additional funds covered support equipment and spares. The growth in funds in FY07 reflects the continuation of the Airborne Signals Intelligence Payload (ASIP) program and the start of development work on the RC-135 fleet, MQ-1/9, Special Projects such as SENIOR SCOUT, and Compass Bright. In FY08, SIGINT development projects will add work in the ASIP Upgrade Program (Spiral development capabilities to enhance the ASIP baseline program through hardware and software modifications necessary to counter the evolving threat). Additionally, $15.3M was added to increase and accelerate MQ-1 SIGINT efforts.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5180 RC-135 (Airborne SIGINT Development - RC-135)**

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	38.320	49.375	49.501	47.077	32.048	29.824	34.652	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) These funds will be split between the RIVET JOINT, COMBAT SENT, and COBRA BALL programs. Funding increased in FY08-FY10 to reflect the SIGINT Capabilities Working Group (SCWG) priorities and the accomplishment of other ASE initiatives.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) These efforts provide the requisite engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) RC-135 Breakdown of funds (in millions):

	FY07	FY08	FY09	FY10	FY11	FY12	FY13
RIVET JOINT	31.920	42.575	42.601	40.870	25.048	22.624	27.452
COMBAT SENT	3.400	3.700	3.700	3.600	3.700	3.800	3.800
COBRA BALL	3.000	3.100	3.200	3.300	3.300	3.400	3.400

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	(U) Initiates Non-Recurring Engineering (NRE) for the RC-135 SIGINT Systems		38.320	49.375	49.501
	SEE Classified Budget Exhibits (PE 0305207F)				
(U)					
(U)	Total Cost	0.000	38.320	49.375	49.501

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5180 RC-135 (Airborne SIGINT Development - RC-135)

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) (U) PE 0305207F, APAF		89.469	106.108	108.109	110.798	113.147	176.555	180.068	Continuing	TBD

(U) These funds within the PE 0305207F procure all necessary aircraft modifications for the RC-135 program and include those funds necessary to field SIGINT capabilities developed under Project 675180 of this Airborne SIGINT Enterprise.

(U) D. Acquisition Strategy

(U) Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY13 include the procurement, fielding and logistical support for three distinct RIVET JOINT baseline configurations [baseline 8, 9, 10] and two distinct baselines [baselines 3 & 4] for COMBAT SENT and COBRA BALL. Development and integration managed by the Big Safari Systems Group; they employ evolutionary acquisition approaches to field incremental capability improvements.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5180 RC-135 (Airborne SIGINT Development - RC-135)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SIGINT Sensor Development and Integration	CPFF and FFP	L-3 COM Greenville, TX		0.000		38.320	Jan-07	49.375	Jan-08	49.501	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		38.320		49.375		49.501		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		38.320		49.375		49.501		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5180 RC-135 (Airborne SIGINT Development - RC-135)

U.S. AIR FORCE

RC-135

See PE 35207 classified submission for breakout

As of: 8 Jan 07

1

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5180 RC-135 (Airborne SIGINT Development - RC-135)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Development of RIVET JOINT mission sensors		1-4Q	1-4Q	1-4Q
(U) Development of COMBAT SENT mission sensors		1-4Q	1-4Q	1-4Q
(U) Development of COBRA BALL mission sensors		1-4Q	1-4Q	1-4Q

Details are classified and are shown in the classified portion of PE 0305207F

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

PROJECT NUMBER AND TITLE: 5181 U-2 (Airborne SIGINT Development - U-2)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5181	U-2 (Airborne SIGINT Development - U-2)	1.972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.972	1.972
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) This project supported sensor integration and test, design studies, engineering analysis and non-recurring engineering of the ASIP sensor.

(U) This project provides risk reduction for the RQ-4 Global Hawk and will provide the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. The demonstration of ASIP on the U-2 will also be evaluated as part of ASIP's IOT&E by DOT&E. This will support both LRIP and Full Rate Production decisions for ASIP on the Global Hawk (RQ-4B). The first ASIP flight test was accomplished on the U-2 on 15 Dec 06. U-2 test results will support a Global Hawk/ASIP Full Rate Production decision.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Integration on the U-2 aircraft	1.972	0.000	0.000	0.000
(U) Total Cost	1.972	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) N/A										

(U) D. Acquisition Strategy

(U) SIGINT capabilities will be integrated on to this platform using an evolutionary acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

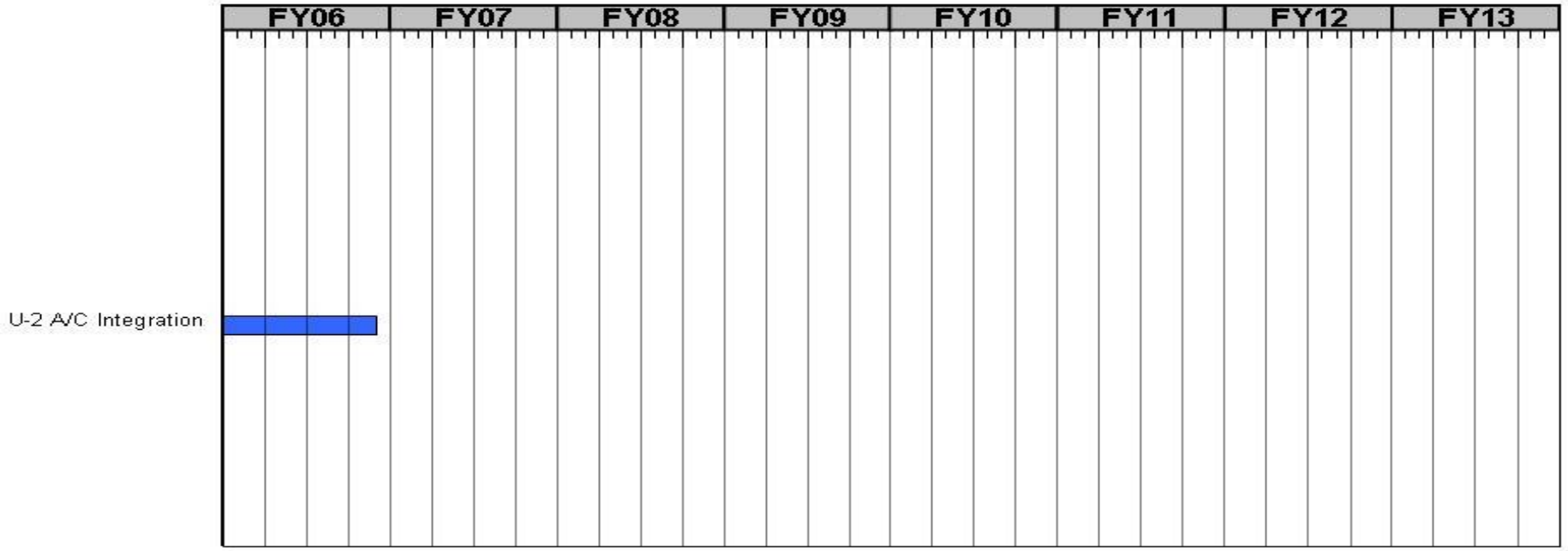
PROJECT NUMBER AND TITLE: **5181 U-2 (Airborne SIGINT Development - U-2)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SIGINT Sensors Integration	CPAF	Lockheed Martin Aero, Palmdale Ca.		1.486	Dec-05	0.000		0.000		0.000		0.000	1.486	TBD
SIGINT Sensors Integration	Various	Various		0.486	May-06								0.486	
Subtotal Product Development			0.000	1.972		0.000		0.000		0.000		0.000	1.972	TBD
Remarks:														
(U) Total Cost			0.000	1.972		0.000		0.000		0.000		0.000	1.972	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5181 U-2 (Airborne SIGINT Development - U-2)

Baseline ASIP U2 Integration

Dominant Air Power: Design For Tomorrow...Deliver Today



As of: 8 Jan 07

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5181 U-2 (Airborne SIGINT Development - U-2)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) U-2 A/C Integration Development	1-4Q			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	2.466	18.082	2.740	2.963	3.057	3.116	3.180	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) MQ-1/9 SIGINT development efforts in the ASE PE will begin in FY07.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the MQ-1/MQ-9 SIGINT sensors and their associated air and ground components. This is an RTD&E effort to integrate SIGINT capability on to the MQ-1/MQ-9 platforms. The sensor shall be capable of collecting technical data and geolocating signals of interest and providing sensor data to a workstation. The integration effort shall include the use of existing sensor suites to the maximum extent possible to minimize design costs and reduce development time lines. Design efforts specific to the Predator or Reaper systems may include, but not be limited to, antennas, EMI reduction, encryption techniques, and changes to the aircraft, ground station, data link, and simulator necessary to accommodate a SIGINT payload and its data throughput.

(U) Funding will begin efforts on antennas, receivers, processors, software development, aircraft integration and ground station upgrades to allow a persistent reconnaissance, surveillance, targeting, and acquisition capability against mission specific threats. Development of a networked capability to other SIGINT platforms will also be initiated. FY 08 funding was added to this activity to increased and accelerate a SIGINT capability on this platform.

(U) This project provides the warfighter with increased combat capability as soon as technology and risk achieve satisfactory levels.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Development/Integration for MQ-1/9		2.466	18.082	2.740
(U) Total Cost	0.000	2.466	18.082	2.740

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) 35219 MQ-1 APAF				26.690	29.630	32.000				

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SIGINT Sensors Integration	TBD	General Atomics, San Diego, CA		0.000		0.500	May-07	1.500	Jan-08	2.740	Jan-09	Continuing	TBD	TBD
SIGINT Sensors Development	TBD	Northrop Grumman ESL, San Jose, CA		0.000		1.466	May-07	15.582	Jan-08	0.000			17.048	TBD
SIGINT Ground Station Development	TBD	Raytheon, Falls Church, VA				0.500	May-07	1.000	Jan-08	0.000			1.500	TBD
Subtotal Product Development			0.000	0.000		2.466		18.082		2.740		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		2.466		18.082		2.740		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)

ASIP 1C on Predator

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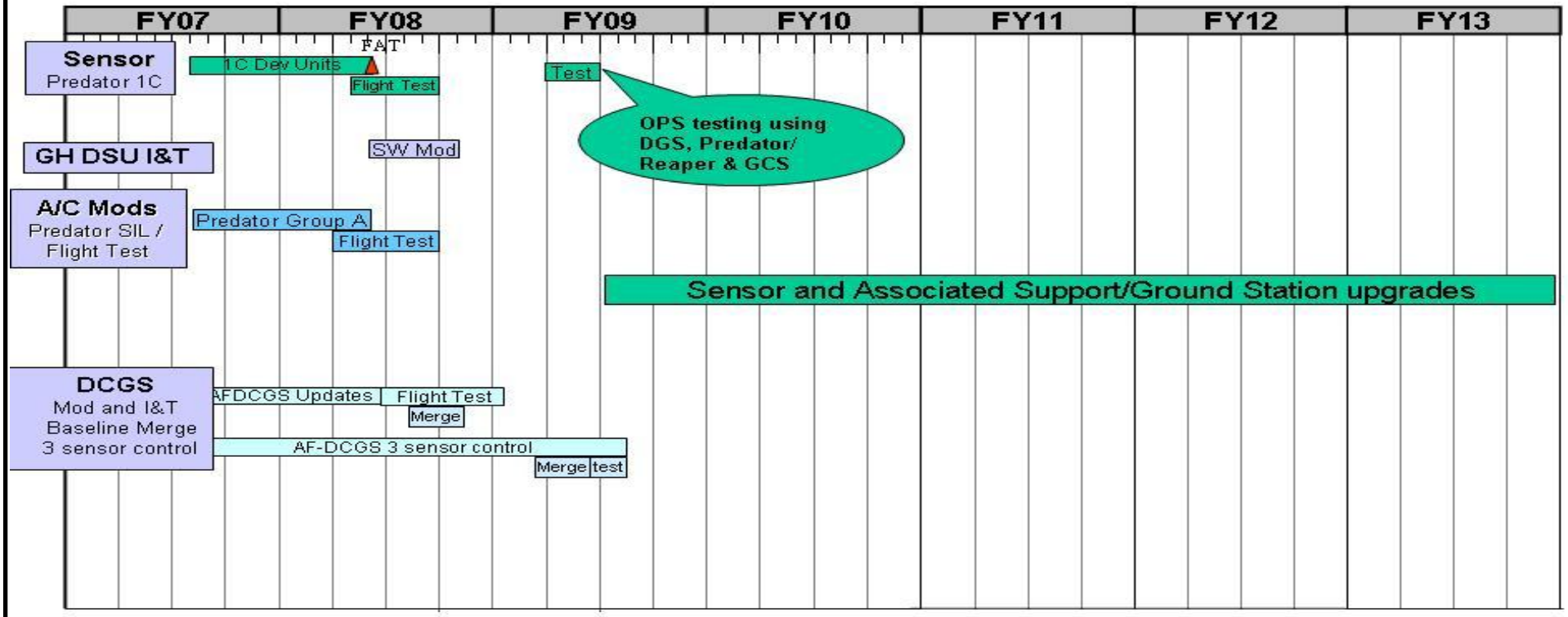

Final Schedule Depends on Platform Contractor's Ability to Support

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Initiate SIGINT development for the MQ-1/MQ-9		2-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5183 Common Development (Airborne SIGINT Development - Common Development)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5183	Common Development (Airborne SIGINT Development - Common Development)	80.445	53.693	47.652	66.166	70.095	79.695	85.872	91.162	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) This projects supports the development of the Airborne Signals Intelligence payload (ASIP) sensor for use on multiple platforms as well as projects common to the ASE PE overall to include, but not limited to: Air Force Cryptologic Architecture (AFCA) maintenance and modeling and simulation.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of sensors and their associated air and ground components that will be used on/by more than one platform. The common development SIGINT program develops new sensors and maintains present capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability via spiral development to exploit evolving signals of interest to meet emerging operational requirements. The current sensor being developed is the Airborne Signals Intelligence Payload Program, to be tested by both the Global Hawk (RQ-4B) and U-2. The system's open architecture and Joint Airborne SIGINT Architecture (JASA) compliant design supports streamlined integration of ASIP onto additional ISR platforms, both AF, and cross-service (United States Army & United States Navy), and other government agencies.

(U) This program will design and build a common/scalable SIGINT system designed for maximum coverage of the electromagnetic spectrum through the use of an integrated high and low band system. ASIP will deliver developmental units for integration and test to both the Global Hawk and U-2. U-2 test articles will complete integration and test in 4Q FY06 and begin flight test in 1Q FY07. The Global Hawk article is scheduled to complete integration and test for the developmental article and begin flight test in 1Q FY08. In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08.

(U) This strategy provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on the various platforms as funding permits.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Complete Baseline ASIP development/integration	80.445	53.693	32.900	
(U)	Begin ASIP upgrades in FY08 to meet the evolving threat			14.752	66.166
(U)	Total Cost	80.445	53.693	47.652	66.166

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) APAF, 0305220F - ASIP Production BP10 with Advance Proc	0.000	0.000	10.711	80.405	67.129	72.871	111.794	132.197		475.107
(U) APAF, 0305220F - ASIP Production BP11 with Advanced Proc	0.000	0.000	16.066	91.796	97.137	92.185	53.425	0.000		350.609

(U) D. Acquisition Strategy

Signals Intelligence (SIGINT) capabilities will be developed and integrated onto various platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5183 Common Development (Airborne SIGINT Development - Common Development)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
(U) SIGINT Sensor Development and Integration	CPAF	Northrop Grumman, San Jose, CA		56.129	Oct-05	24.670	Oct-06	34.426	Jan-08	66.166	Jan-09	Continuing	TBD	TBD
(U) ASIP U-2	CPIF	Lockheed Martin Aeronautics, Palmdale, CA		10.115	Nov-05	6.412	Oct-06	1.111	Oct-07			Continuing	TBD	TBD
(U) ASIP U-2	CPIF	L-3 Comm, Salt Lake City, UT				0.743	Dec-06					0.000	0.743	TBD
(U) AFDCGS Integration	CPIF	Lockheed Martin Astronautics, Denver, CO		3.980	Dec-05	6.050	Oct-06	1.200	Nov-07			Continuing	TBD	TBD
(U) AFDCGS Integration	CPIF	Raytheon, Falls Church, VA		6.603	Oct-05	5.885	Oct-06	3.350	Nov-07			Continuing	TBD	TBD
(U) Management, Various Integration Efforts, and Flight Test	Various	Various		3.618	Oct-05	9.933	Nov-06	7.565	Nov-07			Continuing	TBD	TBD
Subtotal Product Development			0.000	80.445		53.693		47.652		66.166		Continuing	TBD	TBD
Remarks: Above costs for U-2 and AFDCGS are for the baseline ASIP. Upgrade costs for ASIP specific contracts are TBD														
(U) Total Cost			0.000	80.445		53.693		47.652		66.166		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5183 Common Development (Airborne SIGINT Development - Common Development)

Baseline ASIP SoS RDT&E

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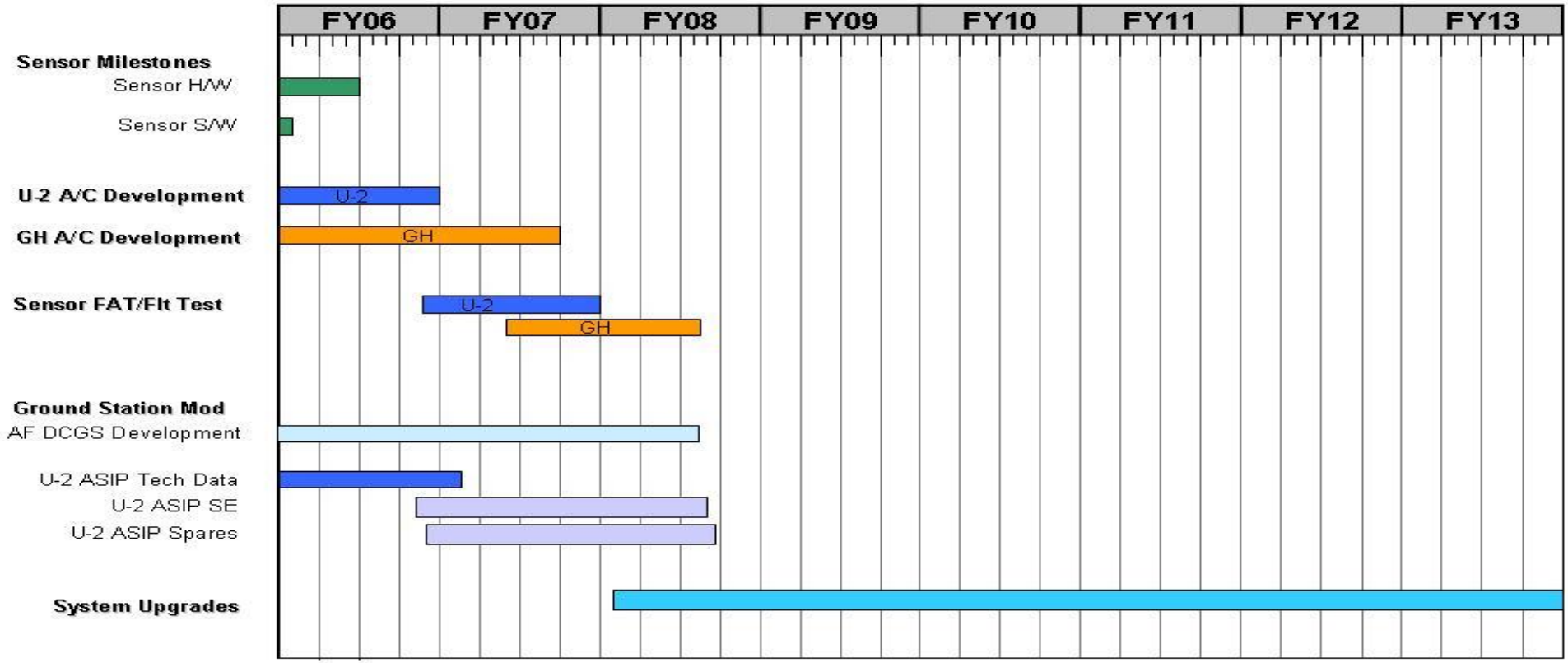

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5183 Common Development (Airborne SIGINT Development - Common Development)

ASIP SoS RDT&E

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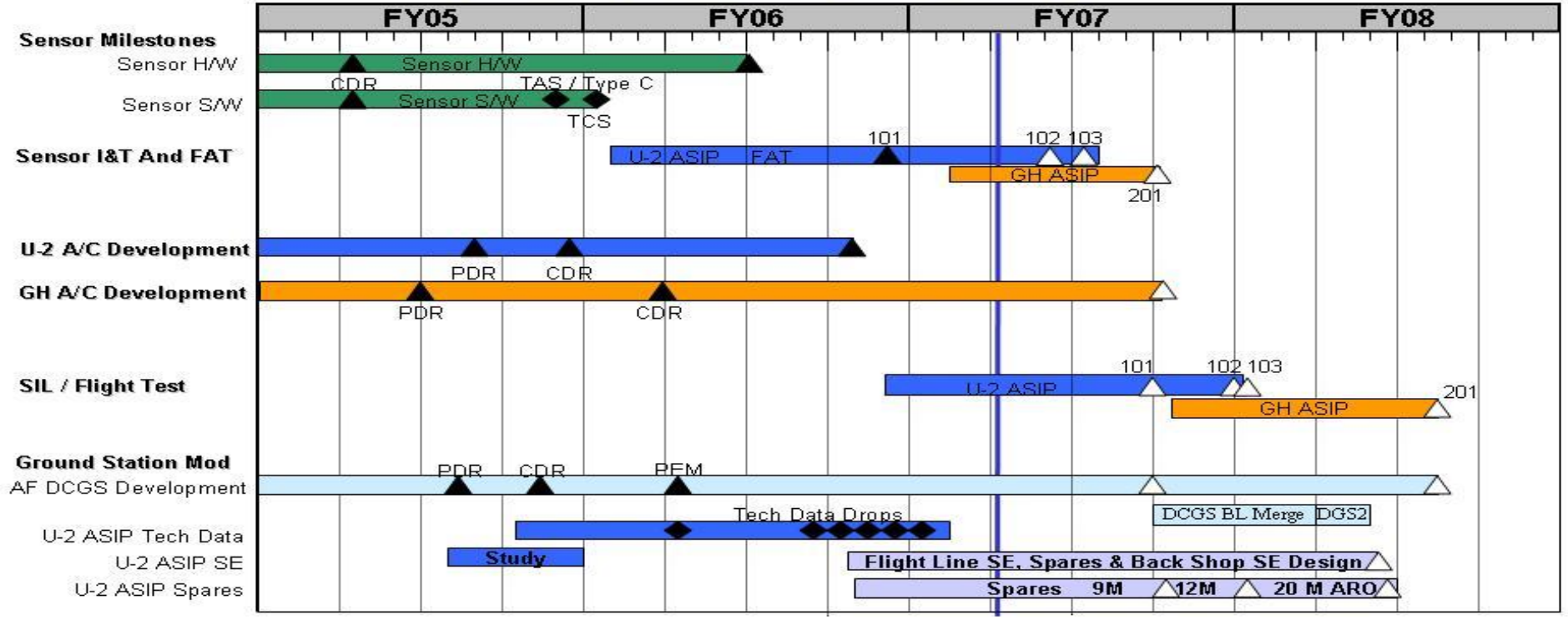

As of: 7 Jan 07

FAT Complete 22 Sep 06; 1st Flight 15 Dec 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) ASIP Sensor Hardware	1-4Q	1-3Q		
(U) ASIP Sensor Software	1Q			
(U) U-2 ASIP Int & Factory Acceptance Test (Sensors 101-103)	1-4Q	1-3Q		
(U) GH ASIP Int & Factory Acceptance Test (Sensor 201)		1-3Q		
(U) U-2 ASIP SIL/Flight Test	4Q	1-4Q	1Q	
(U) GH ASIP SIL/Flight Test		4Q	1-3Q	
(U) AF DCGS Development	1-4Q	1-4Q	1-3Q	
(U) U-2 ASIP Tech Data	1-4Q	1Q		
(U) U-2 ASIP Support Equipment	4Q	1-4Q	1-2Q	
(U) U-2 ASIP Spares	4Q	1-4Q	1-2Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

PROJECT NUMBER AND TITLE: 5184 RQ-4 (Airborne SIGINT Development - Global Hawk

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	4.958	10.480	10.887	11.167	11.429	11.594	11.820	12.060	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) This project covers RQ-4 SIGINT development integration in the ASE PE.

(U) A. Mission Description and Budget Item Justification

(U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the air and ground components for the Global Hawk SIGINT sensors.

(U) This project provides the warfighter with a near-term combat capability with increased capability improvements implemented as soon as technology and risk achieve satisfactory levels. The current sensor being developed for the Global Hawk SIGINT is ASIP. In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08. These upgrades are designed to exploit evolving signals of interest to meet emerging operational requirements.

(U) Budget Activity Justification: This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Signals Intelligence (SIGINT) Sensor Integration on the Global Hawk aircraft	4.958	10.480	10.887	11.167
(U)	Total Cost	4.958	10.480	10.887	11.167

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Sensor Integration 0305220F - Sensor Development BP10 APAF	0.000	0.000	10.711	80.181	66.895	72.630	111.416	131.569		473.402
(U)	Sensor Integration 0305220F - Sensor Development BP11 APAF	0.000	0.000	16.066	88.896	97.480	91.078	53.173	0.000		346.693

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5184 RQ-4 (Airborne SIGINT Development - Global Hawk**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SIGINT Sensor Integration	CPAF	Northrop Grumman Mission Sys, San Jose, CA		4.958	Dec-05	10.480	Oct-06	10.887	Jan-08	11.167	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	4.958		10.480		10.887		11.167		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	4.958		10.480		10.887		11.167		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5184 RQ-4 (Airborne SIGINT Development - Global Hawk

GH ASIP Integration

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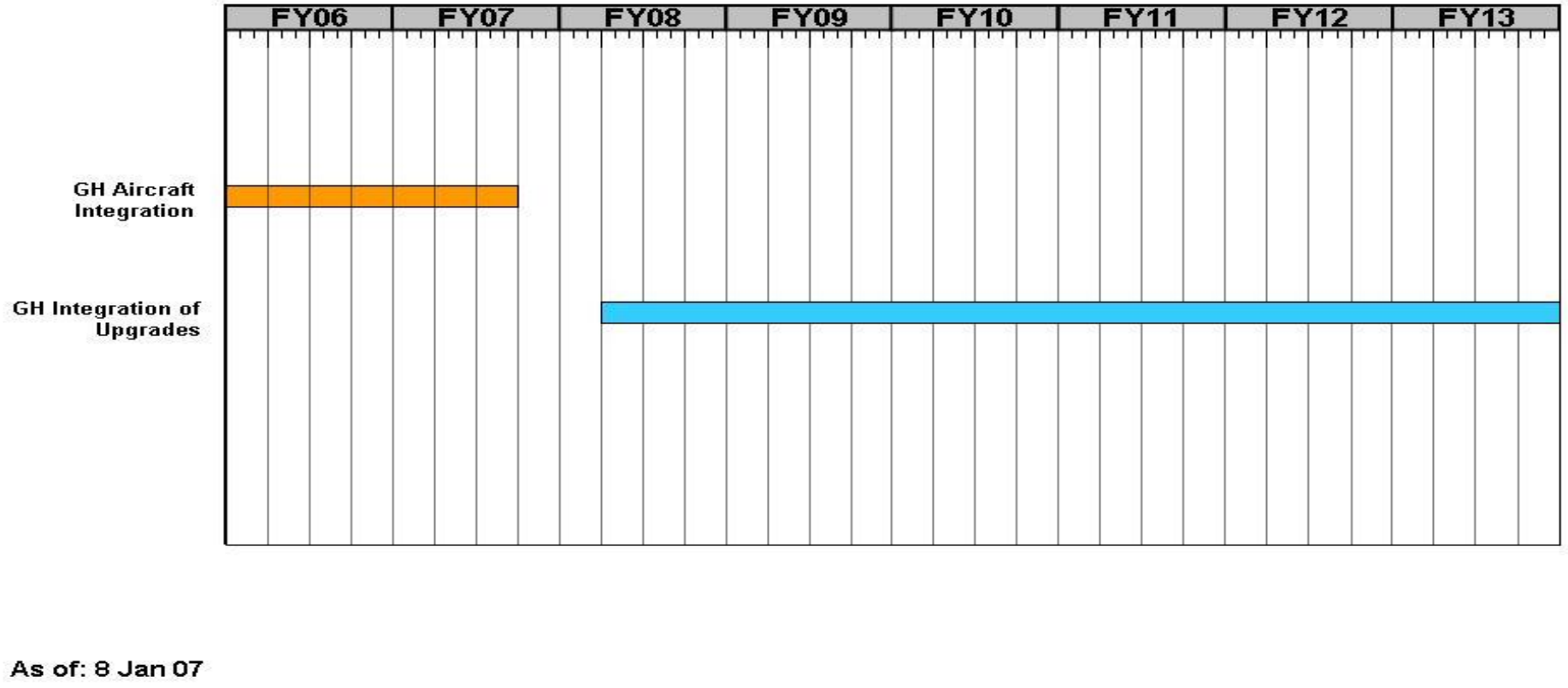

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5184 RQ-4 (Airborne SIGINT Development - Global Hawk**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) GH Sensor Chassis Int & Factory Acceptance Test	1-4Q	1-3Q		
(U) GH SIGINT Upgrades			1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5185 Compass Bright (Airborne SIGINT Development - Compass Bright)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.387	8.219	8.584	8.848	9.100	9.276	9.456	9.650	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force-specific SIGINT and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals. It is the only USAF program that pursues SIGINT and RF MASINT technology transition. Funds were reduced in FY06 from previous submissions due to higher USAF priorities.

(U) The COMPASS BRIGHT program objective is to develop technologies for application in SIGINT and RF MASINT systems/subsystems. Acquisition and production of these developed technologies will occur within the appropriate platform programs.

(U) Compass Bright projects are selected through a data call process whereby the USAF evaluates proposals from the labs and industry to select those projects that are most promising. This process is completed the year prior to award.

(U) This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue COMPASS BRIGHT development projects in the signals intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) areas		7.377	7.735	7.975
(U)	Mission Support, Program Management Activities	0.387	0.842	0.849	0.873
(U)	Total Cost	0.387	8.219	8.584	8.848

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) N/A										

(U) D. Acquisition Strategy

(U) Ongoing COMPASS BRIGHT technology development and demonstration contracts will continue through existing laboratory relationships and other existing contractual vehicles, with future development projects emphasizing full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**

PROJECT NUMBER AND TITLE: **5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Various	Various	AFRL		0.000	Jan-06	7.377	Jan-07	7.735	Jan-08	7.975	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		7.377		7.735		7.975		Continuing	TBD	TBD
Remarks:														
(U) Management														
ASC/303 AESW (Aeronautical Systems Wing)		WPAFB, OH		0.387		0.842		0.849		0.873		Continuing	TBD	TBD
Subtotal Management			0.000	0.387		0.842		0.849		0.873		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.387		8.219		8.584		8.848		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5185 Compass Bright (Airborne SIGINT Development - Compass Bright)

Compass Bright

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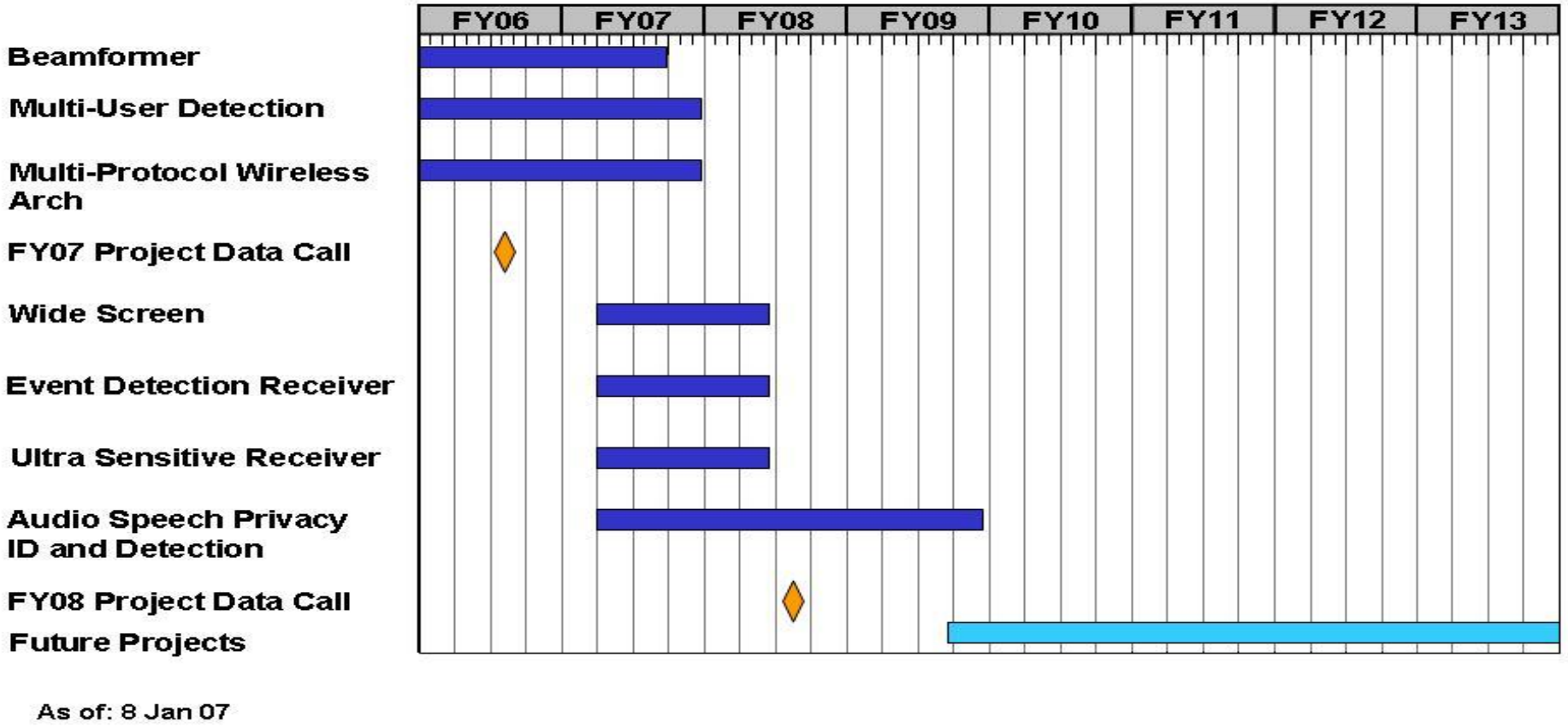

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE: **5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Beamformer	1-4Q	1-3Q		
(U) Multi-User Detection Demo	1-4Q	1-4Q		
(U) Multi-Protocol Wireless Architecture Demo	1-4Q	1-4Q		
(U) FY07 Proposal Calls	3Q			
(U) Wide Screen		2-4Q	1-2Q	
(U) Event Detection Receiver		2-4Q	1-2Q	
(U) Ultra Sensitive Receiver		2-4Q	1-2Q	
(U) Audio Speech privacy ID and Detection (ASPID)		2-4Q	1-4Q	1-4Q
(U) FY08 Proposal Call		3Q		

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	4.212	5.047	5.560	6.821	14.167	12.656	5.154	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) This project will be used to fund SIGINT development efforts in programs such as SENIOR SCOUT, Small UAVs and others.

(U) A. Mission Description and Budget Item Justification

(U) This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities on Senior Scout and other classified platforms. Through extensive utilization of COTS-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) Senior Scout development efforts will include antenna improvements, sensitivity upgrades, and radio frequency distribution upgrades. Additionally, development will begin to allow this platform to network with other SIGINT assets to increase collection accuracy.

(U) This project provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on various platforms as funding permits.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Signals Intelligence (SIGINT) Sensor Integration		4.212	5.047	5.560
(U) Total Cost	0.000	4.212	5.047	5.560

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) 0503115F		3.474	3.808	3.926	4.024	4.076	4.166	4.257	Continuing	TBD

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to various classified platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
SIGINT Sensor Integration	Various	Sierra Nevada, Reno, NV		0.000		4.212	Jan-07	5.047	Jan-08	5.560	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		4.212		5.047		5.560		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		4.212		5.047		5.560		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

U.S. AIR FORCE

Special Projects Schedule

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Sensor Development on Senior Scout		1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305099F
PE TITLE: Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	6.760	6.595	6.681	6.328	6.179	5.921	6.035	6.159	Continuing	TBD
4689 Global Access Architecture	6.760	6.595	6.681	6.328	6.179	5.921	6.035	6.159	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM): the Air Force (AF) program is designed to ensure that all AF acquisitions and modifications conform to appropriate CNS/ATM and Navigation Safety performance requirements to enable access to worldwide civil managed airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The 853rd Electronic Systems Group (ELSG) supports CNS/ATM as the AF's central focal point for identifying, analyzing, and evaluating civil operational airspace requirements, as well as identifying, analyzing, and evaluating the technical performance requirements of the CNS capabilities necessary to enable access to civil managed airspace. Additionally, 853 ELSG supports AF aircraft Single Managers in verifying the system's end-to-end performance for each CNS capability integrated into AF aircraft. Per AFPD 63-13, 853 ELSG will develop and maintain CNS/ATM performance matrices used to identify specific CNS/ATM requirements for each AF aircraft. The Group will provide acquisition and engineering support services through the entire acquisition framework to include development of technical architectures, program management reviews and test planning. Additionally, the Group will develop and award Indefinite Delivery/Indefinite Quantity contracts for centralized procurement and sustainment of CNS/ATM and Nav Safety products and promote commonality of CNS equipment and architectures between aircraft. The Group will also participate in the development of Operational Safety, Suitability and Effectiveness assurance and Airworthiness Certification Plans. Dual-use capabilities of avionics to satisfy both civil and military CNS/ATM requirements will be explored as well as enhancements to net-centric concepts. 853 ELSG will continue projections of studies and prototyping efforts necessary to ensure AF aircraft are postured to meet current civil standards and future changes to civil standards leading to the concept of free flight. No other program satisfies civil CNS/ATM initiatives. This program is assigned Budget Activity 7, Operational Systems Development.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	7.139	7.679	7.869	7.978
(U) Current PBR/President's Budget	6.760	6.620	6.609	6.244
(U) Total Adjustments	-0.379			
(U) Congressional Program Reductions	-0.196			
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer	-0.183			
(U) Significant Program Changes:				

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**

FY06: Global Air Traffic Management (GATM) name changed to Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM). FY06/09: Reductions due to reprogramming to higher DoD priorities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4689 Global Access Architecture	6.760	6.595	6.681	6.328	6.179	5.921	6.035	6.159	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM): the Air Force (AF) program is designed to ensure that all AF acquisitions and modifications conform to appropriate CNS/ATM and Navigation Safety performance requirements to enable access to worldwide civil managed airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The 853rd Electronic Systems Group (ELSG) supports CNS/ATM as the AF's central focal point for identifying, analyzing, and evaluating civil operational airspace requirements, as well as identifying, analyzing, and evaluating the technical performance requirements of the CNS capabilities necessary to enable access to civil managed airspace. Additionally, 853 ELSG supports AF aircraft Single Managers in verifying the system's end-to-end performance for each CNS capability integrated into AF aircraft. Per AFPD 63-13, 853 ELSG will develop and maintain CNS/ATM performance matrices used to identify specific CNS/ATM requirements for each AF aircraft. The Group will provide acquisition and engineering support services through the entire acquisition framework to include development of technical architectures, program management reviews and test planning. Additionally, the Group will develop and award Indefinite Delivery/Indefinite Quantity contracts for centralized procurement and sustainment of CNS/ATM and Nav Safety products and promote commonality of CNS equipment and architectures between aircraft. The Group will also participate in the development of Operational Safety, Suitability and Effectiveness assurance and Airworthiness Certification Plans. Dual-use capabilities of avionics to satisfy both civil and military CNS/ATM requirements will be explored as well as enhancements to net-centric concepts. 853 ELSG will continue projections of studies and prototyping efforts necessary to ensure AF aircraft are postured to meet current civil standards and future changes to civil standards leading to the concept of free flight. No other program satisfies civil CNS/ATM initiatives. This program is assigned Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue operational requirements analysis, demonstration, and evaluation	1.104	1.122	1.122	1.122
(U) Continue development of common avionics and technologies	2.027	1.937	1.937	1.754
(U) Continue acquisition of ID/IQ aviation equipment	0.964	0.840	0.840	0.840
(U) Continue Nav/Safety and GPS/NAVWAR integration and interoperability evaluations	0.593	0.510	0.506	0.506
(U) Continue system architechure definitions, development, and certification	2.072	2.211	2.204	2.022
(U) Total Cost	6.760	6.620	6.609	6.244

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**	PROJECT NUMBER AND TITLE **4689 Global Access Architecture**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) The methodology used to attain CNS/ATM capabilities as required by the MAJCOMs for each platform varies widely - the estimating and tracking of these costs varies even more from program to program. Funding summary information can only be provided by analyzing the specific platform's budget/PE. Please refer to each particular PE affected by CNS/ATM for funding data.										

(U) D. Acquisition Strategy

CNS/ATM acquisition strategy enables 853 ELSG to guide CNS/ATM and Nav Safety equipment procurements for AF aircraft Single Managers. 853 ELSG will ensure standardization and support airworthiness certification of AF platforms/systems that operate in the national and global air traffic environments. The Group will collaborate on performance assessment efforts, provide technical expertise and interface with appropriate product/support centers, battle labs, and Department of Defense research and development facilities in the execution of assigned tasks. Program Research and Development Agreements (PDRAs), Cooperative Research and Development Agreements (CDRAs), and Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts will be competitively awarded.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**

PROJECT NUMBER AND TITLE: **4689 Global Access Architecture**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
MIT	FFP		6.056	0.800	Oct-05	0.287	Oct-06	0.286	Oct-07	0.270	Oct-07	Continuing	TBD	
Honeywell	FFP		2.745									Continuing	TBD	
Allied Signal	FFP		1.975									0.000	1.975	
Rockwell Collins	FFP		1.504									Continuing	TBD	
MITRE Corporation	CPAF		13.887	3.150	Oct-05	3.099	Oct-06	3.097	Oct-07	2.926	Oct-07	Continuing	TBD	
Horizons Technology Inc	FFP		3.974									Continuing	TBD	
TASC	CPFF		0.728									0.000	0.728	
Smiths Industries	FFP		0.194									Continuing	TBD	
SAIC	T&M		0.530									0.000	0.530	
ARINC Inc	FFP		0.946									Continuing	TBD	
Lockheed Martin	CPAF		0.159									0.000	0.159	
Bremmer Associates	FFP		0.729									0.000	0.729	
Northop Grumman	CPAF		2.499									0.000	2.499	
MCR	IDIQ		1.948	0.206	May-05	0.216	May-06	0.217	May-07	0.200	May-08	Continuing	TBD	
Federal Tech Services	FFP		0.300									0.000	0.300	
DISA/DIT	FFP											Continuing	TBD	
ACS Defense			4.133	1.719	May-05	1.663	May-06	1.661	May-07	1.574	May-08		10.750	
Various	various		3.326	0.565		0.916		0.909		0.860		Continuing	TBD	
Subtotal Product Development			45.633	6.440		6.181		6.170		5.830		Continuing	TBD	0.000
Remarks:														
(U) Support														
MITRE Corporation			1.369									Continuing	TBD	
Various	Various		1.828	0.320		0.439		0.439		0.414		Continuing	TBD	
Subtotal Support			3.197	0.320		0.439		0.439		0.414		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
412th FLTS (Edwards AFB)			0.111									Continuing	TBD	
Subtotal Test & Evaluation			0.111	0.000		0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			48.941	6.760		6.620		6.609		6.244		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

853d ELSG Master Schedule NT

As of 1 July 06

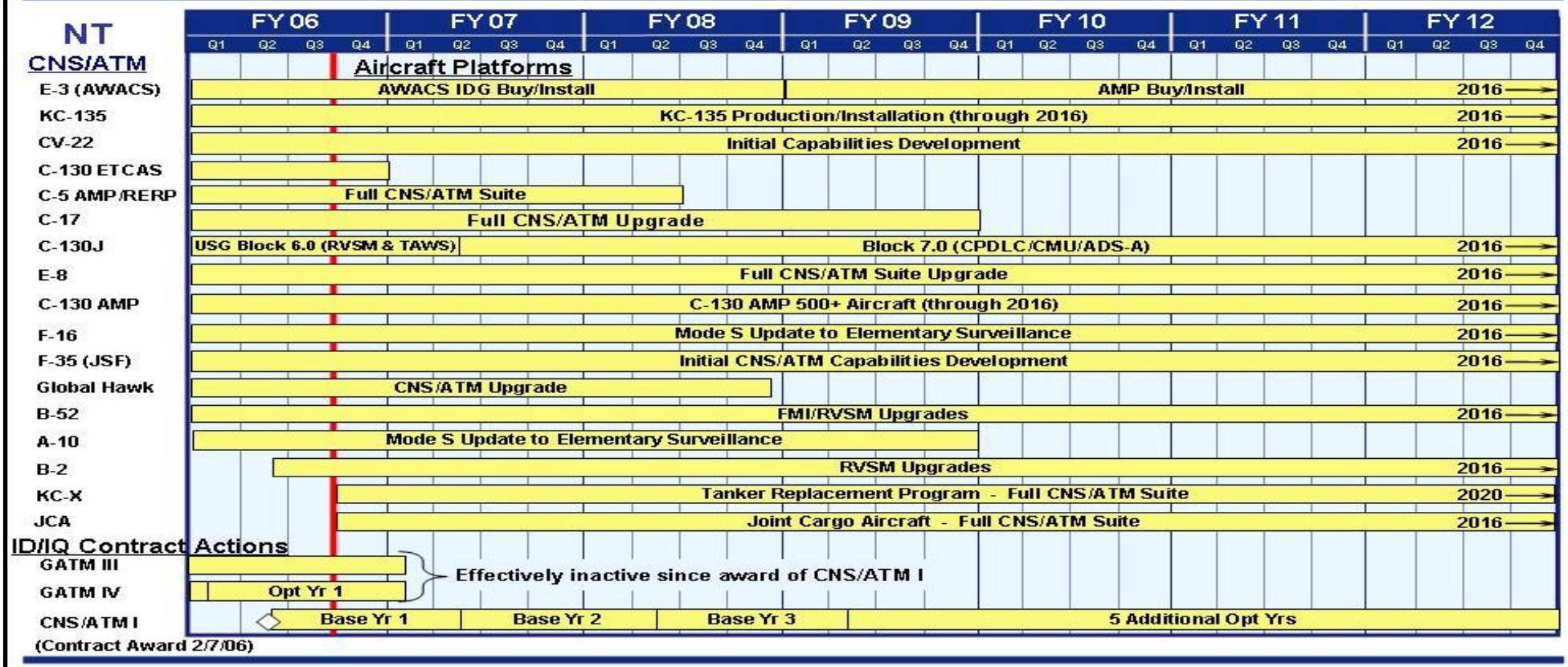

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Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

U.S. AIR FORCE

Long Term Schedule

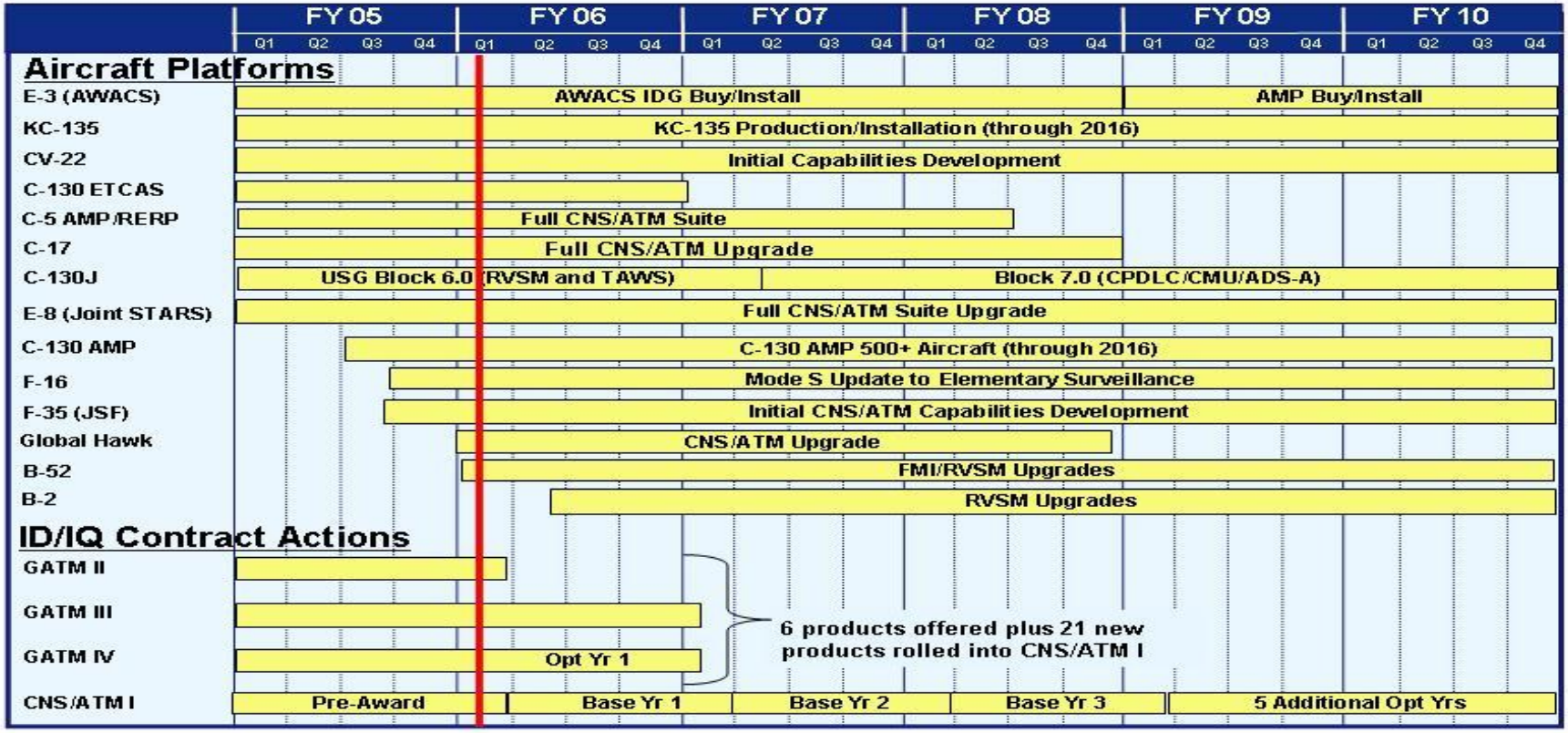

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Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

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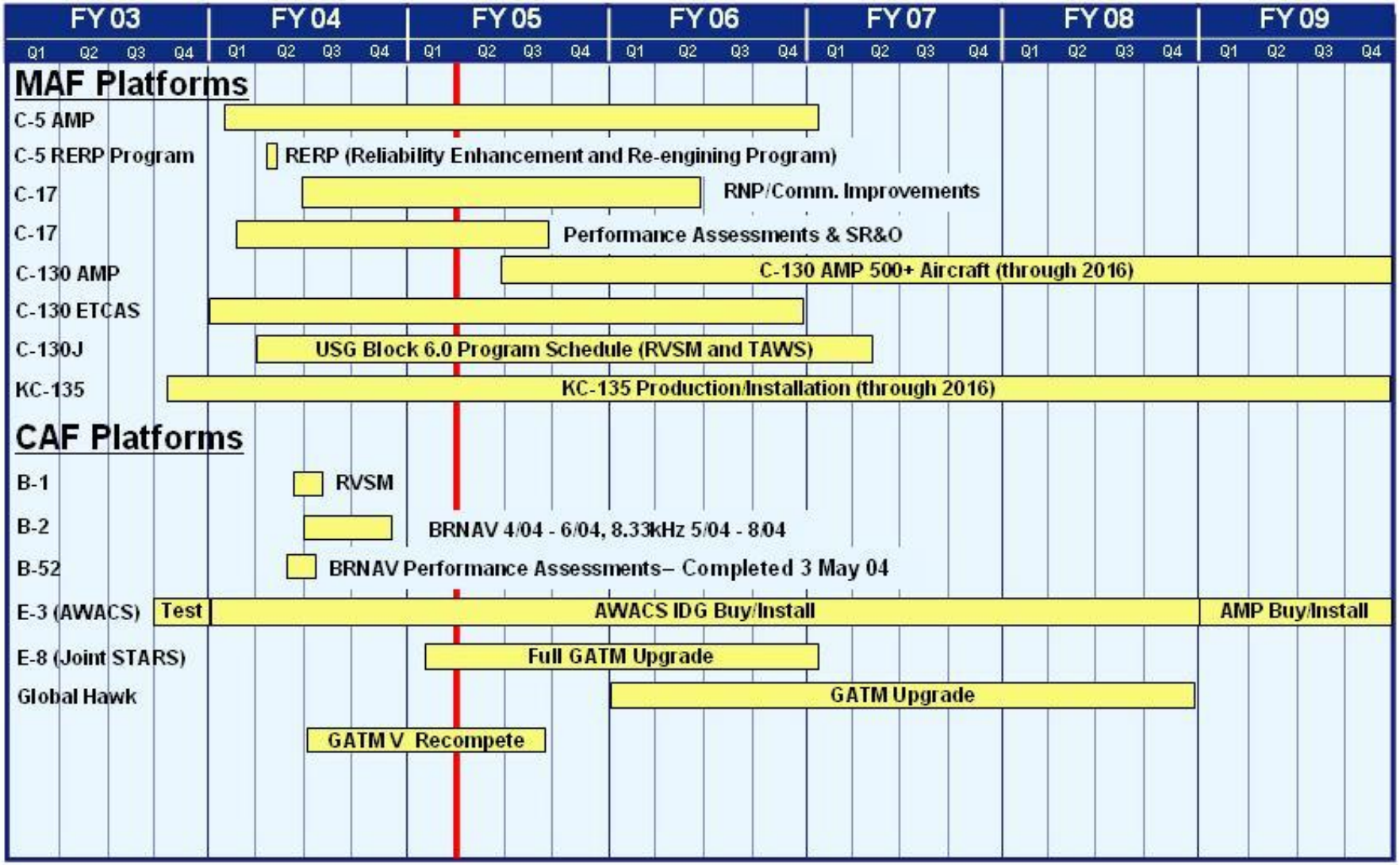

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**	PROJECT NUMBER AND TITLE **4689 Global Access Architecture**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) System Architecture Definitions	1-4Q	1-4Q	1-4Q	1-4Q
(U) Operational Requirements Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) Development of common avionics and technologies	1-4Q	1-4Q	1-4Q	1-4Q
(U) Acquisition of ID/IQ equipment	1-4Q	1-4Q	1-4Q	1-4Q
(U) GPS/NAVWAR Integration Activities	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305110F
PE TITLE: Satellite Control Network

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	24.609	19.783	27.256	17.005	19.316	17.171	17.501	17.857	Continuing	TBD
3276 Satellite Control Network	24.609	19.783	27.256	17.005	19.316	17.171	17.501	17.857	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters USAF-approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for DoD to deploy and operate its satellites. AFSCN provides the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational and future satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Global SATCOM (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and National Oceanic and Atmospheric Administration (NOAA) satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. We will also examine the capability of phased array antenna in the RBC upgrade. Additionally, interoperability efforts to address standards and protocols and external

user connectivity are included in this segment.

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastructure for a multi-domain and web-based system.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	31.170	19.907	17.501	16.798
(U)	Current PBR/President's Budget	24.609	19.783	27.256	17.005
(U)	Total Adjustments	-6.561	-0.124		
(U)	Congressional Program Reductions		-0.049		
	Congressional Rescissions	-0.003	-0.075		
	Congressional Increases				
	Reprogrammings	-5.669			
	SBIR/STTR Transfer	-0.889			

(U) Significant Program Changes:

FY06: Below Threshold Reprogrammings for higher Air Force priorities

FY08: Increase (+9.5M) to complete high power amplifier development and continue tracking station upgrades

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE: 3276 Satellite Control Network	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3276	Satellite Control Network	24.609	19.783	27.256	17.005	19.316	17.171	17.501	17.857	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters USAF-approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for DoD to deploy and operate its satellites. AFSCN provides the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational and future satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Global SATCOM (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and National Oceanic and Atmospheric Administration (NOAA) satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. We will also examine the capability of phased array antenna in the RBC upgrade. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE: 3276 Satellite Control Network

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastucture for a multi-domain and web-based system.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Range Upgrades: continue upgrades to include development of interoperability and RTS Block Change efforts. Participate in demo of phased array antenna applicability to RBC effort. Continue predeployment system engineering and network integration.	17.181	14.119	20.369	9.707
(U)	Network Operations Upgrades: continue upgrades to network operations to include development of Orbit Analysis Subsystem follow-on upgrade, enterprise management, information assurance, and predeployment system engineering and network integration.	0.700	2.000	3.200	3.600
(U)	Program support, to include System Program Office operations, SETA, FFRDC and Systems Engineering and Integration	4.265	3.664	3.687	3.698
(U)	Conduct research into technical feasibility of augmenting AFSCN capabilities with commercial satellite control antennas (Civil Reserve Space Service -- CRSS)	2.463			
(U)	Total Cost	24.609	19.783	27.256	17.005

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF, Electronics & Telecom Equipment (BA 03, PE 0305110F, P-64)	50.251	84.971	50.268	66.282	63.527	66.160	67.459	68.796	Continuing	TBD
(U) OPAF, Initial Spares & Repair Parts (BA 05 PE 0305110F, P-103)	3.567	3.551	0.000	0.000	0.000	0.000	0.000	0.000	0.000	18.098

(U) D. Acquisition Strategy

The AF uses the competitively awarded Satellite Control Network Contract (SCNC), managed by Space and Missile System Center, to modernize and sustain the AFSCN on a non-interference basis as it continues to support operational, RDT&E, and other designated users.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305110F Satellite Control Network

PROJECT NUMBER AND TITLE: 3276 Satellite Control Network

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Satellite Control Network Contract	C/CPAF	Honeywell, Colorado Springs, CO	61.699	17.881	Jan-06	16.119	Dec-06	23.569	Dec-07	13.453	Dec-08	Continuing	TBD	TBD
Congressional increase for Civil Reserve Space Service	various	various	4.275	2.463	Sep-06	0.000							6.738	TBD
Subtotal Product Development			65.974	20.344		16.119		23.569		13.453		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Support (FFRDC, SETA, SPO ops)	various	various	65.974	4.265	Dec-05	3.664	Dec-06	3.687	Dec-07	3.552	Dec-08	Continuing	TBD	TBD
Subtotal Support			65.974	4.265		3.664		3.687		3.552		Continuing	TBD	TBD
Remarks:														
(U) Subtotal additional reprogrammings														
(U) Total Cost			131.948	24.609		19.783		27.256		17.005		Continuing	TBD	TBD
Remarks:														

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2007

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305110F Satellite Control Network	3276 Satellite Control Network

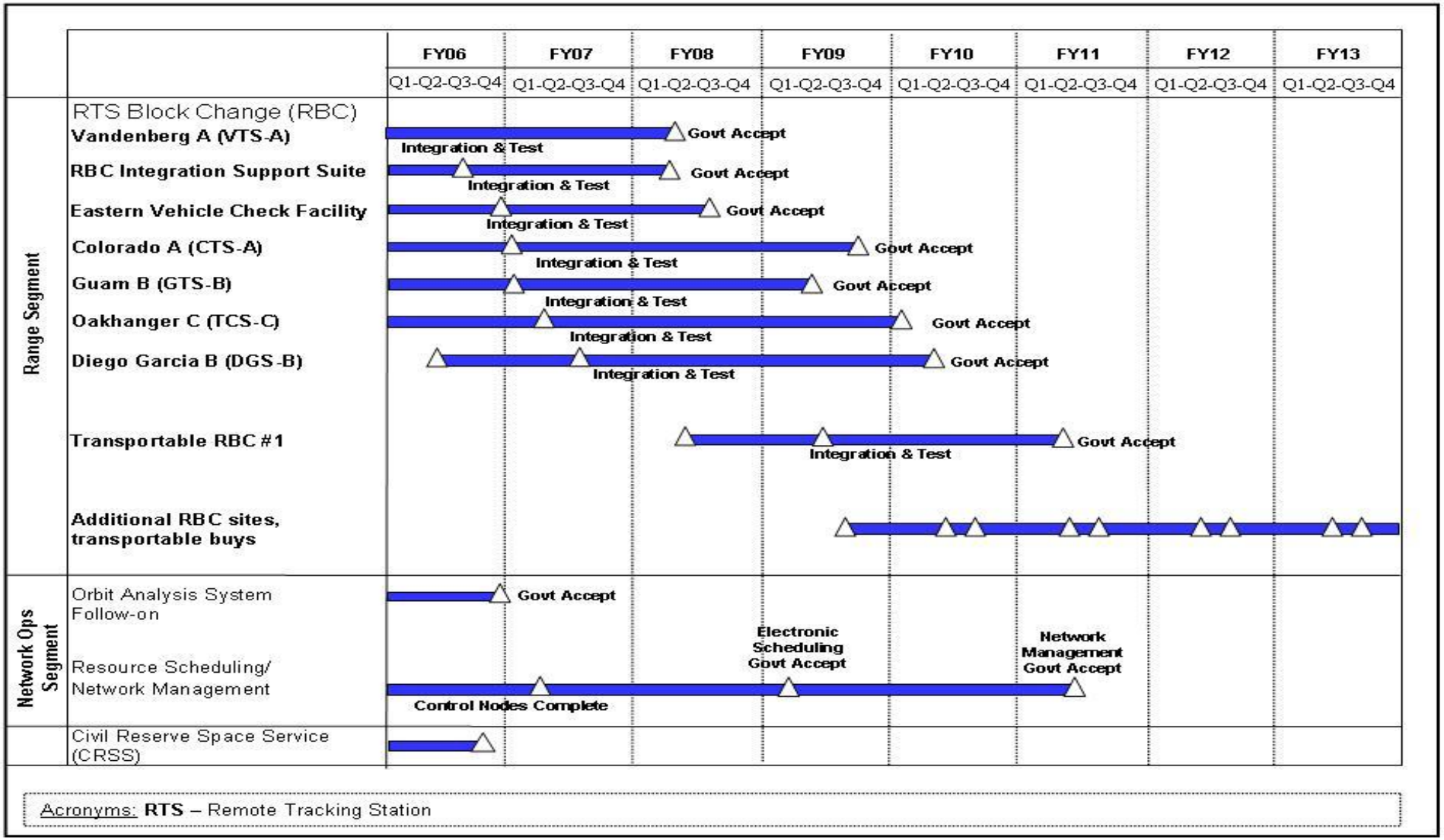

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305110F Satellite Control Network**	PROJECT NUMBER AND TITLE **3276 Satellite Control Network**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) RANGE UPGRADES (Remote Tracking Station (RTS) Block Change)				
(U) - Vandenberg RTS Gov't acceptance			2Q	
(U) - RBC Integration Support Suite Gov't acceptance			2Q	
(U) - Eastern Vehicle Check Facility			3Q	
(U) - Begin Diego Garcia RTS block change	2Q			
(U) - Begin Transportable RBC #1			2Q	
(U) - Begin New Boston RTS block change				2Q
(U) NETWORK OPERATIONS UPGRADES				
(U) - Orbit Analysis System Follow-on Gov't acceptance	4Q			
(U) - Resource Scheduling control nodes upgrade complete		2Q		
(U) - Electronic Scheduling Gov't acceptance				2Q

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PE NUMBER: 0305111F
PE TITLE: WEATHER SERVICE

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	Continuing	TBD
2738 Weather Service	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of space and terrestrial weather data and produces decision-quality information for warfighters. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	28.222	34.899	41.555	52.545
(U)	Current PBR/President's Budget	27.505	35.701	39.747	47.829
(U)	Total Adjustments	-0.717	0.802		
(U)	Congressional Program Reductions		-0.014		
	Congressional Rescissions		-0.135		
	Congressional Increases		1.000		
	Reprogrammings	-0.020			
	SBIR/STTR Transfer	-0.697			

(U) Significant Program Changes:

FY07: Congressional plus-up of $1.0M for Airborne Meteorological Data Reporting Modernization

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2738 Weather Service	27.505	35.701	39.747	47.829	43.492	39.150	39.754	41.075	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for battlespace situational awareness. The AFWWS supports worldwide operations of Air Force and Army warfighters, Special Operation Forces (SOF), and other government agencies with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide. WDA provides a net-centric infrastructure that assimilates worldwide sources of space and terrestrial weather data and produces decision-quality information for warfighters. Weather Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution. Additionally, WDA and Forecasting capabilities will be expanded to integrate and exploit data from a new generation of environmental sensing satellites. PT/WA provides timely, target-scale weather information to operational commanders for a given Area of Responsibility, and at tactical levels, provides front-line weather information to warfighters in support of combat operations. PT/WA supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) WDC: Includes AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.	0.338	0.338	0.338	0.338
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.	6.479	11.844	9.996	10.740
(U) Forecasting: Continues integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.	12.894	14.367	12.145	16.388
(U) PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems. In FY08/09 realigned funds within PE 0305111F in response to government cost estimates and March 06 contract award--no increase in total program funding.	7.794	8.152	17.268	20.363

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE 2738 Weather Service

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Airborne Meteorological Data Reporting Modernization: Develops airborne weather sensors on Unmanned Aerial Vehicles (UAVs)		1.000		
(U) Total Cost	27.505	35.701	39.747	47.829

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF, Weather Service (PE 0305111F WSC 833070, 838010, and 86190A)	47.851	54.754	50.408	60.536	46.155	46.732	44.364	42.509	Continuing	TBD
(U) Operations and Maintenance	126.654	135.066	142.978	148.236	156.044	157.384	160.524	164.388	Continuing	TBD

Includes congressional plus-up of $3.3M of Other Procurement, AF in FY07.

(U) D. Acquisition Strategy

AFWWS employs an incremental development strategy with a series of incremental Initial Operational Capabilities (IOCs) and software releases to enable rapid development and fielding of capabilities using full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305111F WEATHER SERVICE

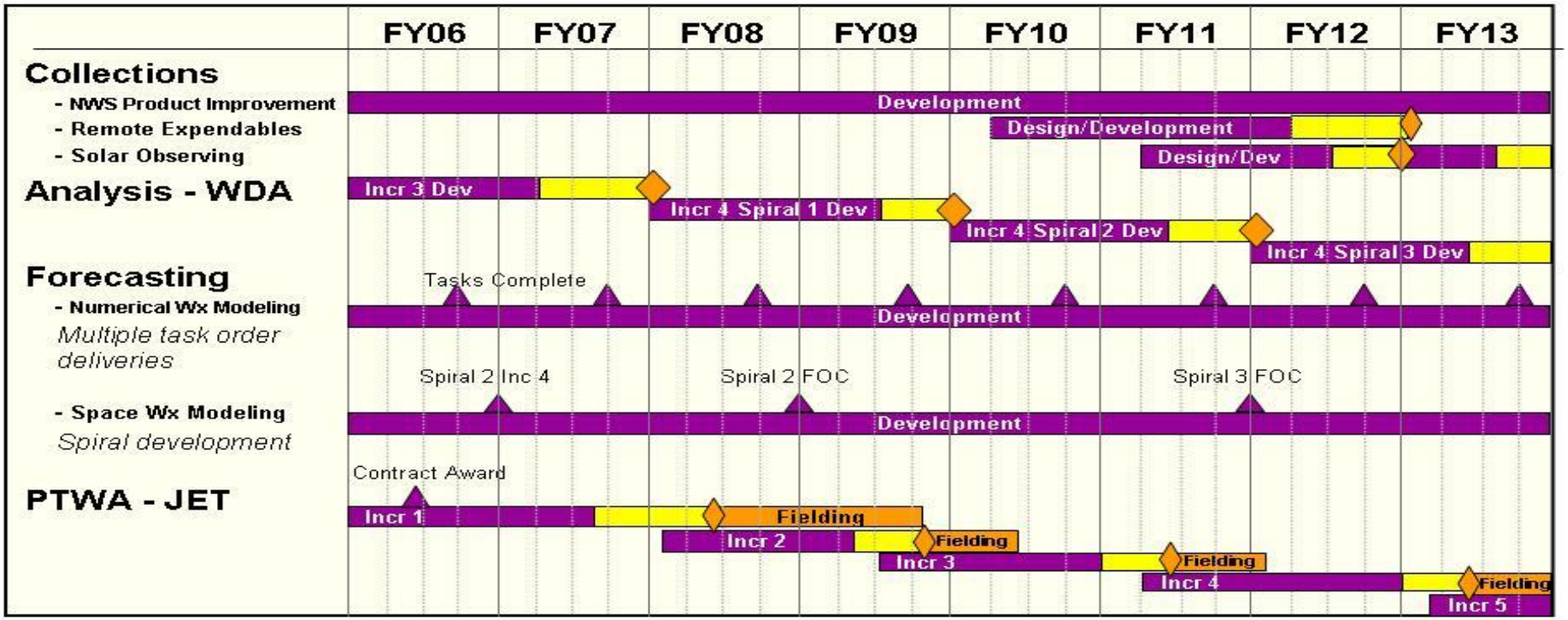
PROJECT NUMBER AND TITLE: 2738 Weather Service

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Northrop Grumman	C/CPAF	Bellevue, NE	0.000	5.556	Feb-06	5.932	Nov-06	2.427	Nov-07	2.417	Nov-08	Continuing	TBD	TBD
Raytheon Technical Services	C/CPFF	Bellevue, NE	3.793	3.542	Aug-06	6.223	Oct-06	1.665	Oct-07	1.909	Oct-08	Continuing	TBD	TBD
Raytheon Information & Intelligence Systems	C/CPAF	Bellevue, NE	0.000	5.543	Mar-06	5.332	Jun-07	14.200	Jun-08	17.200	Jun-09	Continuing	TBD	TBD
Harris Corporation	C/FFP	Bellevue, NE	0.000	1.694	Jun-06							0.000	1.694	TBD
TBD [METSAT Data Exploitation]								4.667	Jan-08	5.100	Jan-09	Continuing	TBD	TBD
TBD [C2 Integration]						3.167	May-07					0.000	3.167	TBD
TBD [Airborne Meteorological Data Reporting Modernization]						1.000	Jun-07					0.000	1.000	TBD
National Center for Atmospheric Research	MIPR	Boulder, CO	1.215	3.565	Mar-06	3.684	Jan-07	4.500	Jan-08	6.646	Jan-09	Continuing	TBD	TBD
National Aeronautics & Space Administration	MIPR	Greenbelt, MD	0.000	1.414	Feb-06	1.800	Jan-07	2.400	Jan-08	2.500	Jan-09	Continuing	TBD	TBD
Various	various	various	7.844	3.323	Oct-05	4.929	Oct-06	3.887	Oct-07	5.691	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			12.852	24.637		32.067		33.746		41.463		Continuing	TBD	TBD
Remarks:														
(U) Management														
Electronic Sytems Center		Hanscom AFB, MA	5.841	2.483	Oct-05	3.224	Oct-06	5.581	Oct-07	5.896	Oct-08	Continuing	TBD	TBD
Space & Missile Systems Center		Los Angeles AFB, CA	0.450	0.095	Oct-05	0.020	Oct-06	0.020	Oct-07	0.020	Oct-08	Continuing	TBD	TBD
Air Force Research Laboratory		Hanscom AFB, MA	0.235	0.290	Oct-05	0.390	Oct-06	0.400	Oct-07	0.450	Oct-08	Continuing	TBD	TBD
Subtotal Management			6.526	2.868		3.634		6.001		6.366		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			19.378	27.505		35.701		39.747		47.829		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE 2738 Weather Service

PE 0305111F Weather Service

As of 10 Jan 07



Note: NWS product improvements, Forecasting, and SWAFS are operational and being upgraded through incremental development activities.

Design / development
Production / fielding
Integration / test
Key events

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) WDC NWS Product Improvement Effort (Note 1)	1-4Q	1-4Q	1-4Q	1-4Q
(U) WDA Increment 3 Delivery			1Q	
(U) Forecasting Tasks Complete	3Q	3Q	3Q	3Q
(U) Forecasting - SWAFS Spiral 2 Increment 4 IOC	4Q			
(U) Forecasting - SWAFS Spiral 2 Full Operational Capability			4Q	
(U) PT/WA Final JET Down-Select	2Q			
(U) PT/WA - JET Increment 1 IOC			2Q	
(U) PT/WA - JET Increment 2 IOC			4Q	

Note 1: AF participation with National Weather Service (NWS) and Federal Aviation Administration (FAA) in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar (NEXRAD).

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PE NUMBER: 0305114F
PE TITLE: Air Traffic Control/Approach/Landing System (ATCALS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	5.908	3.467	4.672	4.686	3.619	3.128	3.188	3.253	Continuing	TBD
3587 Air Traffic Control Systems	5.908	3.467	4.672	4.686	3.619	3.128	3.188	3.253	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program funds research, development, and management of new air traffic control surveillance, positioning, and precision approach capabilities. This project includes the Mobile Approach Control System (MACS) which will replace non-standard, unsupportable, large footprint mobile radar approach systems with a common, easily-transportable system for use by both the Air National Guard and active duty AF. Funding is also provided for the Transportable Transponder Landing System (TTLS) which will provide a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions. This project also funds the Air Traffic Control and Landing Systems (ATCALS) Transformation initiative which combines organizational realignments, process improvements, and investments in technology to update 20+ year old fixed and deployable ATCALS equipment. These investments will result in significant manpower and operations / maintenance savings over the next 20 years. This initiative includes development of a deployable Instrument Landing System (ILS) and updates to fixed and deployable precision and non-precision approach control equipment such as, but not limited to, Tactical Air Navigation (TACAN), Very High Frequency Omnidirectional Range (VOR), and Air Traffic Control Radios. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide air traffic control (ATC) services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the Federal Aviation Administration (FAA) plans to implement new or improved capabilities into the NAS in an evolutionary manner. Included in the FAA improvements are upgrades to the Notice To Airman (NOTAM) program. The NOTAMS program provides timely information regarding the status of airfield equipment and operations, as well as the status of enroute navigational aids. Finally, the ATCALS program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2010 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM), implementation of Automatic Dependent Surveillance-Broadcast (ADS-B) and development of remote ATC Tower capabilities.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Control/Approach/Landing System (ATCALS)

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.169	0.000	0.000	2.608
(U)	Current PBR/President's Budget	5.908	3.467	4.672	4.686
(U)	Total Adjustments	3.739	3.467		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.013		
	Congressional Increases		3.480		
	Reprogrammings	3.800			
	SBIR/STTR Transfer	-0.061			

(U) Significant Program Changes:

FY06: Congressional add of $2.2M for the Transportable Transponder Landing System (TTLS).

FY07: Congressional adds of $1.88M for the Transportable Transponder Landing System (TTLS) and $1.6M for the FAA NOTAMS Program.

FY06/FY07: Completion of Mobile Approach Control System (MACS) testing efforts anticipated to be funded with reprogrammed funds in execution years. $3.8M reprogrammed in FY06.

FY08/FY09: Funds added to begin ATCALS Transformation development.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)	PROJECT NUMBER AND TITLE: 3587 Air Traffic Control Systems

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3587 Air Traffic Control Systems	5.908	3.467	4.672	4.686	3.619	3.128	3.188	3.253	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program funds research, development, and management of new air traffic control surveillance, positioning, and precision approach capabilities. This project includes the Mobile Approach Control System (MACS) which will replace non-standard, unsupportable, large footprint mobile radar approach systems with a common, easily-transportable system for use by both the Air National Guard and active duty AF. Funding is also provided for the Transportable Transponder Landing System (TTLS) which will provide a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions. This project also funds the Air Traffic Control and Landing Systems (ATCALS) Transformation initiative which combines organizational realignments, process improvements, and investments in technology to update 20+ year old fixed and deployable ATCALS equipment. These investments will result in significant manpower and operations / maintenance savings over the next 20 years. This initiative includes development of a deployable Instrument Landing System (ILS) and updates to fixed and deployable precision and non-precision approach control equipment such as, but not limited to, Tactical Air Navigation (TACAN), Very High Frequency Omnidirectional Range (VOR), and Air Traffic Control Radios. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide air traffic control (ATC) services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the Federal Aviation Administration (FAA) plans to implement new or improved capabilities into the NAS in an evolutionary manner. Included in the FAA improvements are upgrades to the Notice To Airman (NOTAM) program. The NOTAMS program provides timely information regarding the status of airfield equipment and operations, as well as the status of enroute navigational aids. Finally, the ATCALS program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2010 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM), implementation of Automatic Dependent Surveillance-Broadcast (ADS-B) and development of remote ATC Tower capabilities.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Perform Transportable Transponder Landing System (TTLS) Demonstrations	2.108	1.880		
(U) FAA NOTAMs Program		1.587		
(U) Continue Mobile Approach Control System (MACS) development/test	3.800		0.500	
(U) Begin ATCALS Transformation Development			4.172	4.686
(U) Total Cost	5.908	3.467	4.672	4.686

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) APAF - BA 5 (PE 35114F) Weapon System Code CO2900	3.765			32.000					Continuing	TBD
(U) OPAF - BA 3 (PE 0305114F) Weapon System Code 833010	36.073	12.210	12.821	25.354	17.204	0.598	24.465	8.693	Continuing	TBD
(U) OPAF, BA 3, (PE 0305137F) Weapon System Code 833020	59.230	53.421	50.429	53.505	55.021	55.526	55.559	55.331	Continuing	TBD
(U) OPAF, BA 5, (PE 0305137F) Weapon System Code 86190A Initial Spares	5.039	5.388	5.498	5.623	5.864	5.947	6.063	6.183	Continuing	TBD
(U) OPAF - BA 3 (PE 0305114F) Weapon System Code 86190A Initial Spares	2.431	2.775	9.078	2.731	0.926	0.942	0.959	0.978	Continuing	TBD

(U) D. Acquisition Strategy

Award multiple, competitive contract vehicles emphasizing off-the-shelf technology and maximizing the use of non-developmental items (NDIs).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

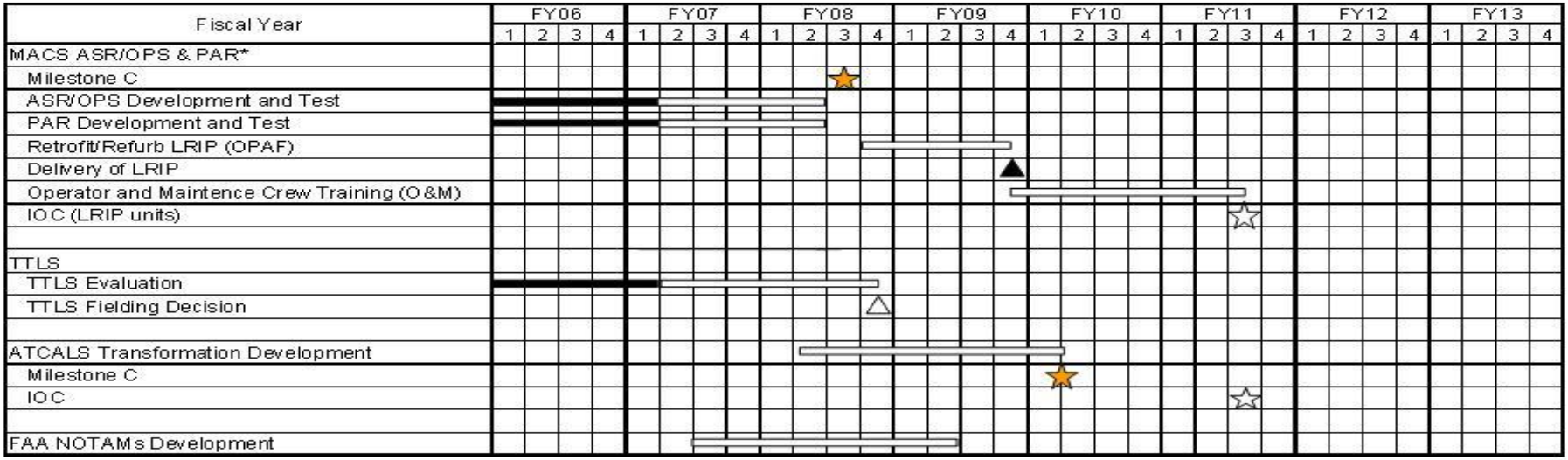
BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**

PROJECT NUMBER AND TITLE: **3587 Air Traffic Control Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Transportable Transponder Landing System (TTLS)	C/FFP	Adv Nav & Positioning Corp; Hood River, OR	2.409	2.108	Sep-06	1.880	Mar-07					0.000	6.397	4.578
NOTAMs Program	TBD	TBD				1.587	Sep-07					0.000	1.587	1.587
Mobile Approach Control System (MACS)	Various	Various	48.944	3.800	Sep-06			0.500	Feb-08			0.000	53.244	53.244
ATCALS Transformation	TBD	TBD						4.172	Feb-08	4.686	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			51.353	5.908		3.467		4.672		4.686		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			51.353	5.908		3.467		4.672		4.686		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**



As of December 2006

IOC
Milestone C
Planned Ongoing Activity
Ongoing Activity that is Complete
Completed Event
Planned Tasks

* FY 07 MACS effort anticipated to be funded with re-programmed funds in execution year

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete MACS ASR operations shelter development/test			2Q	
(U) Complete MACS PAR development/test			2Q	
(U) MACS MS C			3Q	
(U) Begin crew/maintenance personnel training				4Q
(U) Begin TTLS system evaluation	1Q			
(U) Complete TTLS system evaluation			4Q	
(U) Begin ATCALS Transformation development			2Q	
(U) Begin FAA NOTAMs upgrade development		3Q		

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PE NUMBER: 0305116F
PE TITLE: AERIAL TARGETS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305116F AERIAL TARGETS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD
5136 Target Systems Development	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY08, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY08 funding will support trade studies and acquisition planning activities (to include prototyping, as required) to begin the development effort for the Air Superiority Target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	6.547	5.203	5.297	5.348
(U) Current PBR/President's Budget	5.388	5.183	7.376	26.603
(U) Total Adjustments	-1.159	-0.020		
(U) Congressional Program Reductions				
Congressional Rescissions		-0.020		
Congressional Increases				
Reprogrammings	-1.032			
SBIR/STTR Transfer	-0.127			
(U) Significant Program Changes:				

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS

The increase of 2.079M in FY08 and 21.255M in FY09 are due to the start of the Air Superiority Target Program, a full scale follow-on to the QF-4.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5136 Target Systems Development	5.388	5.183	7.376	26.603	35.607	44.263	22.739	17.481	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY08, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate and develop product improvements to improve reliability, reduce cost and provide needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY08 funding will support trade studies and acquisition planning activities (to include prototyping, as required) to begin the development effort for the Air Superiority Target leading to a planned production effort in approximately FY14.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Aerial Targets basic operating support.	2.402	0.453	1.000	1.000
(U) Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems	0.100	0.100	0.100	0.100
(U) Complete Air Superiority Target analysis of alternatives	2.338	0.811	0.000	0.000
(U) Initiate acquisition planning activities and trade studies to support development program for the new Air Superiority Target (AST).	0.000	0.000	2.000	20.455
(U) Continue product improvement program for the Air Force Subscale Aerial Target (AFSAT) program to include payload and propulsion improvements, radar augmentation, and other objective requirements/enhancements	0.548	3.819	4.276	5.048
(U) Total Cost	5.388	5.183	7.376	26.603

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE 5136 Target Systems Development

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE35116F: Appn: Aircraft Procurement, AF(APAF), Program Title: Aerial Targets	78.582	81.743	85.604	90.349	92.412	93.457	95.290	151.549	Continuing	TBD
(U) Initial Spares	0.471	0.384	0.509	0.524	0.537	0.543	0.554	0.565	Continuing	TBD
(U) Munitions	3.569	3.819	3.999	4.147	4.248	4.304	4.389	4.477	Continuing	TBD
(U) Electronic Attack Pods	4.926	5.063	5.575	5.199	5.433	5.607	5.717	5.831	Continuing	TBD

(U) D. Acquisition Strategy

The acquisition strategy is competitive, with cost plus, fixed price and time and materials contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305116F AERIAL TARGETS

PROJECT NUMBER AND TITLE: 5136 Target Systems Development

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AFSAT P3I Efforts	FFP, T&M, CPIF	Composite Engineering Inc., Sacramento CA		0.548	Apr-06	3.819	Feb-07	4.276	Jan-08	5.048	Jan-09		13.691	
AST Risk Reduction., Trade Studies and Development	FFP, T&M, CPXX	TBD						2.000		20.455			22.455	
Subtotal Product Development			0.000	0.548		3.819		6.276		25.503		0.000	36.146	0.000
Remarks: Pre-planned product improvements for the AFSAT Subscale Aerial Target and New Full Scale Aerial Target (Air Superiority Target - AST) Development														
(U) Support														
Mission Support	Various	Various		2.402		0.453		1.000		1.000			4.855	
Subtotal Support			0.000	2.402		0.453		1.000		1.000		0.000	4.855	0.000
Remarks:														
(U) Test & Evaluation														
Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems			0.100	0.100		0.100		0.100		0.100			0.500	
Subtotal Test & Evaluation			0.100	0.100		0.100		0.100		0.100		0.000	0.500	0.000
Remarks:														
(U) Management														
System Acq and Engineering Support	Various	Various		2.338		0.811							3.149	
Subtotal Management			0.000	2.338		0.811		0.000		0.000		0.000	3.149	0.000
Remarks: AST AoA effort														
(U) Total Cost			0.100	5.388		5.183		7.376		26.603		0.000	44.650	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE 5136 Target Systems Development

FOR OFFICIAL USE ONLY

AFSAT Contract Efforts

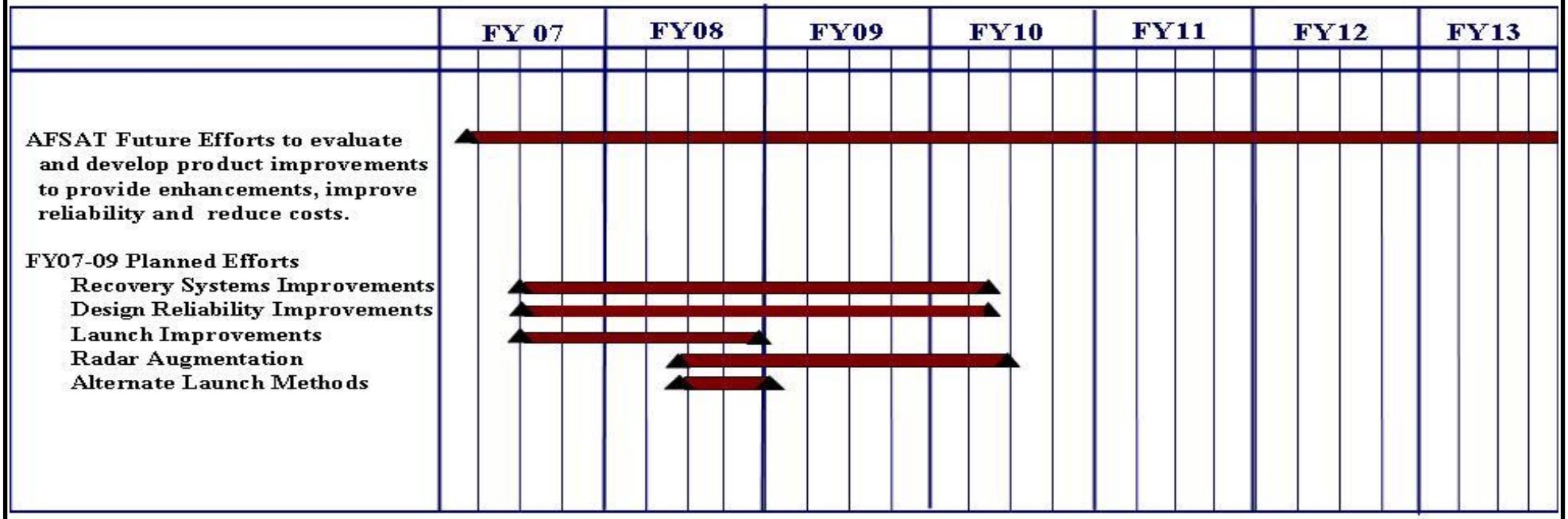

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE 5136 Target Systems Development

FOR OFFICIAL USE ONLY

AST Planned Development Schedule

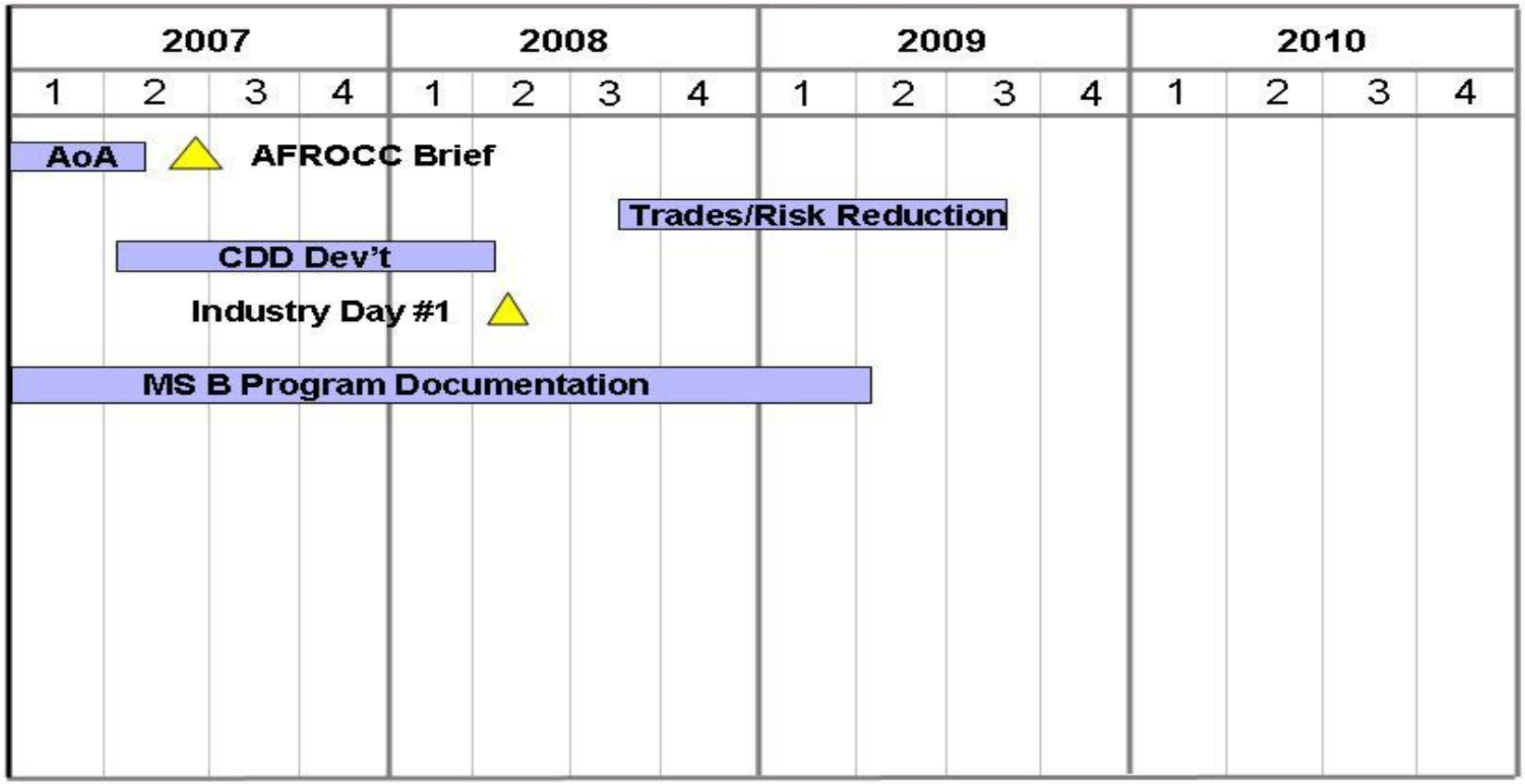

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Recovery System Study		3Q		
(U) Design Reliability Assessment		3Q	1Q	
(U) Launch Improvement Study		3Q		
(U) Radar Augmentation			2Q	
(U) Combo IR/RCS Pod				2Q
(U) Alternate Launch Method Study			2Q	
(U) AST Risk Reduction, Trade Studies and and Development			2Q	

PE NUMBER: 0305128F
PE TITLE: Security And Investigative Activities

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.470	0.507	0.829	0.832	0.844	0.850	0.865	0.884	Continuing	TBD
1931	TECH SURVEIL COUNTER MEAS EQPT	0.470	0.507	0.829	0.832	0.844	0.850	0.865	0.884	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Air Force Office of Special Investigations (AFOSI) conducts specialized investigative activities and force protection support for Air Force (AF) commanders worldwide. This assists AF commanders in protecting their people and resources. AFOSI's mission includes investigating criminal matters affecting AF personnel, contract fraud and economic crimes involving AF weapons systems and spare parts, the investigation of environmental crime, counterdrugs, computer intrusion detection and forensic media analysis of computer crimes. This element supports Technical Surveillance Countermeasures (TSCM), Computer Crime Investigations (CCI), and technical support to criminal and counterintelligence investigations and operations conducted by AFOSI. AFOSI's TSCM mission conducts counterintelligence investigations for both AF and DoD facilities and programs in order to deter and detect technical surveillance operations conducted by Foreign Intelligence Services to compromise classified or sensitive information. The purpose of CCI research is to improve AF and DoD Information Operations capability by enhancing AFOSI's ability to deter or prevent spies, hackers, or saboteurs from manipulating, damaging, or stealing sensitive war fighting data or systems. Failing that, to investigate, identify, and prosecute those who do. While most research to meet operational requirements is Operational System Development, there is also research in the category of Engineering and Manufacturing Development due to a need for modifications to present technology.

The equipment required to provide technical support to investigations is unique and complex. This equipment must be continually updated to provide state-of-the-art capabilities to detect and neutralize criminal activities targeted against the AF and DoD. In an era of advancing technology, reduced manning, and increasingly high level fraud, environmental crime and computer crime investigations, technical investigative equipment must be continuously updated to enable AFOSI special agents to have the most cost effective and best possible means of thwarting criminal acts. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through a global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems.

Critical Infrastructure Protection identifies weaknesses in the Air Force Critical infrastructure, highlights critical countermeasures and acquires and deploys cost-effective solutions. The intent is to provide an Air Force-wide review of current infrastructure vulnerabilities; prioritize AF protection planning and integrate with existing programs; identify gaps based on AF needs; direct studies to refine AF requirements.

This program is in Budget Activity 7, Operational System Development, because its products are primarily for use in investigative activity of an operational nature.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.484	0.509	0.829	0.832
(U)	Current PBR/President's Budget	0.470	0.507	0.829	0.832
(U)	Total Adjustments	-0.014			
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.002		
	Congressional Increases	-0.014			
	Reprogrammings				
	SBIR/STTR Transfer		-0.014		
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
1931	TECH SURVEIL COUNTER MEAS EQPT	0.470	0.507	0.829	0.832	0.844	0.850	0.865	0.884	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Air Force Office of Special Investigations (AFOSI) conducts specialized investigative activities and force protection support for Air Force (AF) commanders worldwide. This assists AF commanders in protecting their people and resources. AFOSI's mission includes investigating criminal matters affecting AF personnel, contract fraud and economic crimes involving AF weapons systems and spare parts, the investigation of environmental crime, counterdrugs, computer intrusion detection and forensic media analysis of computer crimes. This element supports Technical Surveillance Countermeasures (TSCM), Computer Crime Investigations (CCI), and technical support to criminal and counterintelligence investigations and operations conducted by AFOSI. AFOSI's TSCM mission conducts counterintelligence investigations for both AF and DoD facilities and programs in order to deter and detect technical surveillance operations conducted by Foreign Intelligence Services to compromise classified or sensitive information. The purpose of CCI research is to improve AF and DoD Information Operations capability by enhancing AFOSI's ability to deter or prevent spies, hackers, or saboteurs from manipulating, damaging, or stealing sensitive war fighting data or systems. Failing that, to investigate, identify, and prosecute those who do. While most research to meet operational requirements is Operational System Development, there is also research in the category of Engineering and Manufacturing Development due to a need for modifications to present technology.

The equipment required to provide technical support to investigations is unique and complex. This equipment must be continually updated to provide state-of-the-art capabilities to detect and neutralize criminal activities targeted against the AF and DoD. In an era of advancing technology, reduced manning, and increasingly high level fraud, environmental crime and computer crime investigations, technical investigative equipment must be continuously updated to enable AFOSI special agents to have the most cost effective and best possible means of thwarting criminal acts. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through a global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems.

Critical Infrastructure Protection identifies weaknesses in the Air Force Critical infrastructure, highlights critical countermeasures and acquires and deploys cost-effective solutions. The intent is to provide an Air Force-wide review of current infrastructure vulnerabilities; prioritize AF protection planning and integrate with existing programs; identify gaps based on AF needs; direct studies to refine AF requirements.

This program is in Budget Activity 7, Operational System Development, because its products are primarily for use in investigative activity of an operational nature.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Next Generation Technical Surveillance Countermeasures (TSCM) receiver	0.161	0.170	0.260	0.270
(U) Continue development of Computer Crimes Investigative (CCI) Equipment & Software	0.162	0.169	0.300	0.320
(U) Next Generation TSCM receiver continuing development	0.147	0.168	0.269	0.242
(U) Total Cost	0.470	0.507	0.829	0.832

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement/Technical Surveillance Countermeasures Equipment 3080/WSC 846030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U) Other Procurement/Heavily Armored Vehicle 3080/WSC 821700	0.241	0.241	0.246	0.250	0.265	0.270			Continuing	TBD

(U) D. Acquisition Strategy

Market Research is accomplished jointly within the DoD, Counterintelligence, and Law Enforcement communities with the various government laboratories and major defense contractors to identify locations with the ability to develop investigative tools unique to our mission needs, these technologies, capabilities, and limitiations of current and future investigative tools is sometimes highly sensitive or classified.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305128F Security And Investigative Activities**

PROJECT NUMBER AND TITLE: **1931 TECH SURVEIL COUNTER MEAS EQPT**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Sandia Natl Lab	MIPR			0.107	Mar-06	0.100	Mar-07	0.200	Mar-08	0.200	Mar-09	Continuing	TBD	TBD
AFWIC	MIPR			0.161	Mar-06	0.198	Mar-07	0.200	Mar-08	0.200	Mar-09	Continuing	TBD	TBD
Other Agency	MIPR			0.040	Apr-06	0.109	Apr-07	0.200	Apr-08	0.200	Apr-09	Continuing	TBD	TBD
													0.000	
Subtotal Product Development			0.000	0.308		0.407		0.600		0.600		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) AF Infrastructure Protection Studies														
Subtotal AF Infrastructure Protection Studies														
Remarks:														
(U) Subtotal														
			0.000	0.000		0.000		0.000		0.000				
Subtotal Subtotal														
Remarks:														
(U)														
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.308		0.407		0.600		0.600		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE 1931 TECH SURVEIL COUNTER MEAS EQPT

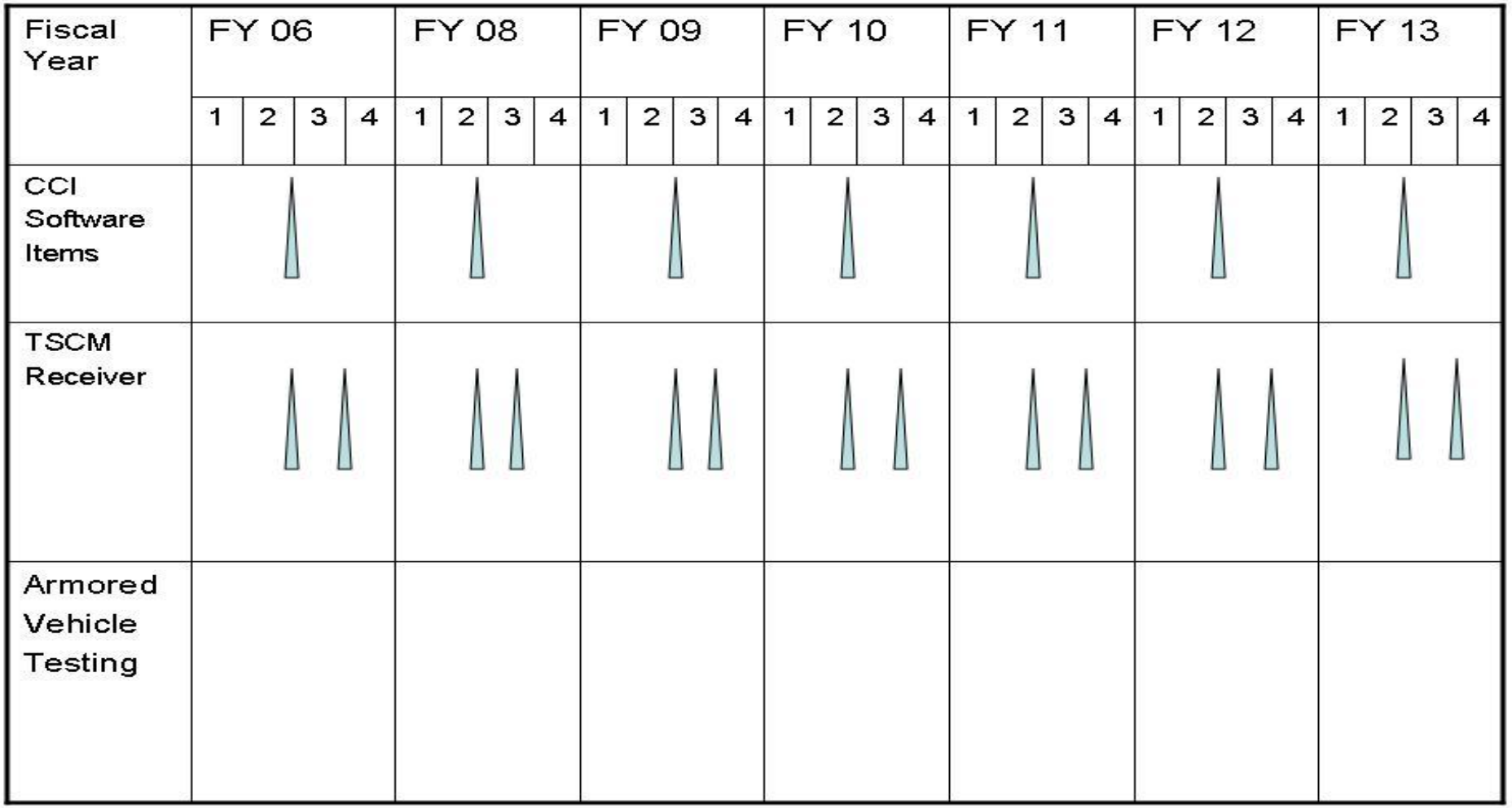

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) TSCM Receiver	2-4Q	2-4Q	2-4Q	2-4Q
(U) CCI Software/Equipment	2-3Q	2-3Q	2-3Q	2-3Q

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PE NUMBER: 0305160F
PE TITLE: Defense Meteorological Satellite Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
4758 DMSP Program	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day).

DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office will implement a service life extension program on F19 and F20 to increase projected lifetime from 4 to 5 years. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 was launched on a Delta IV booster on 4 Nov 06. DMSP F-18's launch is scheduled for 3rd Quarter FY08 on an Atlas V.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.852	0.969		
(U)	Current PBR/President's Budget	3.749	0.963		
(U)	Total Adjustments	-0.103	-0.006		
(U)	Congressional Program Reductions		-0.002		
	Congressional Rescissions		-0.004		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.103			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4758 DMSP Program	3.749	0.963	0.000	0.000	0.000	0.000	0.000	0.000	0.000	912.077
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day).

DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office will implement a service life extension program on F19 and F20 to increase projected lifetime from 4 to 5 years. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 was launched on a Delta IV booster on 4 Nov 06. DMSP F-18's launch is scheduled for 3rd Quarter FY08 on an Atlas V.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue system integration and test, studies, and related support activities	2.072	0.500		
(U) Continue EELV interface design (transition to EELV)	1.677	0.463		
(U) Total Cost	3.749	0.963	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) Missile Procurement/PE 0305160F (P-24)	68.034	86.376	127.350	101.136	102.580	95.301	86.300	78.899	12.782	3,069.577

Related RDT&E:

PE 0305178F, National Polar-orbiting Operational Environmental Satellite System (NPOESS)

PE 0305160N, Navy Meteorological and Oceanographic Sensor-Space (METOC) (provides funds for Navy unique studies)

(U) D. Acquisition Strategy

Support and services contracts for the spacecraft, sensors, ground systems, and supporting software have been awarded to various contractors. No major milestone decisions remain. Production of DMSP satellites has been completed. Remaining effort is to continue spacecraft and sensor integration and test and successfully launch remaining DMSP satellites.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305160F Defense Meteorological Satellite Program**

PROJECT NUMBER AND TITLE: **4758 DMSP Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed -Martin	SS/CPAF		3.764										3.764	
Lockheed-Martin	SS/CPAF		11.064										11.064	
Northrop-Grumman (CSS&S)	SS/CPAF		13.208										13.208	
Lockheed-Martin	C/CPAF		39.513										39.513	
Lockheed-Martin	C/CPAF		6.456	3.749	Feb-06	0.963	Oct-06						11.168	
Harris (SSMIS/STT SW)	C/CPAF		8.617										8.617	
Det 11/GSA (Mark IVB P3I)	MIPR		2.986										2.986	
Lockheed-Martin (Titan II Msn Unique Studies)	SS/CPAF		5.953										5.953	
Boeing (EELV Msn Unique Studies & Services)	SS/CPAF		2.585										2.585	
Aerojet	SS/CPAF		2.530										2.530	
Aerojet	C/CPAF/FFP		85.979										85.979	
Aerojet (SSM/TW/IS S&S & Model + SSMIS)	SS/CPAF		2.183										2.183	
Raytheon, formerly Hughes (SSMI Spt & Svc)	SS/CPFF		0.236										0.236	
AFRL	MIPR/PD		5.838										5.838	
NRL	MIPR/Var		15.782										15.782	
APL	MIPR/Var		4.332										4.332	
SMC (Det 3 SSSG/NPOESS)	FCA/MIPR		2.506										2.506	
Sandia	MIPR/Var		0.820										0.820	
NOAA			0.034										0.034	
Other	Various		6.671										6.671	
Historical Satellite Blocks	Various		583.786										583.786	
NONE													0.000	
Subtotal Product Development			804.843	3.749		0.963		0.000		0.000		0.000	809.555	0.000
Remarks:														
(U) Support														
FFRDC	AF 277		25.623										25.623	
PRC/BD Systems/TASS	C/CPAF		9.515										9.515	
Program Mgmt			22.720										22.720	
Litigation Support			1.809										1.809	
Other	Various		4.325										4.325	
Historical Satellite Blocks	Various		38.530										38.530	

Exhibit R-3, RDT&E Project Cost Analysis						DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development			PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program		PROJECT NUMBER AND TITLE: 4758 DMSP Program			
NONE							0.000	
Subtotal Support	102.522	0.000	0.000	0.000	0.000	0.000	102.522	0.000
Remarks:								
(U) Test & Evaluation								
NONE							0.000	
NONE							0.000	
Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Management								
							0.000	
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost	907.365	3.749	0.963	0.000	0.000	0.000	912.077	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE 4758 DMSP Program

DMSP Schedule

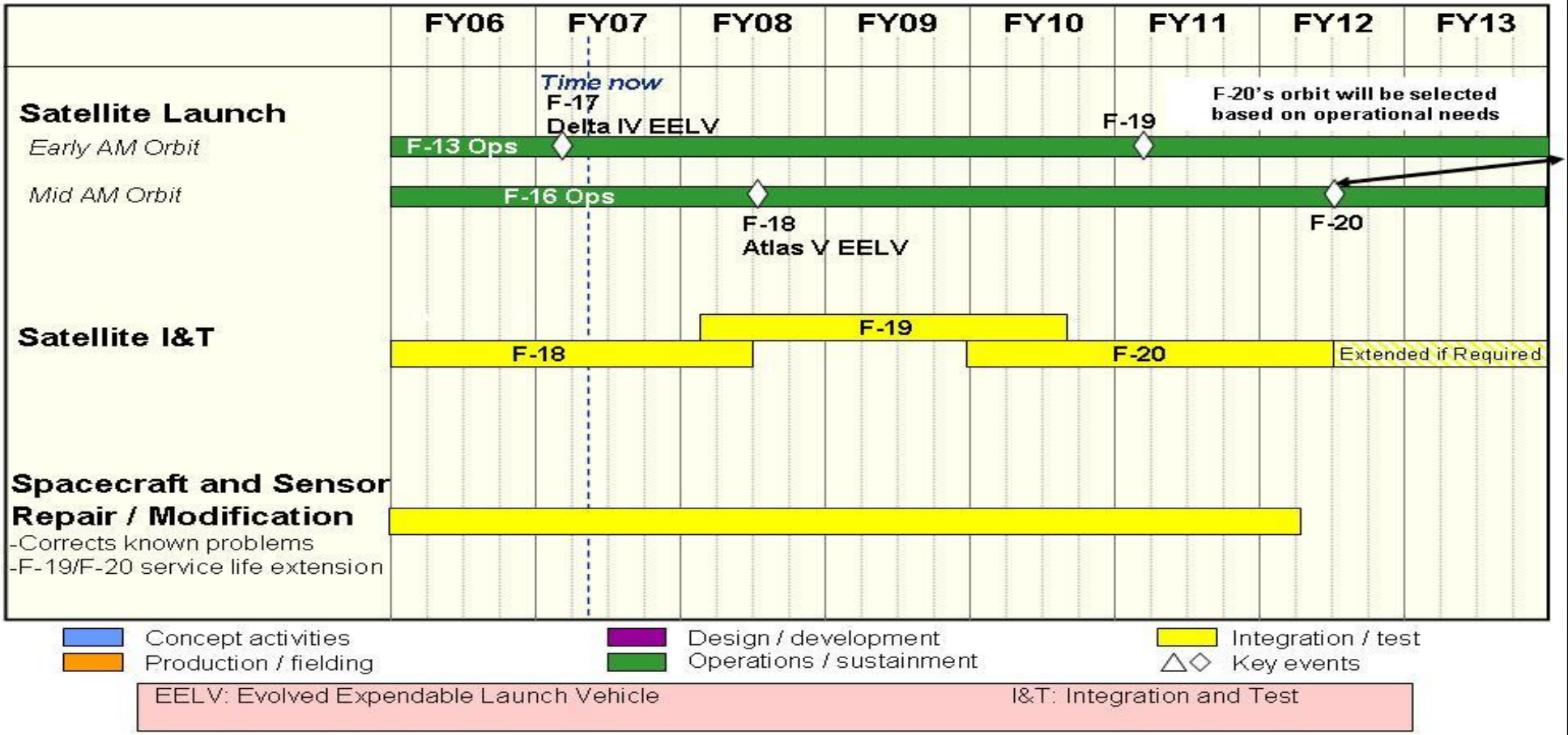

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) F-17 Satellite Launch		1Q		
(U) F-18 Satellite Launch			3Q	

PE NUMBER: 0305164F
PE TITLE: NAVSTAR Global Positioning System User Equipment Space

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	111.710	133.574	93.267	67.001	68.680	68.454	90.967	90.116	Continuing	TBD
3028 Navstar GPS	111.710	133.574	93.267	67.001	68.680	68.454	90.967	90.116	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space-based radio positioning, navigation, and time distribution system. GPS User Equipment (UE) consists of standardized receivers, antennas, antenna electronics, etc., grouped together in sets to derive navigation and time information transmitted from GPS satellites. These receiver sets are used by DoD. RDT&E funds UE development and testing, studies and engineering to assist UE aircraft integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation, and mission support. Due to increasing military GPS dependence and emerging Electronic Warfare (EW) threat, the Navigation Warfare (Navwar) program was established to address EW solutions for GPS. Key elements of GPS Modernization include protecting U.S. military and allies' use of GPS, preventing hostile exploitation of GPS, and preserving civil use of GPS outside the area of operations (AO). Modernized User Equipment (MUE) will develop the next generation of air, ground and space based GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA).

This program element is in Budget Activity 7 - Operational System Development, because UE supports operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	123.794	131.083	92.394	66.187
(U) Current PBR/President's Budget	111.710	133.574	93.267	67.001
(U) Total Adjustments	-12.084	2.491		
(U) Congressional Program Reductions	-0.004	-0.302		
Congressional Rescissions		-0.507		
Congressional Increases		3.300		
Reprogrammings	-7.209			
SBIR/STTR Transfer	-4.871			

(U) Significant Program Changes:

FY06: -$7.209M for higher Air Force priorities; FY07: $3.300M for Joint Navwar Center (JNWC)

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space	PROJECT NUMBER AND TITLE: 3028 Navstar GPS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3028 Navstar GPS	111.710	133.574	93.267	67.001	68.680	68.454	90.967	90.116	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space-based radio positioning, navigation, and time distribution system. GPS User Equipment (UE) consists of standardized receivers, antennas, antenna electronics, etc., grouped together in sets to derive navigation and time information transmitted from GPS satellites. These receiver sets are used by DoD. RDT&E funds UE development and testing, studies and engineering to assist UE aircraft integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation, and mission support. Due to increasing military GPS dependence and emerging Electronic Warfare (EW) threat, the Navigation Warfare (Navwar) program was established to address EW solutions for GPS. Key elements of GPS Modernization include protecting U.S. military and allies' use of GPS, preventing hostile exploitation of GPS, and preserving civil use of GPS outside the area of operations (AO). Modernized User Equipment (MUE) will develop the next generation of air, ground and space based GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA).

This program element is in Budget Activity 7 - Operational System Development, because UE supports operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Advanced UE Technology efforts	15.301	17.200	17.729	15.747
(U) Continue Selective Availability Anti-Spoofing Module (SAASM)/GPS Receiver Applications Module(GRAM-SAASM) development	3.405	2.200	3.687	0.692
(U) Continue Integration, Test and Evaluation	2.133	3.300	7.646	7.955
(U) Continue System Engineering	29.008	19.900	15.665	14.755
(U) Continue Program Support	4.363	6.400	4.682	4.849
(U) Continue Modernization efforts (Modernized UE Development)	57.500	84.574	43.858	23.003
(U) Total Cost	111.710	133.574	93.267	67.001

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) Operations and Maintenance (PE 0305164F, BA 1 -	2.810	3.413	5.305	6.142	6.885	4.312	4.409	4.504	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space	PROJECT NUMBER AND TITLE: 3028 Navstar GPS	

(U) C. Other Program Funding Summary ($ in Millions)

Operating Forces, SAG 13D)										
(U) Aircraft Procurement (PE 0305164F, BA 7, Aircraft Support Equipment, BP19)	11.521	9.969	12.593	16.078	19.792	20.298	22.471	21.821	Continuing	TBD
(U) Other Procurement (PE 0305164F, BP 83 - Electronics & Telecommunications Equipment, WSC 836730, P-62)	8.974	5.974	8.102	6.089	5.883	5.374	2.125	2.120	Continuing	TBD

(U) D. Acquisition Strategy

The GPS Wing acquisition strategy is to continue the development of GPS user equipment (UE) to support current warfighter activities and execute concept definition and technology risk reduction programs that will define and mature technologies needed for GPS Modernization. The GPS UE program will continue Selective Availability Anti-Spoofing Module (SAASM) receiver development /production and work with platforms/users to identify requirements and upgrade paths for GPS enhancements. Additionally, several anti-jam technology risk reduction efforts will be pursued to mature technologies and prepare for technology insertion to combat the potential threat that U.S. forces may be denied the use of GPS signals. The Modernized User Equipment (MUE) program will develop aviation and ground receiver cards capable of position, navigation, and time (PNT) utilizing Y-Code/M-code/Coarse Acquisition (YMCA). The MUE program will also develop controlled, non-proprietary specifications and interface control documents (ICDs), to enable the Services to acquire affordable Modernized UE through their program offices and/or the GPS Wing.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305164F NAVSTAR Global Positioning System User Equipment Space**

PROJECT NUMBER AND TITLE: **3028 Navstar GPS**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Rockwell (MAGR)	C/FPIF/FFP/ CPAF		19.293	0.000		0.000		0.000		0.000		0.000	19.293	
DOE Sandia (SAASM)	MIPR	Kirtland AFB, NM	43.288	2.793	Jan-06	1.700	Jan-07	0.575	Jan-08	0.580	Jan-09	Continuing	TBD	
NAWC (SAASM)	MIPR		0.599	0.000		0.000		0.000		0.000		0.000	0.599	
Various (SAASM/GB-GRAM)	Various	Various	29.932	0.612		0.500		3.112		0.112		Continuing	TBD	
Various (Modernized UE)	Various	Various	93.790	57.500	May-06	84.574	Jan-07	43.858	Jan-08	23.003	Jan-09	Continuing	TBD	
Alliant Techsys Inc (SAASM) & Multiple NAVWAR PRDAs	C/CPFF & C/CPAF		18.222	0.000		0.000		0.000		0.000		0.000	18.222	
Holloman AFB (Various Integration)	Project Order	46th TG, Holloman AFB, NM	6.304	0.400	Jan-06	0.420	Jan-07	0.441	Jan-08	0.463	Jan-09	Continuing	TBD	
SPAWAR (Various Integration)			0.122	0.164	Jan-06	0.000		0.000		0.000		0.000	0.286	
General Dynamics (Various)	Time and Materials		1.810	0.000		0.000		0.000		0.000		0.000	1.810	
Completed technology development efforts	Various		85.634	0.000		0.000		0.000		0.000		0.000	85.634	
Allan Osborne, Alliant Tech, Rockwell Collins, and Raytheon (DAGR)	PRDA	Various	28.108	0.000		0.000		0.000		0.000		0.000	28.108	
Raytheon (MAGR2K) (GRAM-SAASM)	PRDA		31.395	0.000		0.000		0.000		0.000		0.000	31.395	
Advanced UE Tech Invest	Various		4.646	0.000		0.000		0.000		0.000		0.000	4.646	
Receiver Technology	MIPR	AFRL - WPAFB, OH & KAFB, NM	16.048	1.710	Jan-06	0.534	Dec-06	0.800	Dec-07	1.150	Dec-08	Continuing	TBD	
Receiver Technology	Various	SPAWAR, CECOM	0.000	0.000		0.534	Dec-06	0.800	Dec-07	1.150	Dec-08	Continuing	TBD	
Anti-jam Filter Technology	Various	Various	7.847	0.000		0.000		0.000		0.000		0.000	7.847	
Advanced Antenna Technology	Various	Various	48.840	13.591	Jan-06	16.132	Dec-06	16.129	Dec-07	13.447	Dec-07	Continuing	TBD	
Subtotal Product Development			435.878	76.770		104.394		65.715		39.905		Continuing	TBD	0.000
Remarks:														
(U) Support														
Overlook Sys (OASD/C3I)	C/CPFF	OASD, Arlington, VA	27.897	0.000		0.000		0.000		0.000		Continuing	TBD	
Various	Various	Various	0.000	0.000		3.100	Jan-07	3.683	Jan-08	3.956	Jan-09		10.739	
Aerospace Corp (Technical Supt)	CPFF	Aerospace,	19.881	6.115	Jan-06	5.700	Dec-06	6.878	Dec-07	6.512	Dec-08	Continuing	TBD	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305164F NAVSTAR Global Positioning System User Equipment Space**

PROJECT NUMBER AND TITLE: **3028 Navstar GPS**

		Los Angeles, CA												
PRC (Technical Supt)	Time and Materials		0.714	0.000		0.000		0.000		0.000		0.000	0.714	
Miscellaneous (SE/Program Spt/Joint Navar Center (JNWC))	Various	Various	76.099	27.256	Jan-06	17.500	Jan-07	9.786	Jan-08	9.136	Jan-09	Continuing	TBD	
Various (Other Navwar Studies)	Various	Various	7.883	0.000		0.000		0.000		0.000		0.000	7.883	
Subtotal Support			132.474	33.371		26.300		20.347		19.604		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
46th TG (SAASM/Test)	Project Order		31.987	0.000		0.000		0.000		0.000		0.000	31.987	
46th TG/UE development & production Testing	Project Order / Various	Holloman AFB, NM / Various	20.234	1.569		2.880		7.205		7.492		Continuing	TBD	
Subtotal Test & Evaluation			52.221	1.569		2.880		7.205		7.492		Continuing	TBD	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
													0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			620.573	111.710		133.574		93.267		67.001		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305164F NAVSTAR Global Positioning System User Equipment Space**	PROJECT NUMBER AND TITLE **3028 Navstar GPS**

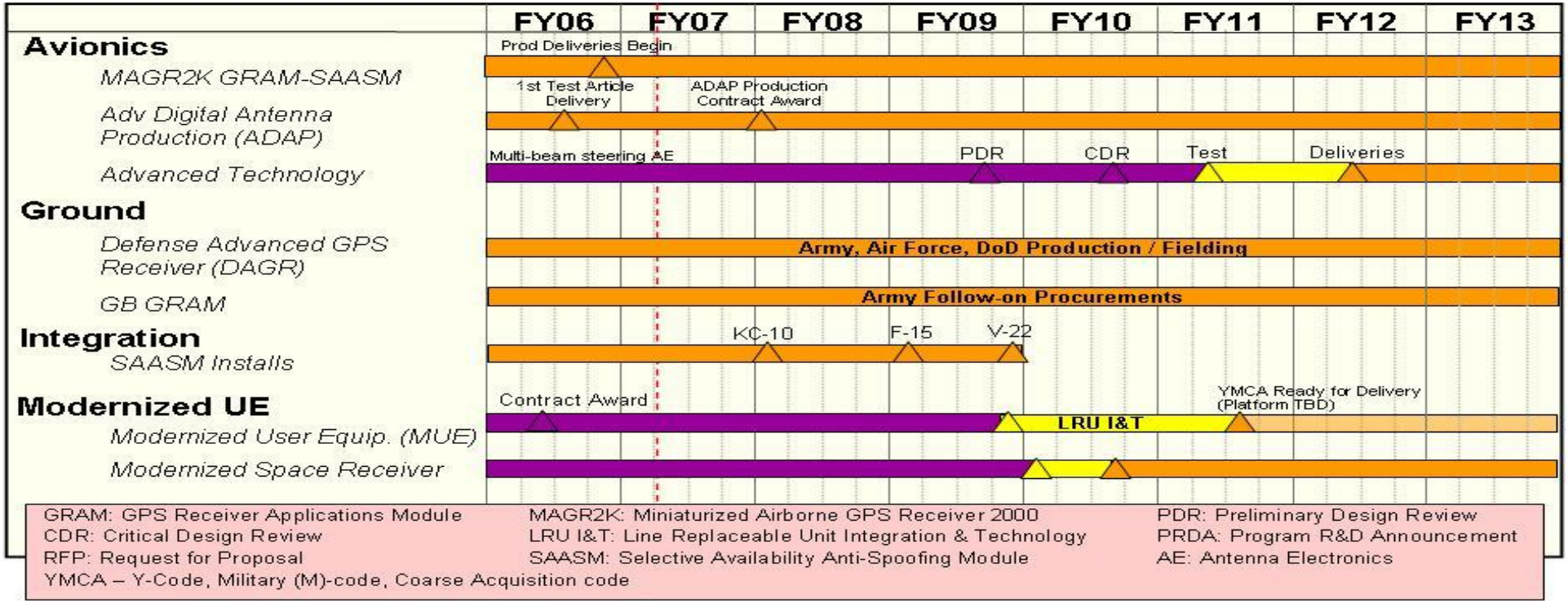

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305164F NAVSTAR Global Positioning System User Equipment Space**	PROJECT NUMBER AND TITLE **3028 Navstar GPS**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) MUE Development Contract Award	2Q			
(U) ADAP First Article Delivery	3Q			
(U) MUE System Requirements Review (SRR)		1Q		
(U) MUE System Design Review (SDR)		3Q		
(U) MUE Preliminary Design Review (PDR)			1Q	
(U) ADAP First Production Order			1Q	
(U) MUE Key Data Point-B (KDP) Decision			1Q	
(U) MUE Critical Design Review (CDR)			2Q	
(U) MSR CDR			3Q	
(U) MUE ASIC Complete				3Q

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PE NUMBER: 0305165F
PE TITLE: NAVSTAR GPS (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	174.530	176.721	120.931	92.626	57.192	35.939	36.221	36.959	Continuing	TBD
3030 NAVSTAR GPS (Space & Control)	174.530	176.721	120.931	92.626	57.192	35.939	36.221	36.959	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments of the overall GPS program. It includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support the entire GPS system deployment. This PE funds R&D for modernization and future GPS systems including efforts to provide anti-jam capability through increased Military(M)-Code signal power.

Modification of GPS Block IIR-M is complete and the satellites are currently being launched. GPS Block IIF satellites are being modified to include a second and third civil signal (L2C and L5) and a new military signal (M-code).

Operational Control System (OCS) will deliver control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	184.756	177.792	106.837	77.123
(U) Current PBR/President's Budget	174.530	176.721	120.931	92.626
(U) Total Adjustments	-10.226	-1.071		
(U) Congressional Program Reductions	-0.005	-0.400		
Congressional Rescissions		-0.671		
Congressional Increases				
Reprogrammings	-5.000			
SBIR/STTR Transfer	-5.221			

(U) Significant Program Changes:

FY06: -$5.000M for higher Air Force priorities; +$14.094M in FY08 and +$15.503M in FY09 for OCS development and GPS Operations Center (GPSOC).

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3030	NAVSTAR GPS (Space & Control)	174.530	176.721	120.931	92.626	57.192	35.939	36.221	36.959	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments of the overall GPS program. It includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support the entire GPS system deployment. This PE funds R&D for modernization and future GPS systems including efforts to provide anti-jam capability through increased Military(M)-Code signal power.

Modification of GPS Block IIR-M is complete and the satellites are currently being launched. GPS Block IIF satellites are being modified to include a second and third civil signal (L2C and L5) and a new military signal (M-code).

Operational Control System (OCS) will deliver control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue system engineering, spectrum/frequency management and program operations, to include Systems Engineering and Integration	6.960	1.892	0.800	0.800
(U)	Continue IIF satellite development	28.713	20.900	0.100	0.000
(U)	Continue Operational Control Segment (OCS) development/modernization	138.857	150.229	113.331	88.026
(U)	Continue Space Operations Center Integration	0.000	3.700	6.700	3.800
(U)	Total Cost	174.530	176.721	120.931	92.626

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E										
(U)	Related RDT&E (PE 0603421F, BA-4/R-41, Project 644993 - GPS Block	89.556	313.401	587.226	868.852	839.868	755.699	642.740	569.885	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)	

(U) C. Other Program Funding Summary ($ in Millions)

III)										
(U) Other APPN										
(U) Operations and Maintenance (PE 0305165F, BA 1 - Operating Forces, SAG 13D)	60.722	74.620	80.075	83.472	92.584	98.920	100.710	102.787	Continuing	TBD
(U) Missile Procurement (PE 0305165F, BA 5 - Space and Other Support, P-22, 23)	336.845	84.585	210.261	127.392	169.626	501.608	726.313	790.504	Continuing	TBD
(U) Other Procurement (PE 0305165F, BP 83 - Electronics and Telecommunications Equipment, WSC 836790, P-67, and WSC 836730; BP 86 - Spares & Repair Parts, WSC 86190A, P-62)	13.370	12.218	11.680	25.456	10.947	18.468	28.008	20.756	Continuing	TBD

(U) D. Acquisition Strategy

GPS OCS upgrade was competitively awarded to a single contractor (Lockheed Martin) in July 1995. Block IIF satellite and IIF ground systems development contract was competitively awarded to a single contractor (Boeing) in April 1996. The Single Prime Initiative (SPI) consolidated these efforts and was added to the Boeing IIF contract (with Lockheed Martin as a subcontractor) on 1 Oct 1999. GPS Modernization efforts for the Block IIR were awarded sole source to Lockheed Martin under a new contract in August 2000. Modernization efforts for Block IIF were added to the existing contract with Boeing as Engineering Change Proposals (ECPs).

The Air Force is unable to deliver full M-Code capability within the operational control segment (OCS) by FY11. This OCS slip created a significant overlap with the planned GPS III next generation control segment (OCX) development causing the potential for duplicative development efforts and near simultaneous fielding of the full M-code capability and new civil signals (L2C and L5) on both the OCX and OCS contracts. The existing OCS contract was modified to descope the delivery of full M-code capability. The delivery of full capability and new civil signals will be implemented in OCX (funded in the GPS III PE 0603421F).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305165F NAVSTAR GPS (Space)**

PROJECT NUMBER AND TITLE: **3030 NAVSTAR GPS (Space & Control)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Applied Research Labs	MIPR	Various	3.649	0.000		0.000		0.000		0.000		0.000	3.649	
OCS Development & IIF Modernization (F0470196C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	1,026.885	138.857	Jan-06	150.229	Nov-06	113.331	Nov-07	88.026	Nov-08	Continuing	TBD	1,944.179
IIF Development (F047019C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	26.100	28.713	Jan-06	20.900	Nov-06	0.100	Nov-07	0.000		0.000	75.813	77.600
IIR Modernization Development (F0470100C0006)	CPIF	Lockheed Martin, King of Prussia, PA	74.786	0.000		0.000		0.000		0.000		0.000	74.786	74.786
GPS III Modernization (F0470101C0008)	FFP	Lockheed Martin, King of Prussia, PA	15.767	0.000		0.000		0.000		0.000		0.000	15.767	TBD
GPS III Modernization (F0470101C0010)	FFP	Boeing, Seal Beach, CA	16.000	0.000		0.000		0.000		0.000		0.000	16.000	
Control Segment Support	MIPR/PO	Various Gov't agencies	8.119	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
EELV Mission Unique Svcs & Clock Development	MIPR/Other SPO Contracts	NRL & Contractors	26.477	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Stewardship	MIPR	Various	13.333	0.000		0.000		0.000		0.000		Continuing	TBD	TBD
Accuracy Improvement Initiative (AII)	FPA/CPAF/CPFF	Boeing, Seal Beach, CA	10.000	0.000		0.000		0.000		0.000		0.000	10.000	
Subtotal Product Development			1,221.116	167.570		171.129		113.431		88.026		Continuing	TBD	TBD
Remarks:														
(U) Support														
System Engineering/Support	Various	FFRDC (Aerospace/ Mitre), SETA	40.579	1.955	Jan-06	4.800	Nov-06	6.700	Nov-07	3.800	Nov-08	Continuing	TBD	TBD
GPS Modernization Tech Spt	Various	Various	43.249	0.000		0.000		0.000		0.000		0.000	43.249	
Miscellaneous	Various	Various	3.231	0.000		0.000		0.000		0.000		0.000	3.231	
Subtotal Support			87.059	1.955		4.800		6.700		3.800		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Flex Power Testing (F0470100C0006)	FPAF/CP	Lockheed	4.588	0.000		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis									DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development					PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)				PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)		
		AF/CPFF	Martin, King of Prussia, PA & various gov't activities								
	Subtotal Test & Evaluation			4.588	0.000	0.000	0.000	0.000	Continuing	TBD	TBD
	Remarks:										
(U)	Management										
	Management Support	Various SETA & FFRDCs	FFRDC (Aerospace) & SETA	14.942	5.005	0.792	0.800	0.800	Continuing	TBD	TBD
	Subtotal Management			14.942	5.005	0.792	0.800	0.800	Continuing	TBD	TBD
	Remarks:										
(U)	Total Cost			1,327.705	174.530	176.721	120.931	92.626	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305165F NAVSTAR GPS (Space)**	PROJECT NUMBER AND TITLE **3030 NAVSTAR GPS (Space & Control)**

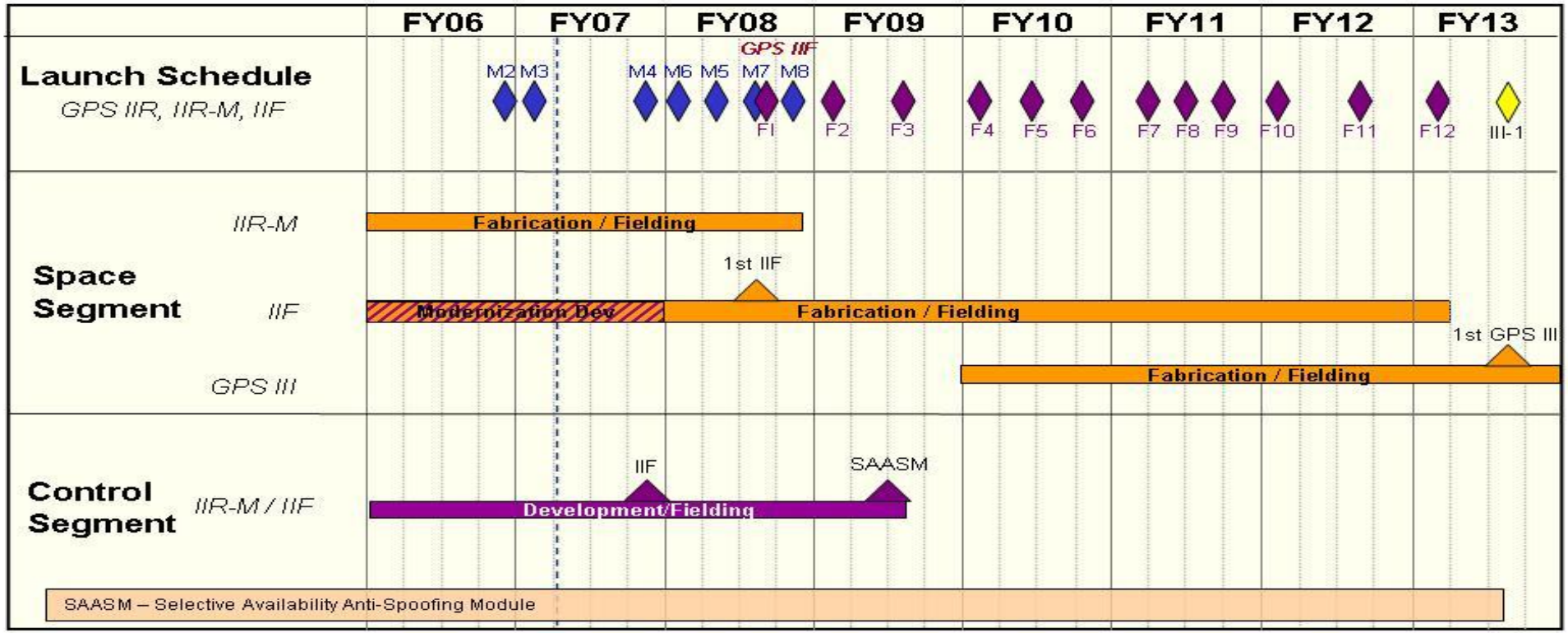

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305165F NAVSTAR GPS (Space)**	PROJECT NUMBER AND TITLE **3030 NAVSTAR GPS (Space & Control)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Legacy Accuracy Improvement Initiative (AII) capability complete	1Q			
(U) Launch, Anomaly resolution & Disposal Operations (LADO) release 1 delivery to site		1Q		
(U) SAASM development Formal Qualification Test (FQT)		3Q		
(U) GPS Block IIF development complete		3Q		
(U) IIF flight software development complete		4Q		
(U) SAASM system test complete			1Q	
(U) LADO release 2 complete			2Q	
(U) SAASM capability complete				2Q

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PE NUMBER: 0305173F
PE TITLE: Space & Missile Test & Evaluation Center

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	4.657	3.089	2.014	1.685	1.710	1.743	1.778	Continuing	TBD
A014 R&D Space and Missile Operations	0.000	4.657	3.089	2.014	1.685	1.710	1.743	1.778	Continuing	TBD

Note: In FY 2007, all funding from BPAC 4992 (PE# 0305173F) was transferred to new BPAC A014 - this rename better reflects focus of efforts.

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focuses on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY 2007. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC is a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) conduct residual operations capability for R&D satellites in order to develop/test tactics, techniques, procedures and concepts; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources. In addition, it adds the capability to rapidly support operational systems.

The RDSMO Program Element also contains O&M and OPAF funds. RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Center for Research Support (CERES) at Schriever AFB, CO which operates residual satellites and serves as a test bed; (3) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (4) the Test, Operations, and Programs at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (5) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.
This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305173F Space & Missile Test & Evaluation Center

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	4.675	3.060	1.990
(U)	Current PBR/President's Budget	0.000	4.657	3.089	2.014
(U)	Total Adjustments	0.000			
(U)	Congressional Program Reductions				
	Congressional Rescissions		0.018		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				
	FY 2007 New Start Effort (MMSOC)				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center	PROJECT NUMBER AND TITLE: A014 R&D Space and Missile Operations	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A014	R&D Space and Missile Operations	0.000	4.657	3.089	2.014	1.685	1.710	1.743	1.778	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

Note: In FY 2007, all funding from BPAC 4992 (PE# 0305173F) was transferred to new BPAC A014 - this re-name better reflects focus of efforts.

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focuses on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY 2007. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC is a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) conduct residual operations capability for R&D satellites in order to develop/test tactics, techniques, procedures and concepts; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources. In addition, it adds the capability to rapidly support operational systems.

The RDSMO Program Element also contains O&M and OPAF funds. RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Center for Research Support (CERES) at Schriever AFB, CO which operates residual satellites and serves as a test bed; (3) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (4) the Test, Operations, and Programs at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (5) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.
This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Multi-Mission Satellite Operations Center (MMSOC) development/integration	0.000	4.657	3.089	2.014
(U) Total Cost	0.000	4.657	3.089	2.014

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305173F Space & Missile Test & Evaluation Center**	PROJECT NUMBER AND TITLE **A014 R&D Space and Missile Operations**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF, Electronics & Telecom Equipment (BA 03, PE 0305173F, P-48)	0.263	7.042	7.766	10.183	3.545	3.600	3.671	3.743	Continuing	TBD

(U) D. Acquisition Strategy

The AF uses the competitively-awarded Engineering, Development, and Sustainment (EDS) Contract, managed by Space and Missile System Center, Space Development & Test Wing (formerly Detachment 12), to modernize and sustain RDSMO on a non-interference basis as it continues to support RDT&E and other designated users. The AF will use the competitively-awarded EDS Follow-on Contract to develop MMSOC.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305173F Space & Missile Test & Evaluation Center**

PROJECT NUMBER AND TITLE: **A014 R&D Space and Missile Operations**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Engineering, Development, and Sustainment (EDS) Follow-on Contract	C/CPAF	TBD		0.000		2.720	Dec-06	1.788	Dec-07	1.168	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		2.720		1.788		1.168		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Support (SETA, SPO ops)	Various	Various		0.000		1.937	Dec-06	1.301	Dec-07	0.846	Dec-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		1.937		1.301		0.846		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.000		4.657		3.089		2.014		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305173F Space & Missile Test & Evaluation Center	PROJECT NUMBER AND TITLE A014 R&D Space and Missile Operations

MMSOC Schedule

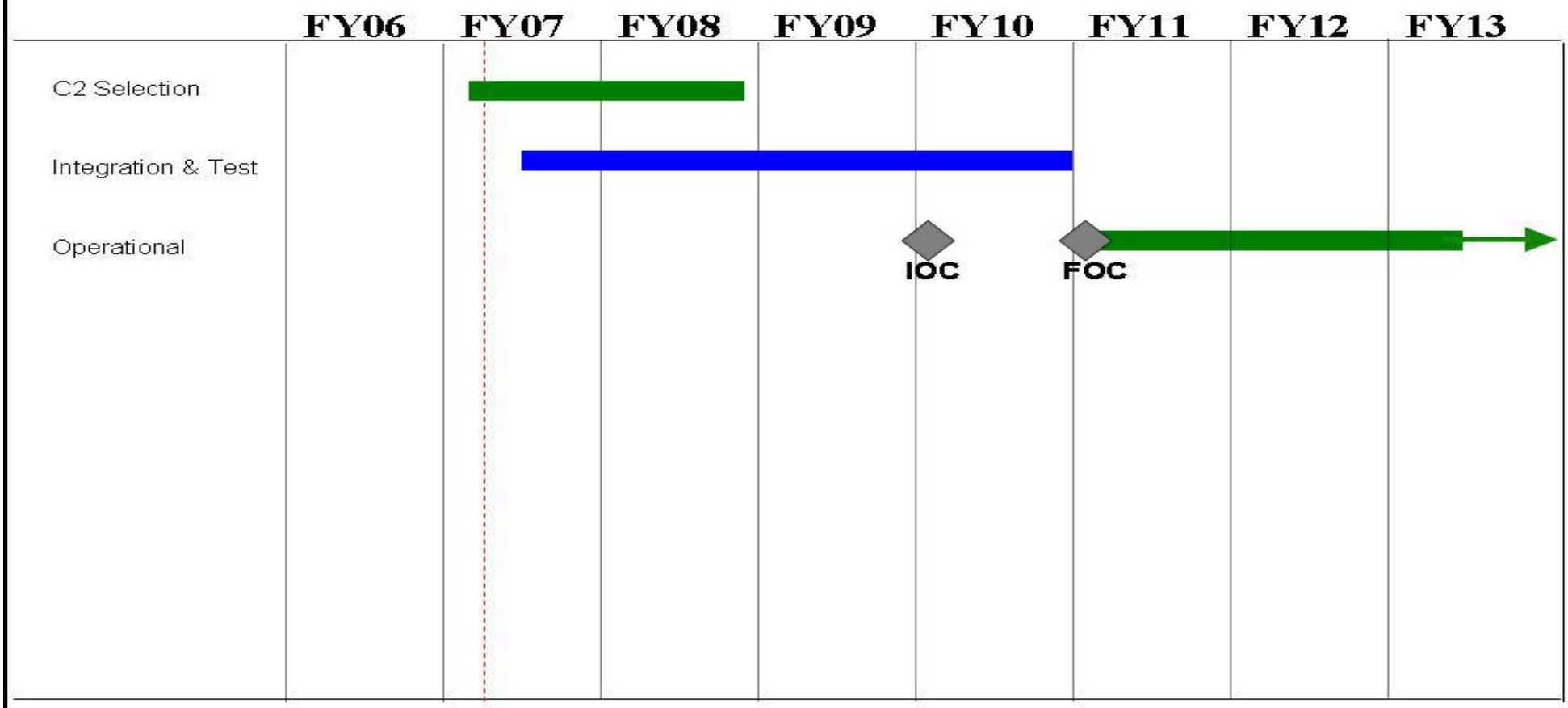

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center	PROJECT NUMBER AND TITLE: A014 R&D Space and Missile Operations

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Begin MMSOC Design		1Q		
(U) MMSOC Command and Control System Selection		2Q		
(U) Begin MMSOC Integration		3Q		

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PE NUMBER: 0305174F
PE TITLE: SPACE WARFARE CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.383	0.723	1.678	3.047	3.101	3.131	3.191	3.256	Continuing	TBD
A011	Space Analysis and Application Development	0.383	0.723	1.678	3.047	3.101	3.131	3.191	3.256	Continuing	TBD

The Space Warfare Center has been renamed the Space Innovation and Development Center, but this program element presently retains the old name.

(U) A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Innovation and Development Center develops, evaluates, and tests space application and utility concepts, new technologies, and tactics. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

The Space Analysis and Application Development project develops and modifies modeling and simulation tools that Air Force Space Command's Space Analysis Center uses for operations research, military utility analyses, tradeoff studies, and other evaluations of space mission areas to guide planning, programming, requirements generation, analyses of alternatives, and other activities. Development activities incorporate changes in fielded and projected space operational capabilities, as well as technical improvements, into the group's software tools to ensure their data and technology remain current.

This effort is in Budget Activity 7, Operational System Development, because it develops and modifies software models for fielded analysis systems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.405	0.726	2.002	3.626
(U)	Current PBR/President's Budget	0.383	0.723	1.678	3.047
(U)	Total Adjustments	-0.022	-0.003		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.003		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.022			
(U)	Significant Program Changes:				

FY 2008 - FY 2009: Reductions for higher Air Force priorities

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER	PROJECT NUMBER AND TITLE: A011 Space Analysis and Application Development

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A011	Space Analysis and Application Development	0.383	0.723	1.678	3.047	3.101	3.131	3.191	3.256	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

The Space Warfare Center has been renamed the Space Innovation and Development Center, but this program element presently retains the old name.

(U) A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Innovation and Development Center develops, evaluates, and tests space application and utility concepts, new technologies, and tactics. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

The Space Analysis and Application Development project develops and modifies modeling and simulation tools that Air Force Space Command's Space Analysis Center uses for operations research, military utility analyses, tradeoff studies, and other evaluations of space mission areas to guide planning, programming, requirements generation, analyses of alternatives, and other activities. Development activities incorporate changes in fielded and projected space operational capabilities, as well as technical improvements, into the group's software tools to ensure their data and technology remain current.

This effort is in Budget Activity 7, Operational System Development, because it develops and modifies software models for fielded analysis systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Model modification	0.172	0.344	0.814	1.482
(U) Verification of model changes	0.087	0.152	0.332	0.602
(U) Validation of results	0.124	0.227	0.532	0.963
(U) Total Cost	0.383	0.723	1.678	3.047

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, Air Force (Weapon System Code 832070, Intelligence Communications Equipment)*	0.521	0.539	0.452	0.462	0.474	0.481	0.488	0.495	Continuing	TBD

*Additional SIDC Other Procurement, Air Force funding (not shown) supports efforts unrelated to Space Analysis Center development activities

(U) D. Acquisition Strategy

This effort was awarded under a firm fixed price contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305174F SPACE WARFARE CENTER**

PROJECT NUMBER AND TITLE: **A011 Space Analysis and Application Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Develop/modify software tools and models	C/FFP	SI International, Colorado Springs, CO	0.000	0.383	Mar-06	0.723	Apr-07	1.678	Apr-08	3.047	Apr-09	Continuing	TBD	
Develop/modify software tools and models	C/CPAF	SPARTA, Colorado Springs, CO	0.774	0.000		0.000		0.000		0.000		0.000	0.774	
Subtotal Product Development			0.774	0.383		0.723		1.678		3.047		Continuing	TBD	0.000
Remarks:														
(U) Support														
Not applicable													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.774	0.383		0.723		1.678		3.047		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305174F SPACE WARFARE CENTER**	PROJECT NUMBER AND TITLE **A011 Space Analysis and Application Development**

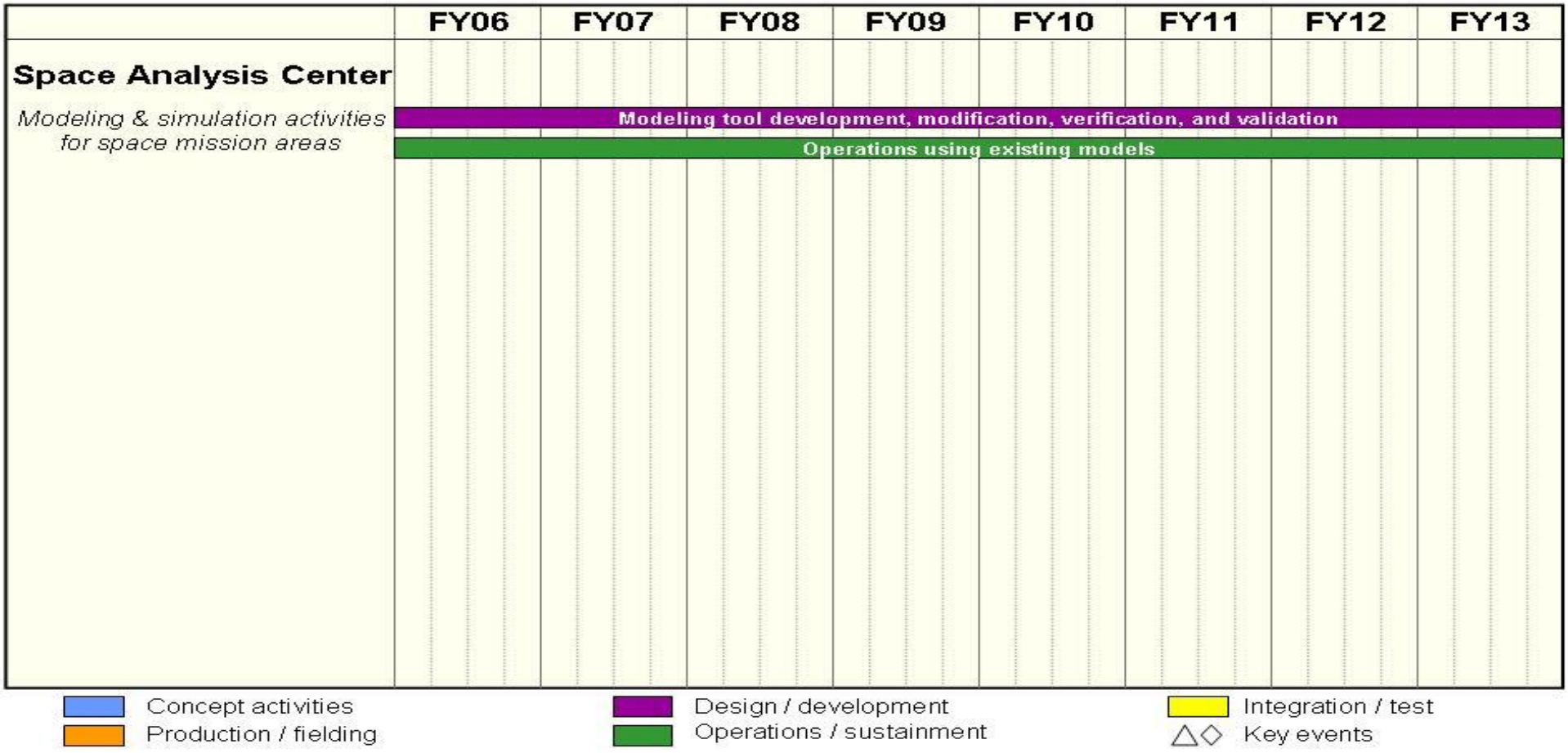

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER	PROJECT NUMBER AND TITLE: A011 Space Analysis and Application Development

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Model modification, verification, and validation	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305182F
PE TITLE: Spacelift Range System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305182F Spacelift Range System

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	49.515	38.900	27.300	12.559	10.311	10.428	10.629	10.845	Continuing	TBD
4137	Launch and Test Range System (LTRS) Modernization	49.515	38.900	27.300	12.559	10.311	10.428	10.629	10.845	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station , FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Many range assets are obsolete, unreliable, inefficient, and costly to operate and maintain. Reliability has been a major issue due to reliance on equipment such as 25-year old computers, 1960s vintage high frequency transmitters, wire-wrap circuit boards, etc. As a result, multiple assets are employed for redundancy during launches to ensure availability of range support.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Systems being modernized include: weather; communications (voice, video, data, and timing; network management system; and digital telemetry); planning and scheduling; and flight operations and analysis. Second, the SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation at both ranges and supports activation of the WR Operations Control Center. It also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. Some examples of the most recent deliveries on these two contracts include: automated planning and network management systems; digital telemetry systems; and optical system upgrades. FY08 and FY09 funds continue these modernization, system engineering, testing and architectural management efforts.

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305182F Spacelift Range System

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	49.081	38.044	27.045	12.408
(U)	Current PBR/President's Budget	49.515	38.900	27.300	12.559
(U)	Total Adjustments	0.434			
(U)	Congressional Program Reductions	-0.001			
	Congressional Rescissions		-0.144		
	Congressional Increases		1.000		
	Reprogrammings	1.144			
	SBIR/STTR Transfer	-0.709			

(U) Significant Program Changes:

FY06: AF added $1.144M to fund Western Range Ops Control Center Activation

FY07: Congress added $1M to fund continuation of California Space Infrastructure Program

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE: 4137 Launch and Test Range System (LTRS) Modernization

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4137	Launch and Test Range System (LTRS) Modernization	49.515	38.900	27.300	12.559	10.311	10.428	10.629	10.845	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB)/Cape Canaveral Air Force Station , FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Many range assets are obsolete, unreliable, inefficient, and costly to operate and maintain. Reliability has been a major issue due to reliance on equipment such as 25-year old computers, 1960s vintage high frequency transmitters, wire-wrap circuit boards, etc. As a result, multiple assets are employed for redundancy during launches to ensure availability of range support.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Systems being modernized include: weather; communications (voice, video, data, and timing; network management system; and digital telemetry); planning and scheduling; and flight operations and analysis. Second, the SLRS Contract (SLRSC) modernizes command, telemetry, and radar instrumentation at both ranges and supports activation of the WR Operations Control Center. It also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. Some examples of the most recent deliveries on these two contracts include: automated planning and network management systems; digital telemetry systems; and optical system upgrades. FY08 and FY09 funds continue these modernization, system engineering, testing and architectural management efforts.

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete RSA Phase IIA development, test, and evaluation of planning/ scheduling; communications; weather; and flight operations/analysis systems. Complete integration of systems into WR Operations Control Center.	30.842	27.413	13.100	
(U) Continue SLRSC systems engineering, instrumentation modernization, and systems integration. Continue development, test, and evaluation of command destruct, telemetry, and radar instrumentation and local control interfaces. Continue activation of operational centers in WR Operations Control Center.	16.716	9.519	13.700	12.281
(U) Provide program support, to include System Program Office operations, SETA, FFRDC, and Systems Engineeing and Integration.	0.998	1.000	0.500	0.278

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE 4137 Launch and Test Range System (LTRS) Modernization

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Funds added by Congress for California Space Authority (CSA) to continue California Space Infrastructure Program.	0.959	0.968		
(U) Total Cost	49.515	38.900	27.300	12.559

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF (Spacelift Range System Space, P-65, BA 03)	104.142	119.686	122.559	103.384	105.557	106.914	109.013	111.172	Continuing	TBD
(U) OPAF (Spares and Repair Parts, P-103, BA 05)	2.860	2.793	2.932	2.998	3.040	3.089	3.149	3.211	Continuing	TBD

(U) D. Acquisition Strategy

The AF is using two competitively awarded, complementary contracts, managed by the Space and Missile Systems Center, to modernize the ranges on a minimal-interference basis as they continue to support operational launches and tests.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305182F Spacelift Range System**

PROJECT NUMBER AND TITLE: **4137 Launch and Test Range System (LTRS) Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
RSA Phase IIA	C/CPAF	Lockheed Martin, Santa Maria, CA	257.559	30.842	Oct-05	27.413	Oct-06	13.100	Oct-07			0.000	328.914	TBD
SLRSC	C/CPAF	ITT Industries, Cape Canaveral, FL	118.400	16.716	Oct-05	9.519	Oct-06	13.700	Oct-07	12.281	Oct-08	Continuing	TBD	TBD
Subtotal Product Development			375.959	47.558		36.932		26.800		12.281		Continuing	TBD	TBD
Remarks:														
(U) Support														
SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various	34.114	0.998	Oct-05	1.000	Oct-06	0.500	Oct-07	0.278	Oct-08	Continuing	TBD	TBD
California Space Authority Studies/Projects	Various	Various	32.426	0.959	Jun-06	0.968						Continuing	TBD	TBD
Subtotal Support			66.540	1.957		1.968		0.500		0.278		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			442.499	49.515		38.900		27.300		12.559		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE: 4137 Launch and Test Range System (LTRS) Modernization

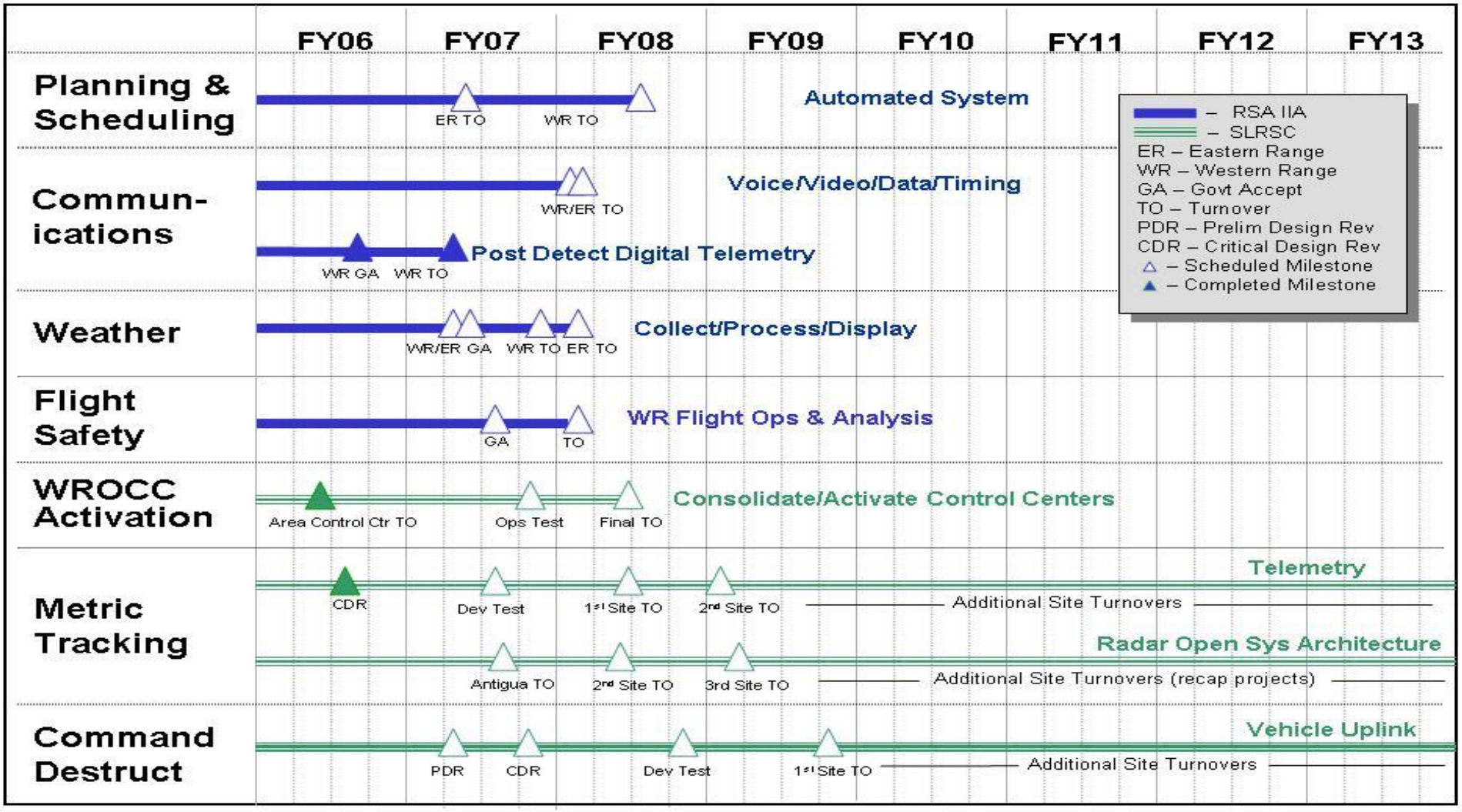

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305182F Spacelift Range System**	PROJECT NUMBER AND TITLE **4137 Launch and Test Range System (LTRS) Modernization**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) RSA Phase IIA				
(U) - Planning & Scheduling ER Operational (Ops) Turnover		2Q		
(U) - Planning & Scheduling WR Ops Turnover			3Q	
(U) - Communications (Voice/Video/Data/Timing) ER Final Ops Turnover			1Q	
(U) - Communications (Voice/Video/Data/Timing) WR Final Ops Turnover			1Q	
(U) - Communications (Post Detect Digital Telemetry) WR Govt Acceptance	3Q			
(U) - Communications (Post Detect Digital Telemetry) WR Ops Turnover		2Q		
(U) - Weather WR Final Govt Acceptance		2Q		
(U) - Weather ER Final Govt Acceptance		2Q		
(U) - Weather WR Final Ops Turnover			4Q	
(U) - Weather ER Final Ops Turnover			1Q	
(U) - Flight Safety (WR Flight Ops & Analysis) Govt Acceptance		3Q		
(U) - Flight Safety (WR Flight Ops & Analysis) Ops Turnover			2Q	
(U) - Contract Closeout			4Q	
(U) SLRS Contract				
(U) - WR Ops Control Center (WROCC) Area Control Center Activation	2Q			
(U) - WR Ops Control Center (WROCC) Operational Testing		4Q		
(U) - WR Ops Control Center (WROCC) Final Turnover			2Q	
(U) - Metric Tracking (Telemetry) Critical Design Review	3Q			
(U) - Metric Tracking (Telemetry) Developmental Test & Evaluation		3Q		
(U) - Metric Tracking (Telemetry) 1st Site Turnover			2Q	
(U) - Metric Tracking (Telemetry) 2nd Site Turnover				1Q
(U) -Metric Tracking (Radar Open System Architecture) 1st Site Turnover		3Q		
(U) -Metric Tracking (Radar Open System Architecture) 2nd Site Turnover			2Q	
(U) -Metric Tracking (Radar Open System Architecture) 3rd Site Turnover				1Q
(U) - Command Destruct (Vehicle Uplink) Preliminary Design Review		2Q		
(U) - Command Destruct (Vehicle Uplink) Critical Design Review		4Q		
(U) - Command Destruct (Vehicle Uplink) Developmental Test			4Q	
(U) - Command Destruct (Vehicle Uplink) 1st Site Turnover				4Q

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PE NUMBER: 0305193F
PE TITLE: INTEL SPT TO INFO OPS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.566	3.785	1.134	1.247	1.273	1.301	1.329	1.362	Continuing	TBD
4871 Information Operations Technology	3.566	3.785	1.134	1.247	1.273	1.301	1.329	1.362	Continuing	TBD

Beginning in FY-08 the funding for the Joint Integrative Analysis and Planning Capability (JIAPC) was transferred to PE 33166D managed by JFCOM

(U) A. Mission Description and Budget Item Justification

This program element supports, but is not limited to intelligence activities focused on the development, integration and assessment of systems or applications in support of non-traditional and contingency warfare.

Funds the Joint Task Force - Global Network Operations (JTF-GNO) Threat Incident Database (JTID) development. JTID fuses network incident and intelligence data analyzed within the context of operationally relevant information from affected commands (Version 3); develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs limited sets of foreign GNO specific threat information to DoD's command and control infrastructure to include intentions and capabilities (Version 4); and is interoperable with law enforcement and allied communities of interest.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	3.566	3.813	4.039	4.472
(U) Current PBR/President's Budget	3.566	3.785	1.134	1.247
(U) Total Adjustments	0.000	0.028		
(U) Congressional Program Reductions		-0.014		
Congressional Rescissions		-0.014		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

Beginning in FY-08 the funding for the Joint Integrative Analysis and Planning Capability (JIAPC) was transferred to PE 33166D managed by JFCOM

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871	Information Operations Technology	3.566	3.785	1.134	1.247	1.273	1.301	1.329	1.362	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program element supports, but is not limited to intelligence activities focused on the development, integration and assessment of systems or applications in support of non-traditional and contingency warfare.

Funds the Joint Task Force - Global Network Operations (JTF-GNO) Threat Incident Database (JTID) development. JTID fuses network incident and intelligence data analyzed within the context of operationally relevant information from affected commands (Version 3); develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs limited sets of foreign GNO specific threat information to DoD's command and control infrastructure to include intentions and capabilities (Version 4); and is interoperable with law enforcement and allied communities of interest.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue database modifications of limited sets of foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities (Version 3); Continue development and production of intelligence reports on computer network attacks against US systems (Version 4); Continue to develop better incident assessments and analysis modules. Researches improved means of supplying appropriate response options and detailed courses-of-action in defense of protected networks.	1.042	1.142	1.134	1.247
(U)	JIAPC program Support	2.524	2.643	0.000	0.000
(U)	Total Cost	3.566	3.785	1.134	1.247

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) JIAPC Intel Support 3400 PE 35193	4.388	4.355							Continuing	TBD

(U) D. Acquisition Strategy

The JTID program is executing an incremental improvement of JTID capabilities. Systems engineering, development and initial testing will be accomplished under a

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305193F INTEL SPT TO INFO OPS**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

full and open competition, Time & Materials (T&M) contract.

The JIAPC program's funding will transfer to Joint Forces Command in FY-08 to define and finalize program requirements.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305193F INTEL SPT TO INFO OPS**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
JTID CNO Analyses	T&M	Northrop Grumman IT-TASC, Lorton VA		1.042	Dec-05	1.142	Dec-06	1.134	Dec-07	1.247	Dec-08	Continuing	TBD	TBD
JIAPC Initiation/Development	N/A	ESC		2.524	N/A	2.643	N/A	0.000	N/A	0.000	N/A	0.000	5.167	TBD
Subtotal Product Development			0.000	3.566		3.785		1.134		1.247		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	TBD
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Remarks:														
(U) Test & Evaluation														
													0.000	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Remarks:														
(U) Management														
													0.000	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Remarks:														
(U) Total Cost			0.000	3.566		3.785		1.134		1.247		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

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Exhibit R-4, RDT&E Program Schedule Profile	Date: January 2007	
Appropriation/Budget Activity	PE 35193F	Project Number and JTID

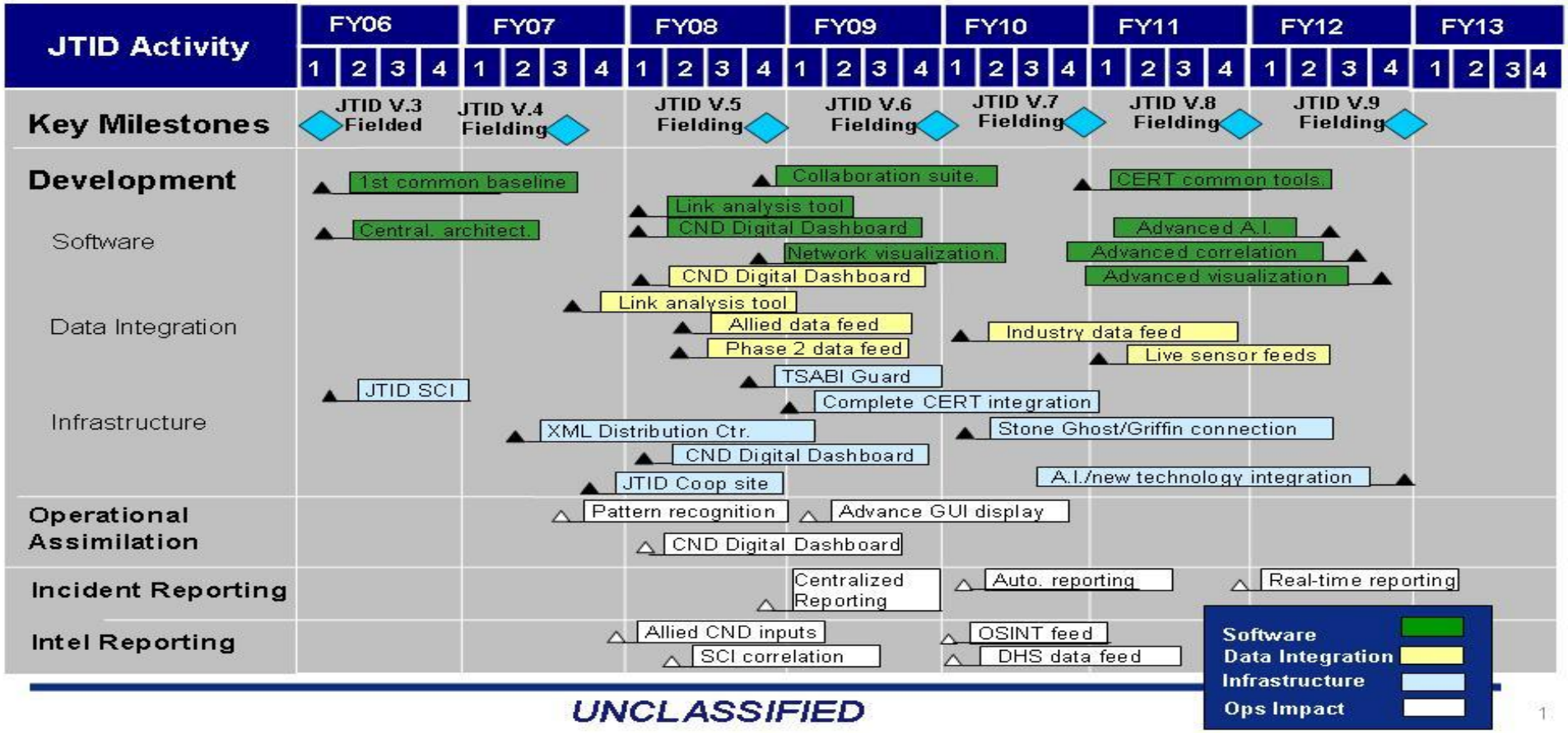

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Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

Transferred to PE 33166D

Notional JIAPC Schedule

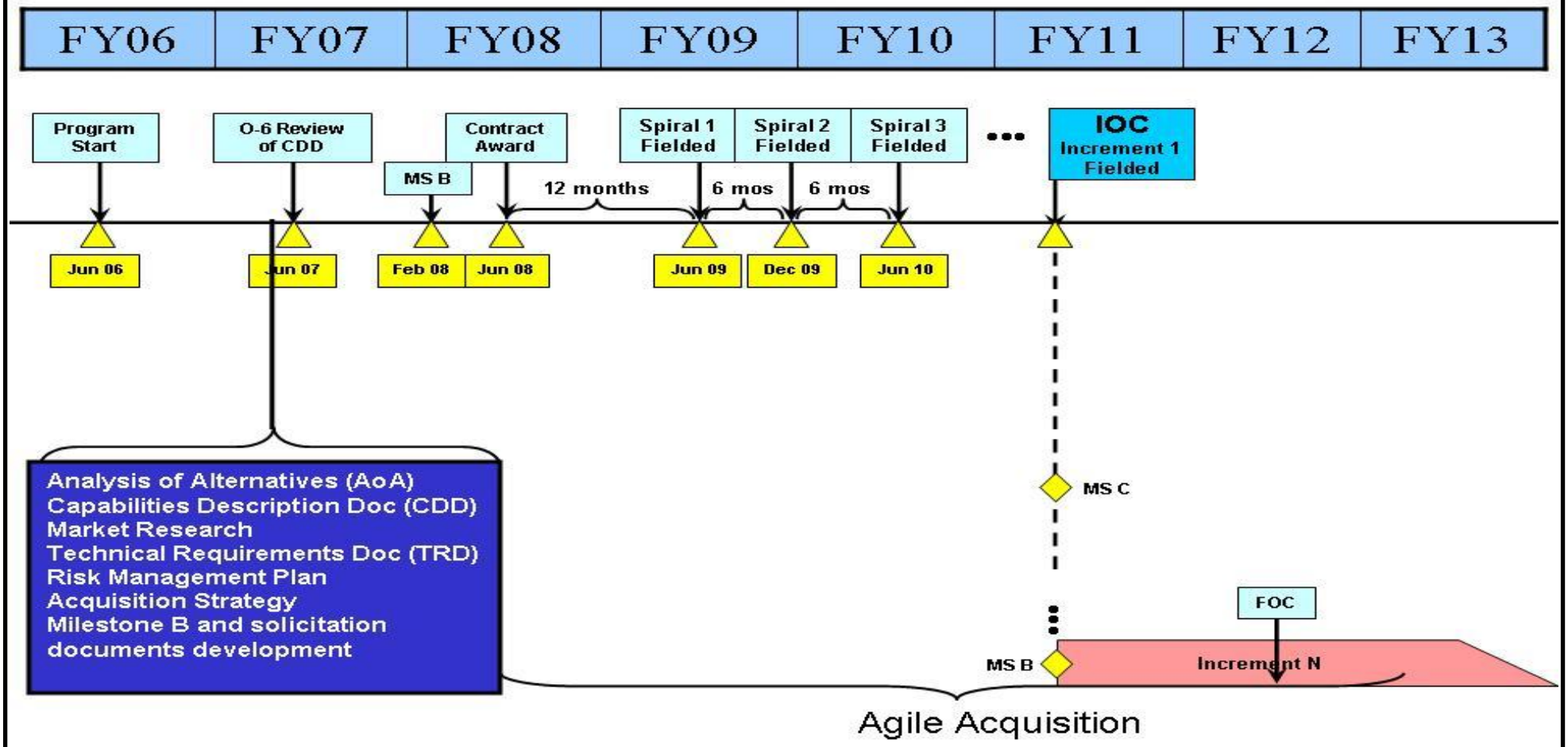

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Ongoing development of JTID functions	1-4Q	1-4Q	1-4Q	1-4Q
(U) Development of V.3	1-3Q			
(U) Fielding of V.3	1-3Q	1-4Q		
(U) Development of V.4	4Q	1-3Q		
(U) Fielding of V.4		4Q	1-4Q	
(U) Development of V.5			1-4Q	
(U) Field of V. 5				1-4Q
(U) Development of V.6				1-4Q
(U) *** JIAPC Transfers to PE 33166D***	1Q			
(U) Program start	3Q			
(U) O-6 requirements review		2-3Q		
(U) Milestone-B			2Q	
(U) Contract Award			3Q	
(U) Spiral 1 fielded				3Q
(U) Spiral 2 Fielded				4Q

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PE NUMBER: 0305202F
PE TITLE: Dragon U-2 (JMIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	10.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
4820	Sensor Development	8.693	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
4945	High Altitude Subsystems	1.319	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD

(U) A. Mission Description and Budget Item Justification

The RDT&E portion of this program element funds efforts to develop enhancements and sustain the U-2 Dragon Lady ISR system. In addition to on-going RDT&E activity, there are procurement and modification funds to support sustainability efforts. This program element will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to pursue joint, allied, and coalition interoperability.

Budget Activity Justification - This program element is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development for the U-2 aircraft and related Intelligence Surveillance Reconnaissance (ISR) subsystems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	10.013	0.000		
(U)	Current PBR/President's Budget	10.012	0.000		
(U)	Total Adjustments	-0.001			
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.001			
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

In FY06, all the U-2 Airborne Signals Intelligence Program (ASIP) development funding was transferred from the Dragon U-2 (JMIP) PE 0305202F, Project 674820 to the new Airborne SIGINT Enterprise PE 0304260F, and is distributed between Project 675181 (U-2 Integration) and Project 675183 (SIGINT Common Development).

In FY07, Air Force Transformation Flight Plan identified the U-2 Weapons System for early retirement, divesting the fleet by FY12. A plan, schedule, and budget are being developed to synchronize the U-2 retirement schedule to the Global Hawk (GH) development and fielding schedule in order to provide uninterrupted, high-altitude, ISR capabilities during the U-2 to Global Hawk transistion. The DoD is committed to keeping the U-2 Fleet capable until it is removed from service. Accordingly, additional modifications and projects to support sustainability efforts will be required before FY12. These additional modifications and sustainability efforts will be considered during future budget year submissions.

Exhibit R-2a, RDT&E Project Justification			DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE 4820 Sensor Development	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4820 Sensor Development	8.693	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This development project supports improvements and modifications to support sustainability efforts for the U-2 sensors such as the Advanced Synthetic Aperture Radar System (ASARS-2A), advanced radar technology research such as foliage penetration, concealed target, and counter deception, SIGINT programs, and works in close cooperation with the ASIP program (PE 0304260F).

The ASARS-2A Program improves area search, precision geolocation, and image quality to support precision guided munitions targeting. The system produces complex imagery, enabling enhanced exploitation methods. ASARS-2A introduces Asynchronous Transfer Mode (ATM) datalink formats to the ISR community and supports National Imagery Transmission Format (NITF) standards. Requirements include ASARS-2A sustainability issues, reliability improvements and exploitation tools for the user (for example, system robustness, Dual Data Link (DDL-2), Beyond Line of Sight (BLOS) communications, image quality, Ground Moving Target Indication (GMTI), geolocation and targeting, sensor position data, Receiver Exciter Controller (REC) upgrades and software upgrades). The ongoing ASARS-2A Image Quality Improvement Program (IQIP) addresses system robustness and image quality performance identified during initial system fielding.

The Senior Year Electro-Optical Reconnaissance System (SYERS-2/2A) Program includes upgrades such as multi-spectral collection and processing, polarization collection and processing , possible hyperspectral collection and processing, and the associated exploitation tools for the user. SYERS-2 also includes reliability, maintainability and sustainability upgrades that incorporate next generation technology to maintain and enhance system supportability. SYERS Polarimetric Improvement (SYERS P4I) investigates the potential for using polarimetric collection data to find man-made objects on the battlefield. A depot for the repair and refurbishing of SYERS sensors will be established and a second source vendor qualified for the focal planes.

The SIGINT Program develops new sensors such as the Airborne Signals Intelligence Program (ASIP), and maintains present sensor capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability to exploit evolving signals of interest including Quick Reaction Capabilities (QRCs) to meet emerging operational requirements. The program has also examined and may modify current systems to allow them to function on Power/Electromagnetic Interference upgraded U-2 aircraft.

Plans for the testing and fielding of ASIP sensors on U-2 and Global Hawk are addressed in the Airborne SIGINT Enterprise exhibit (PE 0304260F).

All U-2 sensors and datalinks are being converted to the Asynchronous Transfer Mode (ATM) standard to address vanishing vendor issues and to optimize signals intelligence bandwidth allocation. Inherent in this transition is the incorporation of suitable security/encryption capabilities.

Budget Activity Justification - This program element is categorized as Budget Activity 7 because it provides for system development and sustainment of technologies and capabilities in support of operational system development for the U-2 intelligence surveillance and reconnaissance (ISR) system.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE: 4820 Sensor Development

(U) B. Accomplishments/Planned Program ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Advanced Synthetic Aperture Radar System (ASARS-2A) Image Quality Improvement Program (IQIP)	0.837			
(U)	Senior Year Electro-Optical Reconnaissance System (SYERS-2/2A)	6.400			
(U)	ASIP U-2 Integration	1.110			
(U)	Other Program Management/Systems Engineering	0.346			
(U)	Total Cost	8.693	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, PE 0304260F Airborne SIGINT Development (ASIP)	1.972	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

* Development activity in FY07 and beyond for integration, flight testing, and fielding ASIP sensors on U-2 is funded under the Common Development Line 5183 in the ASIP PE 0304260. NOTE: Future year RDT&E funding requirements for efforts associated with U-2 system operation and modifications to support sustainment efforts will be addressed on an annual basis and will be linked to achievement of development, production and fielding milestones in the Global Hawk program.

(U) D. Acquisition Strategy

All contracts awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

PROJECT NUMBER AND TITLE: 4820 Sensor Development

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ASARS-2A Way Ahead Phase 2 Development	SS/CPIF	Raytheon, San Jose, CA		0.573	Aug-06							Continuing	TBD	TBD
SYERS-2A Development	SS/CPIF	BF Goodrich, Chelmsford, MA		5.716	Sep-06							Continuing	TBD	5.716
U-2 ASIP Integration	SS/CPIF	LM Aero, Palmdale, CA		1.110	Feb-06							Continuing	TBD	1.110
Subtotal Product Development			0.000	7.399		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
SYERS-2A Flight Test	SS/CPFF	TBD		0.684	Feb-07							Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.684		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Management														
RSW/U2SF	C/FFP	Various		0.611	Dec-05							Continuing	TBD	TBD
Subtotal Management			0.000	0.611		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	8.694		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE 4820 Sensor Development

U.S. AIR FORCE

U-2

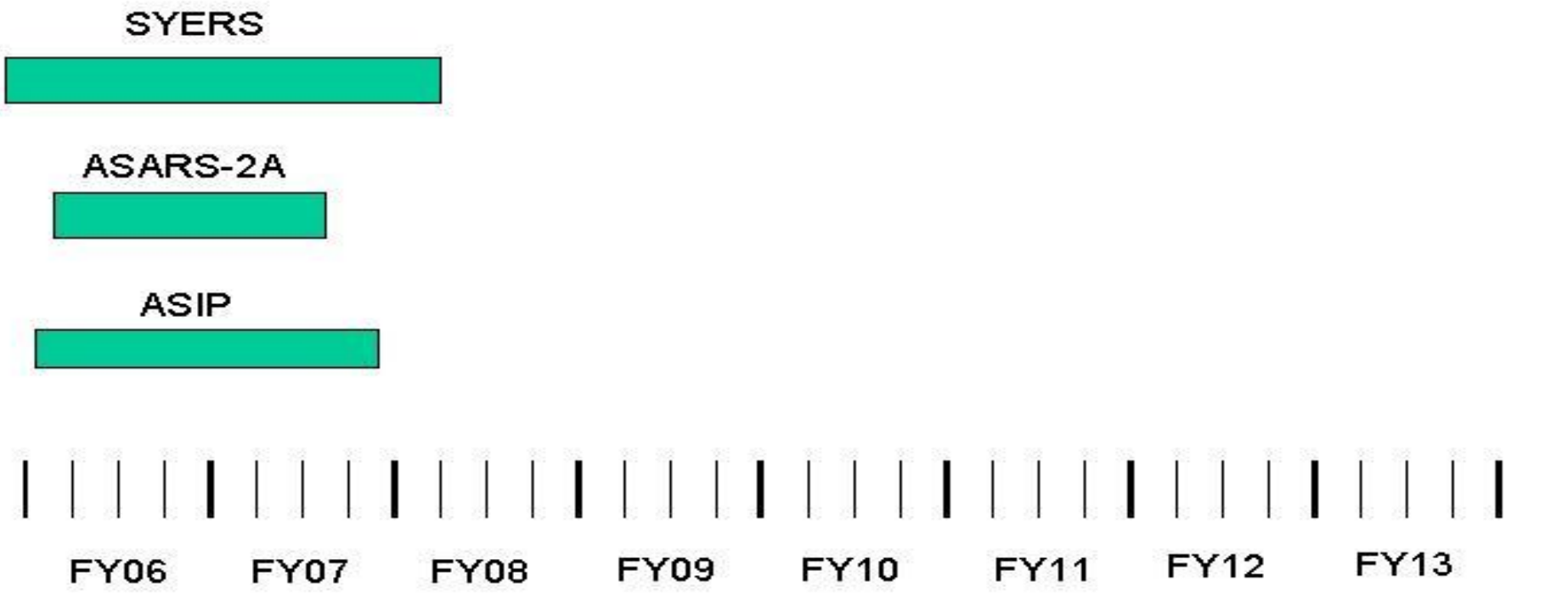

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305202F Dragon U-2 (JMIP)**	PROJECT NUMBER AND TITLE **4820 Sensor Development**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) SYERS Kit 105 Delivery		2Q		
(U) SYERS Kit 106 Delivery		3Q		
(U) SYERS ATM			1Q	
(U) ASARS-2A- Continue Image Quality Improvement Activities	1Q			
(U) ASARS-2A H/W Last Article		1Q		
(U) ASARS-2A S/W Final Delivery		3Q		
(U) ASIP Development - FAT	4Q			
(U) ASIP Development - Capability Demonstration		4Q		

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

PROJECT NUMBER AND TITLE: 4945 High Altitude Subsystems

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4945 High Altitude Subsystems	1.319	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project supports sustainment, development and integration of subsystems on the U-2 (e.g., cockpit upgrades that include a glass cockpit with Electro-Optical View Sight (EOVS), Direct Threat Warning, navigator upgrades, datalinks) and compliance with Communications, Navigation, Surveillance/Air Traffic Management CNS/ATM requirements.

EOVS was designed to replace the legacy optical drift sight that was removed in the U-2 Block 20 upgrade. The controls for the EOVS camera are in the legacy hand controllor, and the image will be displayed in the cockpit on one Multi-function Display (MFD), when selected.

The Dual Data Link (DDL2) Program provides the capability to encrypt and transmit Intelligence Surveillance Reconnaissance (ISR) data via dual, simultaneous, independent wideband datalinks.

Budget Activity Justification - This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development for the U-2 aircraft.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Dual Data Link 2 (DDL2) development	0.145			
(U) RSW/U2SF DSM	1.174			
(U) Total Cost	1.319	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) * APAF - BPAC 19RCON - Dual Data Link (DDL2)	15.255									
(U) APAF - BPAC 19RCON - ADS	8.239									

* Final DDL2 procurement efforts associated with recently completed development program.

NOTE: Future year RDT&E funding requirements for efforts associated with U-2 system operation and modifications to support sustainment efforts will be addressed on an annual basis and will be linked to achievement of development, production and fielding milestones in the Gloabl Hawk program.

(U) D. Acquisition Strategy

Utilize mix of sole source and open competition as appropriate for the U-2 program to sustain and update platform sub-systems as required in order to maintain

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305202F Dragon U-2 (JMIP)**	PROJECT NUMBER AND TITLE **4945 High Altitude Subsystems**

operational effectiveness.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305202F Dragon U-2 (JMIP)**

PROJECT NUMBER AND TITLE: **4945 High Altitude Subsystems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
DDL2 EMD	SS/FFP	L3 Comm, Salt Lake City		0.145	Apr-06							0.000	0.145	TBD
Subtotal Product Development			0.000	0.145		0.000		0.000		0.000		0.000	0.145	TBD
Remarks:														
(U) Test & Evaluation														
Flight Test													0.000	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Remarks:														
(U) Management														
RSW/U2SF DSM	C/FFP	Various		1.174	Apr-06								1.174	TBD
Subtotal Management			0.000	1.174		0.000		0.000		0.000		0.000	1.174	TBD
Remarks:														
(U) Total Cost			0.000	1.319		0.000		0.000		0.000		0.000	1.319	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE 4945 High Altitude Subsystems

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U-2

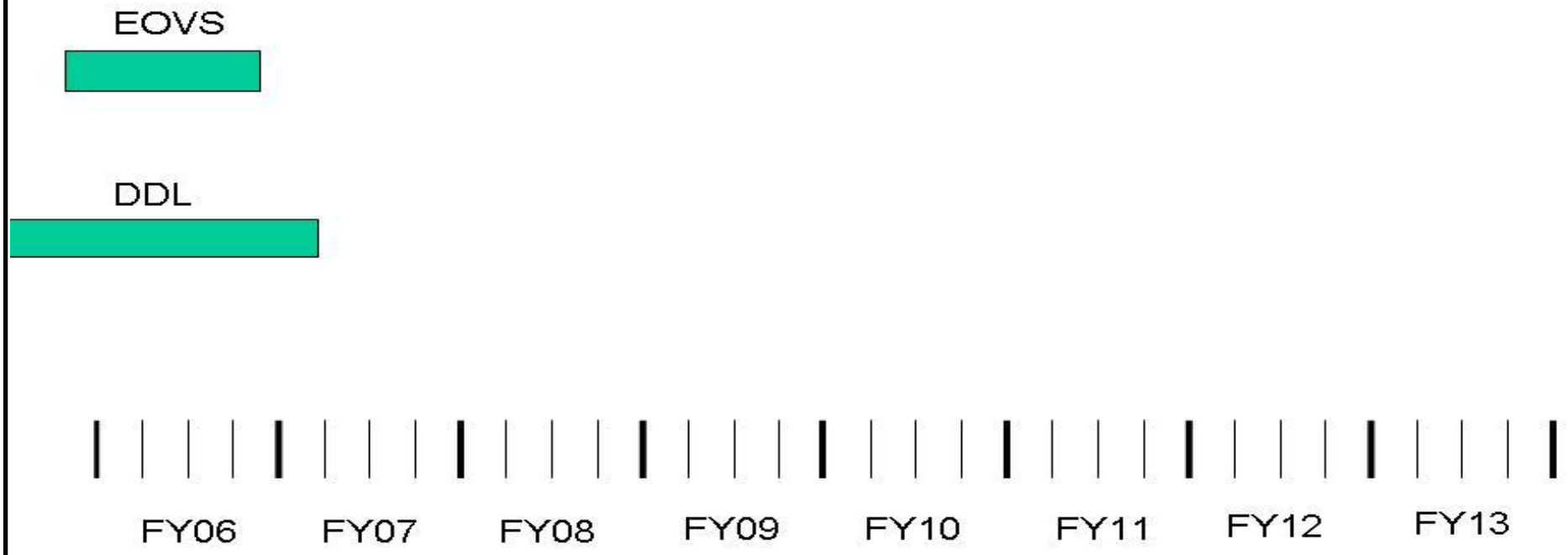

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305202F Dragon U-2 (JMIP)**	PROJECT NUMBER AND TITLE **4945 High Altitude Subsystems**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) EOVS EMD Contract Completion	3Q			
(U) DDL2 EMD Contract Completion		1Q		

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PE NUMBER: 0305206F
PE TITLE: Airborne Reconnaissance Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	55.711	52.624	64.869	67.003	66.624	63.326	63.444	64.659	Continuing	TBD
4818	Imaging and Targeting Support	17.652	15.594	26.951	27.441	26.203	22.465	21.824	22.209	Continuing	TBD
4819	Common Data Link (CDL)	35.357	35.539	36.161	37.891	38.811	39.307	40.036	40.834	Continuing	TBD
5038	Network Centric Collaborative Targeting	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
5092	JTC/SIL MUSE	1.750	1.491	1.757	1.671	1.610	1.554	1.584	1.616	Continuing	TBD

- FY06, Project Number 675038, Network Centric Collaborative Targeting (NCCT) ACTD was completed and program developments were transfered to PE 0305221F, as Project 675197.

(U) A. Mission Description and Budget Item Justification

The Airborne Reconnaissance Systems program coordinates the development of advanced airborne reconnaissance system technologies (sensors, data links, targeting networks and products, and quick reaction capabilities) in support of multiple airborne reconnaissance platforms, both manned and unmanned. Its objective is to develop, demonstrate, and rapidly transition advanced, interoperable, multi-platform solutions to reduce the find, fix, target, and track kill chain timeline. This program also coordinates the development of common collection, processing, and dissemination solutions for near-real time intelligence, surveillance, and reconnaissance (ISR).

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	55.737	52.824	54.885	56.860
(U)	Current PBR/President's Budget	55.711	52.624	64.869	67.003
(U)	Total Adjustments	-0.026	-0.200		
(U)	Congressional Program Reductions		0.000		
	Congressional Rescissions		0.006		
	Congressional Increases				
	Reprogrammings	-0.026	-0.200		
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4818 Imaging and Targeting Support	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4818 Imaging and Targeting Support	17.652	15.594	26.951	27.441	26.203	22.465	21.824	22.209	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The purpose of the Imaging and Targeting Support (I&TS) program is to develop and demonstrate next-generation, common imagery reconnaissance sensors (radar and electro-optical systems) for multiple airborne platforms, and sensor products to aid in rapid targeting (geolocation models, sensor-based exploitation tools, sensor networking capabilities). Developmental efforts pursued are improved sensor capabilities (such as hyperspectral imagery [HSI], measurement and signature intelligence [MASINT], polarimetric imaging, ground moving target indication, foliage penetration, and other radar and electro-optical modes), increased geolocation accuracy, advanced sensor data correlation, automated target detection, network centric warfare, and other Intelligence, Surveillance, and Reconnaissance (ISR) capabilities to reduce both target search and kill chain timelines; as well as, supporting traditional intelligence activities. I&TS will increase interoperability among developed systems by developing common standards and tools. I&TS focuses on the following thrust areas:

Development and integration of common radar and electro-optical sensors (Synthetic Aperture Radar [SAR], Low Frequency SAR, Electro-Optical [EO], Infrared [IR], HSI, Laser Radar [LADAR]) and their operational modes (High Resolution Imagery, Moving Target Indication, Spectral Identification) for multiple airborne platforms.

Development and demonstration of advanced airborne tactical sensor processing algorithms and tools (automatic registration, automatic and assisted target detection, network centric warfare). Integration and test Common Image Processor (CIP) in Theater Airborne Reconnaissance System (TARS). Development of integrated multi-sensor capabilities to detect and identify obscured targets (OT). Development of open architecture between sensor models and target exploitation tools. Development of sensor models for airborne reconnaissance platforms. Development and implementation of national and international imagery standards (Common Ground Moving Target Indicator (GMTI), National Imagery Transmission Format (NITF)). These efforts focus on reducing the find, fix and track elements of the time critical targeting kill-chain timeline while improving operator and decision-maker efficiency and effectiveness.

Enhancement of Imagery Intelligence (IMINT) product quality. Monitoring and enhancement of IMINT product quality (radar and EO/IR imagery, GMTI data, and spectral information) and timeliness throughout the image chain (from sensor to user).

This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Theater Airborne Reconnaissance System (TARS)	3.644	0.150	0.000	0.000
(U) Continue development and delivery of sensor models for airborne reconnaissance platforms.	3.537	0.400	0.000	0.000
(U) Continue efforts to transition HSI technology, such as the Spectral Infrared Imaging Technology Transition Testbed (SPIRITT) sensor and the Hyperspectral Collection and Analysis System (HyCAS) into airborne reconnaissance platforms.	6.127	7.868	4.500	3.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4818 Imaging and Targeting Support

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Develop Obscured Target (OT) sensor capabilities (e.g., foliage penetration synthetic aperture radar (FOPEN SAR) and target identification (ID) laser radar (LADAR)).	1.206	4.096	9.000	8.800
(U)	Develop automatic and assisted target detection algorithms and tools.	0.000	0.000	2.000	4.000
(U)	Procure 4 HyCAS Sensors, integrate onto the MQ-1 Predator UAS, and provide training and support for these systems.			10.182	10.233
(U)	Continue image quality base lining and assessment efforts for airborne reconnaissance platforms.	2.000	2.000	0.000	0.000
(U)	Mission Support	1.138	1.080	1.269	1.408
(U)	Total Cost	17.652	15.594	26.951	27.441

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Joint Capability Technology Demonstration (0604648D8Z, OSD)				2.000	6.000	6.000	7.000	7.000	0.000	28.000
(U)	AF RDT & E (PE 63203F, AFRL)	1.850	3.300	1.400	0.000	0.000	0.000	0.000	0.000	0.000	8.084

-Air Force Research Lab is contributing to SPIRITT HSI sensor development, including a longwave infrared (LWIR) hyperspectral channel.

(U) D. Acquisition Strategy

Acquisition strategy is to maximize commercial and national development efforts and investment through multiple contracting methods; including the use of Engineering Change Proposals (ECP) to modify existing contracts and new contracts that were awarded both competitively or on a sole source basis.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **4818 Imaging and Targeting Support**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
BAE Systems (SPIRITT)	C/CPFF	Greenlawn, NY	19.646	4.927	Nov-05	6.500	Jan-07	1.500	Jan-08	3.000	Jan-09	0.000	35.573	35.573
BAE Systems (TARS)	SS/CPFF	Greenlawn, NY	0.480	3.644	Feb-06	0.000						0.000	4.124	4.124
General Atomics (HYCAS)	SS/CPFF	Rancho Bernardo, CA	0.000	0.000		0.350	Mar-07	2.000	Feb-08	4.500	Jan-09	0.000	6.850	0.350
EOIR Technologies (HYCAS)	SS/CPFF	Fredricksburg, VA	0.000	0.635	Feb-06	0.000						0.000	0.635	0.635
Essex Corp (OT-SAR)	Phase III SBIR	Columbia, MD	0.000	0.750	Jun-06	2.000	Feb-07	0.000		0.000		0.000	2.750	2.750
BAE Systems (CSM)	SS/CPFF	Rancho Bernardo, CA	0.000	1.348	Jun-06	0.000		0.000				0.000	1.348	1.348
ITT Space Systems (Image Quality)	SS/CPFF	Rochester, NY	2.840	1.000	Nov-05	1.000	Dec-06					0.000	4.840	4.840
General Dynamics (Image Quality)	SS/CPFF	Ypsilanti, MI	2.450	1.000	Dec-06	1.000	Nov-06					0.000	4.450	4.450
General Dynamics (API/TRD)	SS/CPFF	Dayton, OH	2.665	0.503	Nov-05	0.000						0.000	3.168	3.168
Others	Various	Various		2.707	Mar-06	3.664	Mar-07	22.182	Mar-08	18.533	Mar-09	Continuing	TBD	TBD
Subtotal Product Development			28.081	16.514		14.514		25.682		26.033		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
												0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
ASC (ITS)	Various	Wright Patterson, AFB		1.138	Oct-05	1.080	Oct-06	1.269	Oct-07	1.408	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.000	1.138		1.080		1.269		1.408		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			28.081	17.652		15.594		26.951		27.441		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4818 Imaging and Targeting Support

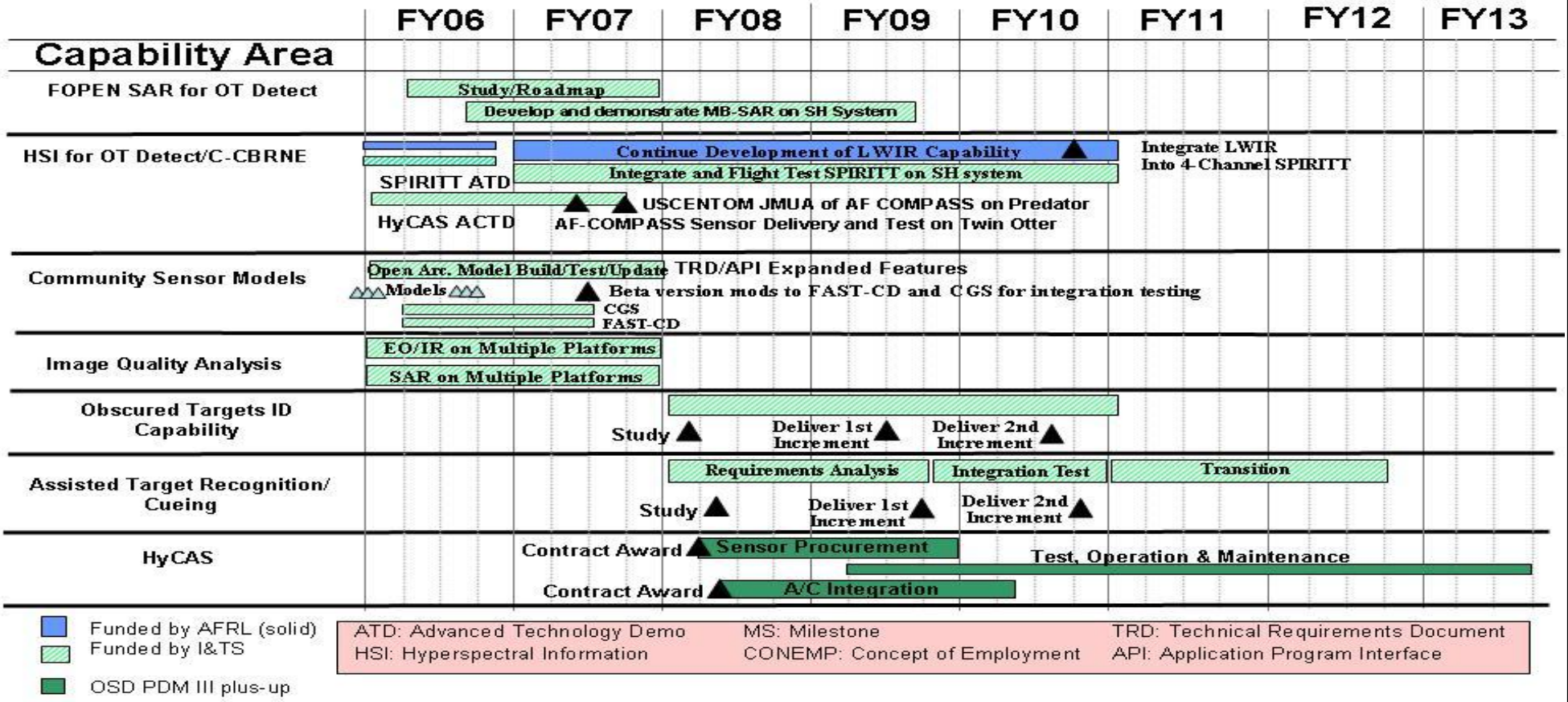

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **4818 Imaging and Targeting Support**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) TARS: Contract Award	3Q			
(U) TARS: CIP Patch Complete		3Q		
(U) ITS: Community Sensor Model Contract Award	2Q			
(U) ITS: Community Sensor Model Deliveries		2Q		
(U) ITS: SPIRITT ATD Phase I Flight Test #2	4Q			
(U) ITS: Demonstrate SPIRITT in C-130 Pod		4Q		
(U) ITS: SPIRITT Long Wave Hyperspectral Integration				3Q
(U) ITS: Obscured Target Sensor Capabilities Study Contract Award	2Q			
(U) ITS: Obscured Target Sensor Capabilities Study Strategy Report	4Q			
(U) ITS: Obscured Target UHF SAR Phase 1 Enhancement Contract Award	3Q			
(U) ITS: Obscured Target UHF SAR Phase 1 Enhancement Delivery		3Q		
(U) ITS: Obscured Target UHF SAR Phase 2 Enhancement Contract Award		2Q		
(U) ITS: Obscured Target UHF SAR Phase 2 Enhancement Delivery			1Q	
(U) ITS: Obscured Target ID Capability Study Contract Award			1Q	
(U) ITS: Assisted Target Recognition Capability Study Contract Award			2Q	
(U) ITS: Deliver Podded MB SAR Capability		4Q		
(U) ITS: Demonstrate LADAR Sensor for OT Identification			3Q	
(U) ITS: Image quality Baseline Global Hawk Complete	2Q			
(U) ITS: Image Quality Baseline Predator CONUS TPED complete		1Q		
(U) ITS: Image Quality Contracts complete		4Q		
(U) ITS: HyCAS Contract Award Sensor Procurement			2Q	
(U) ITS: HyCAS Contract Award A/C Integration			2Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4819 Common Data Link (CDL)	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4819 Common Data Link (CDL)	35.357	35.539	36.161	37.891	38.811	39.307	40.036	40.834	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Common Data Link (CDL) provides an interoperable joint command, control, and communications capability for manned/unmanned Intelligence, Surveillance, and Reconnaissance (ISR) assets. As the CDL Executive Agent (EA), the Air Force oversees acquisition of developmental datalinks and update of the CDL specification. CDL Military Intelligence Program (MIP) funds are used to ensure design configuration, commonality, and interoperability among the service's ISR platforms. Updates to the CDL specification and developmental systems impact approximately 500 DoD airborne and ground ISR systems with CDL capabilities. The CDL program is working to comply with OSD mandates for Software Communications Architecture (SCA) waveform development, Internet Protocol Version 6 (IPv6), and software re-programmable cryptographic (COMSEC) equipment.

The CDL design permits existing and future reconnaissance assets to operate worldwide, providing sensor data directly via point-to-point or point-to-multipoint broadcast to ground sites and airborne platforms. It also provides the capability to relay data via air-to-air or satellite links when the asset and ground site are not within line-of-sight. CDL provides bandwidth to accommodate numerous sensors collecting Signals Intelligence (SIGINT) and Imagery Intelligence (IMINT) (including video) data.

Concept, technology, and developmental efforts support continuous improvements and implementation of line-of-sight and network Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities. CDL's modular design provides for future technology insertion and reduces non-recurring engineering and life-cycle costs to the user. (Note: the term A-series refers to full data rate/network capable CDL systems and T-Series refers to less capable, lower data rate CDL systems.)

This program is categorized as Budget Activity 07 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continued evolutionary development of T-Series CDL terminals and waveforms (e.g. Team Portable, Mini CDL, and Joint Tactical Edge Network) for use on C2ISR platforms (e.g. Guardrail Legacy Replacement, Airborne Reconnaissance Low, P-3, Predator, Reaper, other tactical and small UAVs) and man portable systems.	9.890	5.982	10.583	13.884
(U) Continued development of A-Series terminals and waveforms (e.g. MR-TCDL and SCA/IPv6) for integration into ISR platforms and programs such as ACS, Apache, DCGS-A and Objective Gateway.	12.771	14.363	11.360	9.119
(U) Continued Multi-Platform-Common Data Link (MP-CDL) (A-Series) development of wideband integrated common data link to support Multi-Platform Radar Technology Insertion Program (MP-RTIP) and network centric communications development.	5.099	6.405	0.294	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4819 Common Data Link (CDL)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continued configuration control of CDL architecture, standards, specification, and modules.	1.920	2.108	2.553	2.720
(U)	Continued current development phase of COMSEC replacement and CDL transition to development of software reprogrammable COMSEC.	0.526	3.644	1.483	0.893
(U)	Continued development of advanced technology insertion activities (to include studies and analysis of future data link requirements and architectures), CDL certification test equipment development, and related Joint Service interoperability certification and spectrum management requirements to include OSD mandates.	0.788	0.732	7.373	8.569
(U)	Complete NCCT ACTD wideband integrated common data link development.	1.000	0.000	0.000	0.000
(U)	Complete Ultra-wideband Airborne Laser Communications development. This is an FY06 Congressional Plus-up.	1.774	0.000	0.000	0.000
(U)	Provide CDL technical and engineering support.	1.589	2.305	2.515	2.706
(U)	Total Cost	35.357	35.539	36.161	37.891

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None										

(U) D. Acquisition Strategy

CDL funds are managed by various government program offices and laboratories to support new and on going contracted development efforts in support of providing a common, interoperable wideband ISR data link as mandated by Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII)) policy. Platforms are responsible for CDL procurement, integration, and installation. Acquisition strategy varies by contract. When possible contracts are awarded under full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **4819 Common Data Link (CDL)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
L-3 Communications	C & S; CPAF, CPFF, CPIF	Salt Lake City, UT	139.695	16.956	Feb-06	18.569	Jan-07	16.826	Jan-08	15.566	Jan-09	Continuing	TBD	TBD
Harris Corp	C & S; CPFF	Melbourne, FL	3.441	0.167	Sep-06	1.167	Jan-07	0.333	Jan-08	0.000		0.000	5.108	TBD
SATCOM Interop/Global Grid/Other Govt Orgs	S; MIPR, CPIF	Multiple	8.107	0.000		0.100	Jan-07	1.400	Jan-08	3.800	Jan-09	Continuing	TBD	TBD
L-3 COMCEPT	C; CPFF	Rockwall, TX	20.619	1.000	Feb-06							0.000	21.619	21.619
ITT	C; IDIQ	Beavercreek, OH	2.700	1.774	Jun-06							0.000	4.474	4.500
Cubic	C, CPFF	San Diego, CA	14.075	6.193	Feb-06	3.117	Jan-07	1.733	Jan-08	1.500	Jan-09	Continuing	TBD	TBD
Viasat	CPIF	San Diego CA	0.000	0.167	Sep-06	1.167	Jan-07	0.333	Jan-08	0.000		0.000	1.667	
Other	S; MIPR, CPFF	Multiple	5.004	2.306	Feb-06	3.500	Jan-07	6.494	Jan-08	7.639	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			193.641	28.563		27.620		27.119		28.505		Continuing	TBD	TBD
Remarks:														
(U) Support														
Various	C & S; CPFF, MIPR	Multiple	28.219	5.464	Dec-05	5.434	Jan-07	5.950	Jan-08	6.188	Jan-09	Continuing	TBD	TBD
Subtotal Support			28.219	5.464		5.434		5.950		6.188		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
JITC	MIPR	Fort Huachuca, AZ	4.023	0.300	Feb-06	0.309	Jan-07	0.318	Jan-08	0.328	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			4.023	0.300		0.309		0.318		0.328		Continuing	TBD	TBD
Remarks:														
(U) Management														
Various	MIPR	Multiple	9.739	1.030	Oct-05	2.176	Jan-07	2.774	Jan-08	2.870	Jan-09	Continuing	TBD	TBD
Subtotal Management			9.739	1.030		2.176		2.774		2.870		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			235.622	35.357		35.539		36.161		37.891		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4819 Common Data Link (CDL)

EXHIBIT R-2A(PE0305206F)

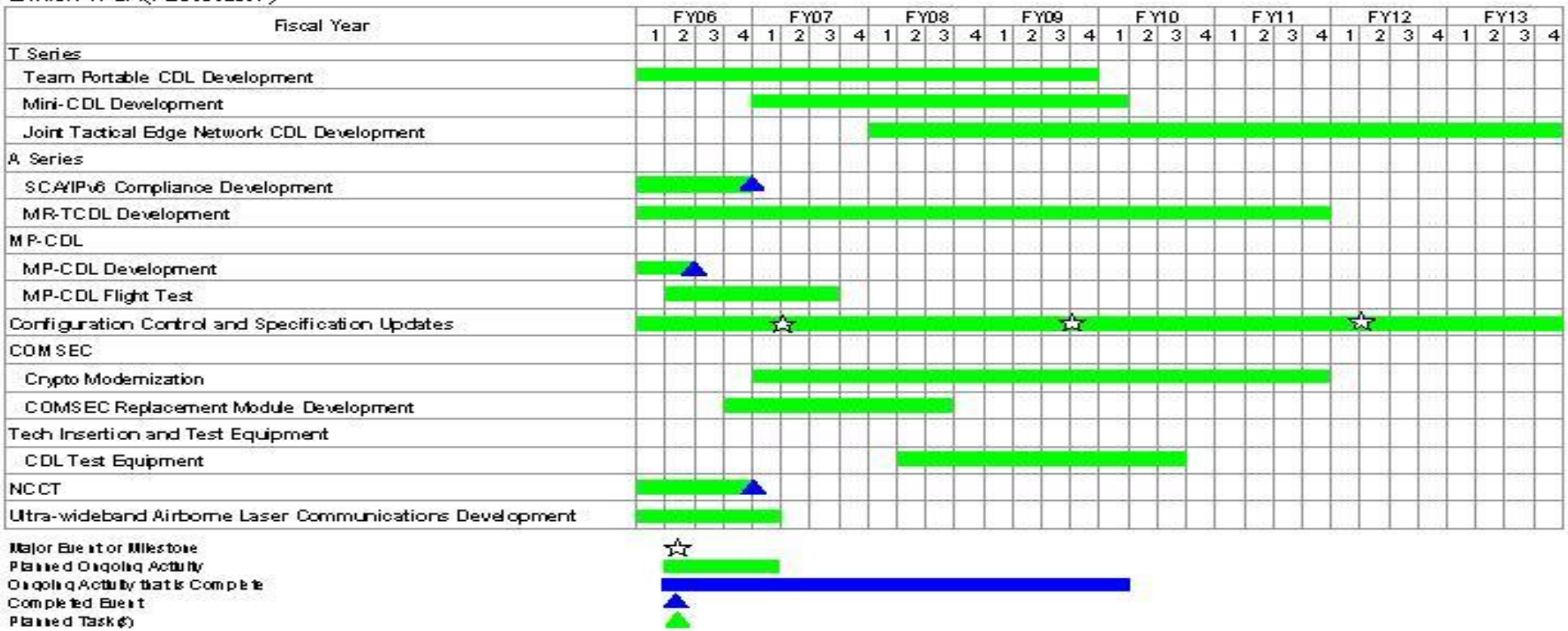

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **4819 Common Data Link (CDL)**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) Team Portable CDL Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Mini-CDL Development		1-4Q	1-4Q	1-4Q
(U) Joint Tactical Edge Network CDL Development			1-4Q	1-4Q
(U) SCA/IPv6 Compliance Development	1-4Q			
(U) MR-TCDL for Army Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) MP-CDL Development	1-2Q			
(U) MP-CDL Flight Test	2-4Q	1-4Q		
(U) Configuration Control and Specification Updates	1-4Q	1-4Q	1-4Q	1-4Q
(U) Crypto Modernization		1-4Q	1-4Q	1-4Q
(U) COMSEC Replacement Module Development	4Q	1-4Q	1-4Q	
(U) CDL Test Equipment			1-4Q	1-4Q
(U) NCCT	1-4Q			
(U) Ultra-wideband Airborne Laser Communications Development	1-4Q	2Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 5038 Network Centric Collaborative Targeting

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5038	Network Centric Collaborative Targeting	0.952	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project completed the Network Centric Collaborative Targeting (NCCT) Advanced Concept Technology Demonstration (ACTD). NCCT transitioned from ACTD to formal Air Force program status in FY06. All NCCT development and fielding efforts now fall under PE 35221F.

NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol connectivity to horizontally integrate Battle Management/Command and Control (BM/C2)/Intelligence, Surveillance, and Reconnaissance (ISR) assets to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT will develop and deploy the capability to share multi-source sensor-level data, coordinate sensor activity, and provide rapidly correlated results between dissimilar BM/C2/ISR platforms and decision-making nodes. NCCT will also develop and refresh BM/C2/ISR asset and decision-making node interfaces in coordination with participant program offices.

NCCT Core Technology develops machine-to-machine hardware and software to horizontally integrate dissimilar BM/C2/ISR assets to include, but not limited to, Rivet Joint, Joint Surveillance Target Attack Radar System (Joint STARS), Deployable Common Ground Station (DCGS)/U2, Falconer Air and Space Operations Center (AOC), national systems and Army Guardrail. NCCT Core Technology includes, but is not limited to, network messages and formats, correlation software and data rules of interaction, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modications and PIMs. Core technology also supports Air Force and Joint experiments, demonstrations, and exercises as necessary.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)				
(U) Complete development of NCCT core technology such as NCCT Network Controller, NCCT Communications Equipment, and NCCT Operations Interface for the ACTD.	0.952			
(U) Total Cost	0.952	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RC-135 PE 0305207F	0.100								0.000	2.100
(U) CDL PE 0305206F (Project 4819)	1.000								0.000	2.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5038 Network Centric Collaborative Targeting**

(U) C. Other Program Funding Summary ($ in Millions)

(U)	OSD PE 0603750D	1.000		0.000	2.000
(U)	Army Guardrail PE 0203744A	1.000		0.000	2.000
(U)	Other APPN				

The ACTD includes participating platforms as shown above. United Kingdom Nimrod also participated in the ACTD with their own funds.

(U) D. Acquisition Strategy

ASC/BSSG, Big Safari Systems Group at Wright Patterson AFB, manages the Cost Plus Fixed Fee contract used to develop NCCT core technology and oversee system demonstration while individual platform program offices (Rivet Joint, Joint STARS, AWACS, Air Force DCGS, Airborne Overhead Introperability Office, Senior Scout, UK Nimrod and Army Guardrail) manage and contract directly for Platform Interface Module development and integration on their platforms.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **5038 Network Centric Collaborative Targeting**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
L-3 ComCept, Inc.	CPFF	Prime Contractor/Rockwall, TX		0.952	Nov-05							0.000	0.952	TBD
Subtotal Product Development			0.000	0.952		0.000		0.000		0.000		0.000	0.952	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.952		0.000		0.000		0.000		0.000	0.952	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305206F Airborne Reconnaissance Systems**	**5038 Network Centric Collaborative Targeting**

	Task Name	2006				2007				2008			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Core Technology Development and Refinement												
										as of 19 Jan 2006			

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5038 Network Centric Collaborative Targeting**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Core Technology Development	1-4Q			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 5092 JTC/SIL MUSE	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5092 JTC/SIL MUSE	1.750	1.491	1.757	1.671	1.610	1.554	1.584	1.616	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a center of technical excellence to support all Unmanned Air Systems (UAS) programs within the services. The mission includes Service-specific and Joint UAS and Intelligence Surveillance Reconnaissance (ISR) programs throughout DoD. The JTC/SIL provides a Government test bed for rapid prototyping, technology insertion and transition, systems engineering, modeling/simulation, training and Command Control Communications Computers and Intelligence (C4I) optimization. The cornerstone of its diverse tool set is the Multiple Unified Simulation Environment (MUSE), which is the Department's simulation/training system of choice for ISR systems, sensors, and platforms. The MUSE is also known as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) in its Air Force application.

The Services and Warfighting Commanders have a requirement for the capability to train with a system that provides a real-time simulation environment containing multiple intelligence systems that can be integrated with larger force-on-force simulations. The MUSE creates a realistic operational environment which supports the ability to assess military utility, architecture and Concept of Operations (CONOPS) development, Tactics, Techniques, and Procedures (TTP) development and refinement, the conduct of emerging concepts experimentation and C4I optimization within warfighting exercises and experiments. The MUSE/AFSERS is the only capability within the Department that allows all Services to train with UAS and ISR assets in a Joint training environment. The MUSE also creates a realistic operational environment that supports an embedded training capability for multiple Program Managers. These tools help to minimize acquisition and life cycle cost and schedule impacts.

The MUSE is currently in use within all services and unified commands simulating PREDATOR, GLOBAL HAWK, HUNTER, Shadow 200 and PIONEER UASs, national and commercial satellite collectors, P-3 and the U-2. During warfighting exercises, the JTC/SIL integrates realistic high-fidelity imagery simulations, emulating the C4I construct. For those assets normally not available for training, the JTC/SIL provides surrogate systems and interfaces. Distributed training environments, virtually linking participants from various locations worldwide, are routinely supported within the MUSE architecture. The MUSE/AFSERS is also used as a Mission Rehearsal Tool for current on-going combat operations.

This program is categorized as Budget Activity 7 because it provides for the development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Laboratory sustainment	0.334	0.334	0.334	0.334
(U) Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) development	0.916	0.657	0.923	0.837
(U) Maintenance, Licenses and equipment purchases	0.500	0.500	0.500	0.500
(U) Total Cost	1.750	1.491	1.757	1.671

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5092 JTC/SIL MUSE**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Other

The program receives approximately $2.3 per year from the Army (PE 0305204A) and $1.7M per year from the Navy (PE P0305204N) thru FY2009.

(U) D. Acquisition Strategy

All contracts are awarded after full and open competition and when situations dictate, via sole source.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **5092 JTC/SIL MUSE**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
JTC/SIL	MIPR	Redstone Arsenal, Huntsville, AL		1.750	Nov-05	1.491	Jan-07	1.757	Jan-08	1.671	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.750		1.491		1.757		1.671		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	1.750		1.491		1.757		1.671		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 5092 JTC/SIL MUSE

JTC/SIL Schedule

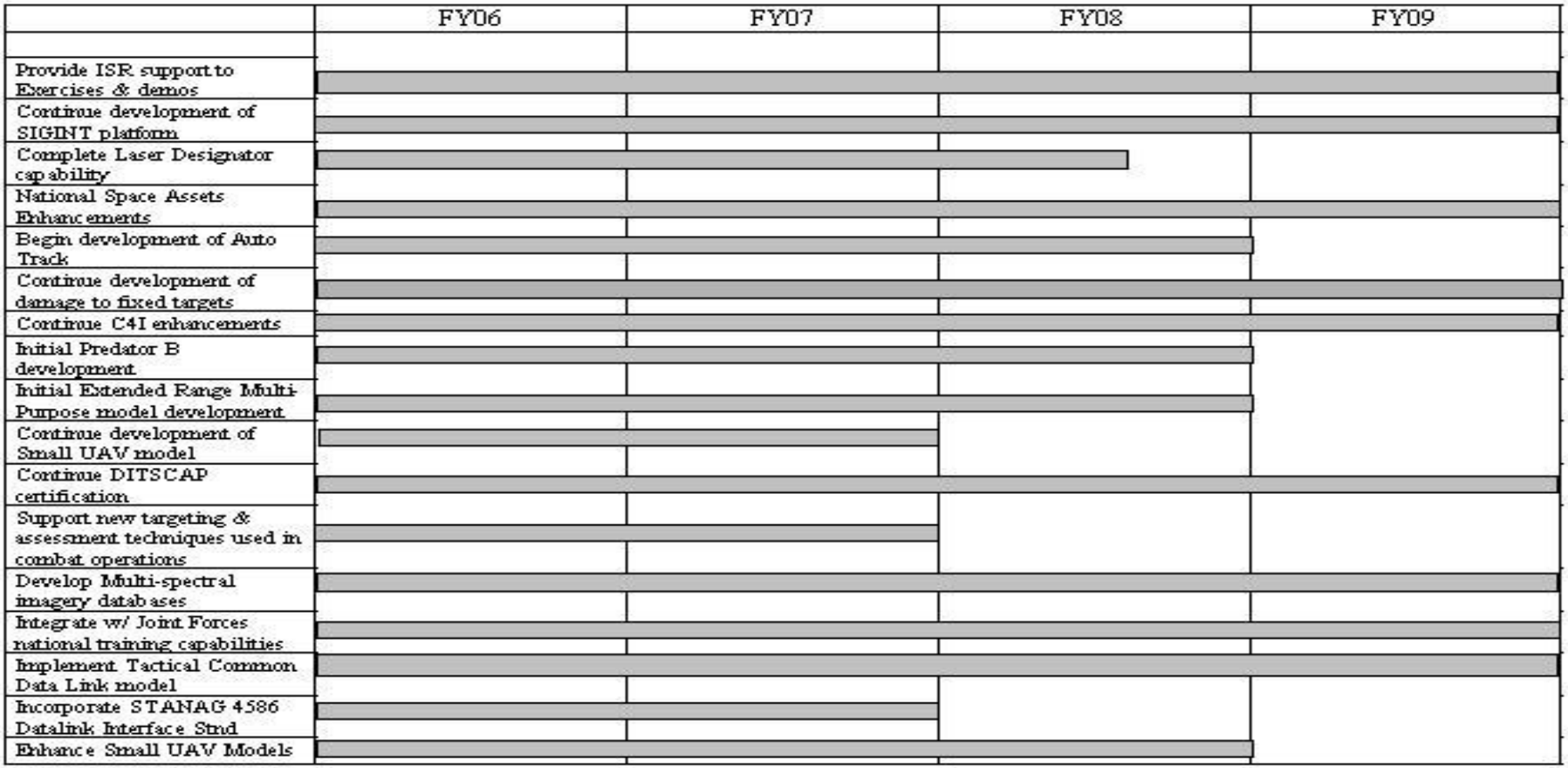

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5092 JTC/SIL MUSE**

(U) **Schedule Profile**	FY 2006	FY 2007	FY 2008	FY 2009
(U) Provide ISR support to exercises and demonstrations	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue development of SIGINT platforms	1-4Q	1-4Q	1-4Q	1-4Q
(U) Complete Laser Designator capability	1-4Q	1-4Q	1-2Q	
(U) National space assets enhancements	1-4Q	1-4Q	1-4Q	1-4Q
(U) Begin development of aut track	1-4Q	1-4Q	1-4Q	
(U) Continue development of damage to fixed targets	1-4Q	1-4Q	1-4Q	1-4Q
(U) Continue C4I enhancements	1-4Q	1-4Q	1-4Q	1-4Q
(U) Initial Predator B (Reaper) development	1-4Q	1-4Q	1-4Q	
(U) Initial extended range multi-purpose model development	1-4Q	1-4Q	1-4Q	
(U) Continue development of Small UAV model	1-4Q	1-4Q		
(U) Continue DITSCAP certification	1-4Q	1-4Q	1-4Q	1-4Q
(U) Support new targeting and assessment techniques used in combat operations	1-4Q	1-4Q		
(U) Develop multi-spectral imagery databases	1-4Q	1-4Q	1-4Q	1-4Q
(U) Integrate with Joint Forces national training capabilities	1-4Q	1-4Q	1-4Q	1-4Q
(U) Implement Tactical Commomn Data Link model	1-4Q	1-4Q	1-4Q	1-4Q
(U) Incorporate STANAG 4586 Datalink interface standard	1-4Q	1-4Q		
(U) Enhance Small UAV models	1-4Q	1-4Q	1-4Q	

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PE NUMBER: 0305207F
PE TITLE: Manned Reconnaissance System

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305207F Manned Reconnaissance System

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	18.074	16.669	12.672	12.926	13.256	13.447	13.703	13.976	Continuing	TBD
4754 COBRA BALL	18.074	16.669	12.672	12.926	13.256	13.447	13.703	13.976	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations for integration into the various systems baseline configurations.

These activities are managed by the Air Force through the 645th Aeronautical System Group (AESG, a.k.a. BIG SAFARI), Reconnaissance System Wing, Aeronautical Systems Center, Air Force Materiel Command. BIG SAFARI manages engineering, ground and support system modifications, integration, flight testing, product assurance, acceptance testing, logistics, and training activities. Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY08-FY13 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state adversaries and the rapid evolution of COTS technologies demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incremental 'baseline' strategy to mitigate risk, find affordable solutions and field needed capabilities.

This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to pursue joint, allied, and coalition interoperability.

This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	18.074	10.132	12.864	13.100
(U)	Current PBR/President's Budget	18.074	16.669	12.672	12.926
(U)	Total Adjustments	0.000	6.537		
(U)	Congressional Program Reductions				
	Congressional Rescissions		0.063		
	Congressional Increases		6.537		
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

FY07 Congressional Adds include: $3.0M for a COMBAT SENT Tactical ELINT System Modernization study; $3.6M for Advanced IR Technologies for COBRA BALL.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305207F Manned Reconnaissance System	PROJECT NUMBER AND TITLE: 4754 COBRA BALL	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4754 COBRA BALL	18.074	16.669	12.672	12.926	13.256	13.447	13.703	13.976	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

The results of these efforts provide for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations for integration into the various systems baseline configurations.

These activities are managed by the Air Force through the 645th Aeronautical System Group (AESG, a.k.a. BIG SAFARI), Reconnaissance System Wing, Aeronautical Systems Center, Air Force Materiel Command. BIG SAFARI manages engineering, ground and support system modifications, integration, flight testing, product assurance, acceptance testing, logistics, and training activities. Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY08-FY13 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

The world-wide challenge of keeping pace against technologically agile targets used by both nation and non-nation-state adversaries and the rapid evolution of COTS technologies demands a responsive and adaptive acquisition strategy for fielding 'baseline capabilities' that are logistically supportable at all locations. The BIG SAFARI program office uses an incremental 'baseline' strategy to mitigate risk, find affordable solutions and field needed capabilities.

This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to pursue joint, allied, and coalition interoperability.

This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continues Non-Recurring Engineering (NRE) for the development and installation of improved mission capabilities - see classified submission.	7.774	10.069	12.672	12.926
(U) Congressional Add: COMBAT SENT Tactical ELINT System modernization study	1.700	3.000		
(U) Congressional Add: RIVET JOINT Reachback	3.000			
(U) Congressional Add: Apertures for Modern Threat Environments	3.100			

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System	PROJECT NUMBER AND TITLE 4754 COBRA BALL

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Congressional Add: RC-135 Processing Forward Network	2.500			
(U) Congressional Add: Advanced IR technologies for COBRA BALL		3.600		
(U) Total Cost	18.074	16.669	12.672	12.926

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0305207F, APAF	108.624	123.169	138.170	154.320	157.950	160.911	225.263	229.745	Continuing	TBD
(U) PE 0305207F, OPAF	21.219	23.597	22.532	23.078	23.658	24.041	24.570	25.110	Continuing	TBD
(U) PE 0305207F, O&M	234.157	251.097	274.297	274.021	278.991	287.831	296.258	304.026	Continuing	TBD

(U) D. Acquisition Strategy

The RC-135 RIVET JOINT, COBRA BALL, and COMBAT SENT aircraft are maintained and upgraded by the 645 AESG (BIG SAFARI Program Office) through an evolutionary acquisition strategy.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

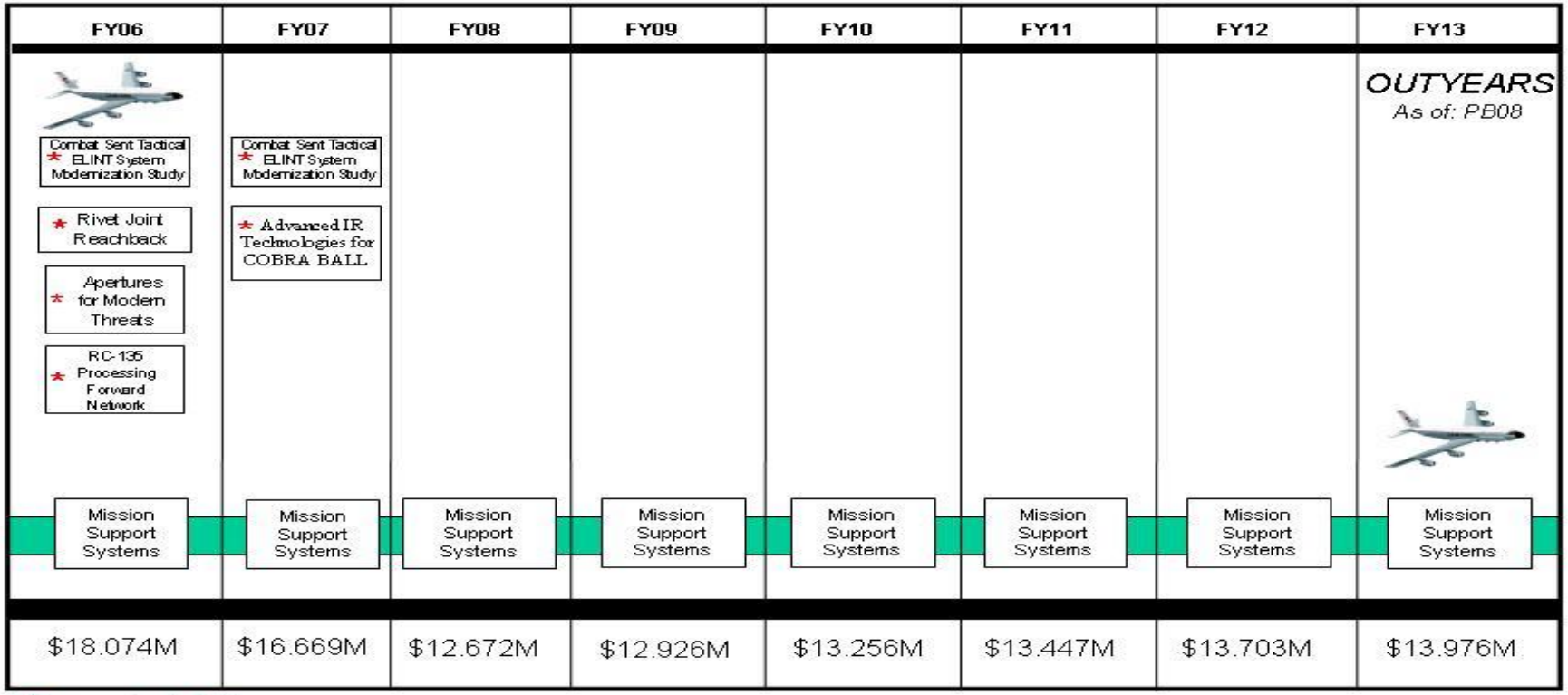
PE NUMBER AND TITLE: **0305207F Manned Reconnaissance System**

PROJECT NUMBER AND TITLE: **4754 COBRA BALL**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
L-3 Communications	CPFF/CPIF/FFP	L-3 Com, Greenville TX		18.074	Nov-05	16.669	Nov-06	12.672	Nov-07	12.926	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	18.074		16.669		12.672		12.926		Continuing	TBD	TBD
Remarks: All activity is based around the Programmed Depot Maintenance (PDM) airframe schedule which includes multiple contracts and organizations with overlapping and continuous periods of performance.														
(U) Total Cost			0.000	18.074		16.669		12.672		12.926		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305207F Manned Reconnaissance System**	PROJECT NUMBER AND TITLE **4754 COBRA BALL**

Manned Reconnaissance Program



*Congressional Adds
** See CLASSIFIED Submission for detailed breakout

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305207F Manned Reconnaissance System**	PROJECT NUMBER AND TITLE **4754 COBRA BALL**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Initiate mission support systems efforts		1Q		
(U) * Classified Mission Systems Development	1-4Q	1-4Q	1-4Q	1-4Q

* See Classified Budget Submission for further breakout

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PE NUMBER: 0305208F
PE TITLE: Distributed Common Ground Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	36.550	125.267	107.117	118.647	125.690	46.612	47.631	48.716	Continuing	TBD
4826	Common Imagery Ground / Surface Systems	36.550	125.267	107.117	118.647	125.690	46.612	47.631	48.716	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level.

AF DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at numbered Air Force and Air National Guard locations, to support the Joint Task Force commander and the Air Operations Center (AOC). The CONUS-based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operationg sensors.

AF DCGS provides critical data and significant support for Time Critical Targeting (TCT) operations. This support will be enhanced with the planned integration of software tools, and, data interfaces to the AOC and the transformation of AF DCGS to a net-centric, service oriented architecture. By converting from a stovepipe system of systems to a web based integrated net centric Intelligence, Surveillance, and Reconnaissance (ISR) management capability AF DCGS will provide the Joint Forces Air Component Commander (JFACC) the capability to:
1) Dynamically visualize and command ISR assets and the information in the AOC
2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TCT process and reduce timelines.
AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented archtecture. This modernization effort, implemented in Block 10.2, will deliver a net centric DCGS capability for the Air Force. Block 10.2 will spiral the necessary technologies and

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

tools into its architecture to provide increased capabilities and meet emerging and urgent user operational needs. These spirals will also integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS transformation will continue this net centric modernization of focusing on Sigint modernization and the integration of data fusion, and automated tools. Increment 2 will perform technology evaluations and develop the required acquisition plans and studies/analysis to begin development in support of a contract award in FY08.

The DIB was developed with the Block 10.2 upgrade and in accordance with DoD direction will be managed and upgraded by the Air Force to meet emerging DCGS architecture and standards for Joint and Coalition interoperability.

AF DCGS will also modernize its network management and interface capabilities by upgrading and migrating its current interface capabilities to a standardized interface configuration which is easy to expand and adapt to growing capacity requirements. Efforts will also focus on network management systems and ability to manage critical bandwitdths to meet operational surges and distributed ops requirements.

The Common Imagery Processor (CIP) is the common sensor processing element within DCGS IMINT architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts continue to upgrade the CIP baseline to maintain currency with upgraded/new sensors.

The DCGS-I Testbed is a mobile test enviornment, which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and net centric operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains currency with existing interface standards.

AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, Allied, and coalition interoperability.

AF DCGS is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	34.883	120.777	110.970	122.065
(U)	Current PBR/President's Budget	36.550	125.267	107.117	118.647
(U)	Total Adjustments	1.667	4.490		
(U)	Congressional Program Reductions		-0.036		
	Congressional Rescissions	-0.904	-0.474		
	Congressional Increases	2.571	5.000		
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

- Funding increases from FY 06 to FY 09 to continue AF DCGS modernization and technology insertion. These funds will upgrade AF DCGS and integrate technologies

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

transforming AF DCGS from its existing architecture based on proprietary/legacy systems to an open, net centric, service oriented architecture. The increase also provides the funds necessary to manage and upgrade the DIB to meet emerging technologies and DCGS net centric and enterprise services and improve ISR interoperability.

-Congressional Increase of $2.571M for Ohio Air National Guard in FY06.

-Congressional Increase of $3.3M for Ohio Air National Guard activities and $1.7M for AF DCGS Formal Training Unit in FY07.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4826	Common Imagery Ground / Surface Systems	36.550	125.267	107.117	118.647	125.690	46.612	47.631	48.716	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing, upgrading and managing the DCGS Integration Backbone (DIB) for all the Services to provide common DCGS enterprise services and interoperability at the data level.

AF DCGS provides the Air Force ground systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at numbered Air Force and Air National Guard locations, to support the Joint Task Force commander and the Air Operations Center (AOC). The CONUS-based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operationg sensors.

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Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE **4826 Common Imagery Ground / Surface Systems**

tools into its architecture to provide increased capabilities and meet emerging and urgent user operational needs. These spirals will also integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS transformation will continue this net centric modernization of focusing on Sigint modernization and the integration of data fusion, and automated tools. Increment 2 will perform technology evaluations and develop the required acquisition plans and studies/analysis to begin development in support of a contract award in FY08.

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The DCGS-I Testbed is a mobile test enviornment, which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and net centric operations. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. Upgrades to the DCGS-I Testbed will ensure it maintains currency with existing interface standards.

AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, Allied, and coalition interoperability.

AF DCGS is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS Infrastructure Integrated Process Team (IPT) for USD(I)	2.138	2.320	2.723	2.831
(U)	Continue DCGS-I testbed development and upgrades.	1.478	6.550	4.550	3.550
(U)	Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline of new and upgraded sensors. Continue investigation and implementation of advanced processing tools.	9.247	10.528	12.458	12.565
(U)	Continue commercial imagery integration.	2.600	2.700	2.700	2.700
(U)	Continue AF DCGS Block 10.2 upgrades to provide required tools for AF DCGS support to the JTF Commander and below.	11.114	43.845	18.714	4.123
(U)	Continued development efforts for Increment 2, integrate advance technology with the DCGS	3.617	14.000	26.285	54.830

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE 4826 Common Imagery Ground / Surface Systems

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
Integration Backbone (DIB) to accelerate integration of advanced Mulit-INT exploitation fussion tools.				
(U) Improve DIB interoperability.		1.000	1.000	1.000
(U) Upgrade and manage the DIB.		7.500	7.800	6.200
(U) Continue integration of MASINT and Multiple Intelligence (Multi-INT) exploitation technology capabilities into AF DCGS.		5.000		
(U) Upgrade AF DCGS communication architecture and network.	3.785	26.824	30.887	30.848
(U) Provide Ohio Air National Guard MASINT Exploitation Capability	2.571	3.300		
(U) Provides FTU support		1.700		
(U) Total Cost	36.550	125.267	107.117	118.647

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) OPAF (PE 0305208F)	251.538	199.735	197.806	308.600	150.086	169.402	173.129	176.938		TBD

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the AF DCGS weapon system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**

PROJECT NUMBER AND TITLE: **4826 Common Imagery Ground / Surface Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Block 10.2 Spiral Upgrades	C/Multiple	Raytheon, Garland, TX	6.562	2.275	Aug-06	24.156	Dec-06	16.571	Dec-07	2.692	Dec-08	Continuing	TBD	TBD
Block 10.2 Spiral GFE	TBD	TBD				23.657	Jan-07	8.110	Jan-08	5.656	Jan-09	Continuing	TBD	TBD
DIB Management and Migration	TBD	TBD				7.500	Dec-06	7.800	Dec-07	6.200	Dec-08	Continuing	TBD	TBD
DIB Interoperability	TBD	TBD				1.000	Feb-07	1.000	Feb-08	1.000	Feb-09	Continuing	TBD	TBD
Increment 2	TBD	TBD						10.000	Jul-08	25.000	Jan-09	Continuing	TBD	TBD
Increment 2 Tech Dev	TBD	TBD		1.100	Sep-06	11.085	Jan-07	12.378	Jan-08	25.335	Jan-09	Continuing	TBD	TBD
Communications Capability Upgrade	TBD	TBD			May-06	25.800	Jan-07	25.134	Jan-08	25.608	Jan-09	Continuing	TBD	TBD
Common Imagery Processor Software Development	C/CPFF	Northrup Grumman, Baltimore, MD	39.172	9.247	Dec-05	10.528	Dec-06	12.458	Dec-07	12.565	Dec-09	Continuing	TBD	TBD
MASINT Capabilities into DCGS	Multiple	Riverside Research Institute, Fairfax, VA	3.000		Mar-06	5.000	Jan-07					0.000	8.000	TBD
Commercial Imagery Integration	Multiple	Par Gov't Systems, Rome NY	0.074	2.600	Mar-06	2.700	Jan-07	2.700	Jan-08	2.700	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			48.809	15.222		111.426		96.151		106.756		Continuing	TBD	TBD
Remarks:														
(U) Support														
Other Non-Prime Gov't Contracts			7.958	17.990	Feb-06	10.283	Feb-07	7.230	Feb-08	7.969	Feb-09	Continuing	TBD	TBD
SAIC	SS/ IDIQ	McLean, VA	6.768	2.585	Mar-06	2.714	Mar-07	2.850	Mar-08	2.992	Mar-09	Continuing	TBD	TBD
Various			19.722	0.753	Jan-06	0.844	Oct-06	0.886	Jan-08	0.930	Jan-09	Continuing	TBD	TBD
Subtotal Support			34.448	21.328		13.841		10.966		11.891		Continuing	TBD	TBD
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
													0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
													0.000	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305208F Distributed Common Ground Systems**	**4826 Common Imagery Ground / Surface Systems**

	Subtotal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Total Cost	83.257	36.550	125.267	107.117	118.647	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems

Notional AF DCGS Schedule FY07-13

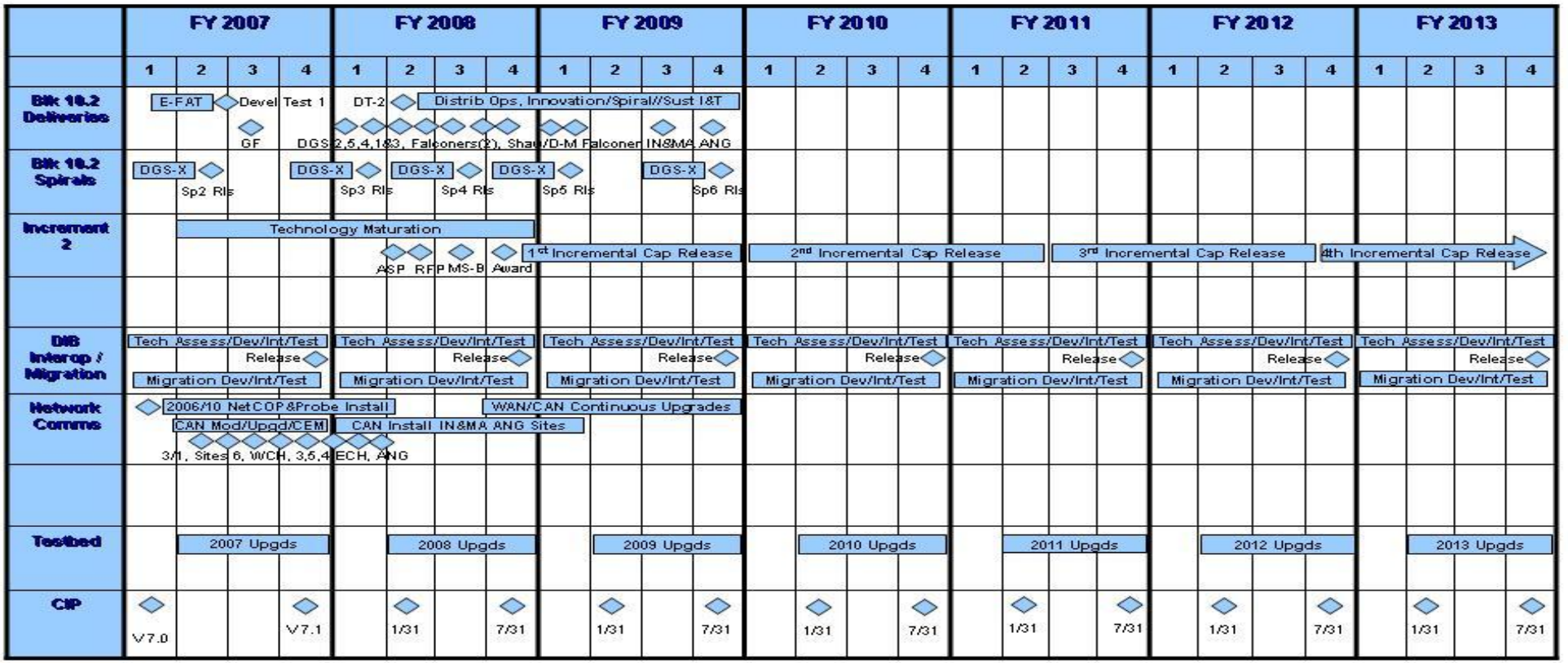

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 10.2 Spiral Development	1-4Q	1-3Q		
(U) Increment 2 Technology Integration		2Q		
(U) Increment 2 Milestone B			2Q	
(U) DCGS-I Testbed Upgrades	3-4Q	2-3Q		
(U) CIP Version 6.8 Release	1Q			
(U) CIP Version 6.9 Release	2Q			
(U) CIP Version 7.0 Release		1Q		
(U) CIP Version 7.1 Release		4Q		
(U) CIP Software Releases			2Q	2Q
(U) CIP Software Releases			4Q	4Q

PE NUMBER: 0305219F
PE TITLE: PREDATOR DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	54.100	67.885	22.296	15.864	21.240	20.922	21.320	21.746	Continuing	TBD
5143 Predator	54.100	67.885	22.296	15.864	21.240	20.922	21.320	21.746	Continuing	TBD

The MQ-9 Program moves to PE 0205219F in FY08. Historical MQ-9 accomplishments remain in this document.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 will operate primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates electro-optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time motion imagery throughout the operational theater. The program will develop and integrate Target Location Accuracy and Metric Sensor improvements. Additionally, the aircraft is multi-configurable to carry either a Synthetic Aperture Radar (SAR) or Hellfire laser-guided missiles. The MQ-1 system will continue to evolve and upgrade its capabilities (which may include SIGINT, communications, Target Location Accuracy and other sensor packages) to satisfy capability shortfalls, new requirements and reliability and maintainability (R&M) and safety issues. Major changes will be classified as distinct blocks or Mission Design Series updates.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-1 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

essential operational capabilities.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	64.081	61.466	18.057	14.653
(U)	Current PBR/President's Budget	54.100	67.885	22.296	15.864
(U)	Total Adjustments	-9.981			
(U)	Congressional Program Reductions		-0.024		
	Congressional Rescissions		-0.257		
	Congressional Increases		6.700		
	Reprogrammings	-9.981			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

The MQ-9 Program moves to PE 0205219F in FY08.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5143 Predator	54.100	67.885	22.296	15.864	21.240	20.922	21.320	21.746	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

The MQ-9 Program moves to PE 0205219F in FY08. Historical MQ-9 accomplishments remain in this document.

(U) A. Mission Description and Budget Item Justification

The basic MQ-1 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 will operate primarily at medium altitudes, integrating with joint aerospace, ground, and maritime forces as well as coalition and Allied forces, to execute combatant commander priority missions. The aircraft carries a Multi-spectral Targeting System (MTS) (a sensor turret that incorporates electro-optical (EO), Infra-Red (IR), laser designator, and IR illuminator) capable of transmitting real-time motion imagery throughout the operational theater. The program will develop and integrate Target Location Accuracy and Metric Sensor improvements. Additionally, the aircraft is multi-configurable to carry either a Synthetic Aperture Radar (SAR) or Hellfire laser-guided missiles. The MQ-1 system will continue to evolve and upgrade its capabilities (which may include SIGINT, communications, Target Location Accuracy and other sensor packages) to satisfy capability shortfalls, new requirements and reliability and maintainability (R&M) and safety issues. Major changes will be classified as distinct blocks or Mission Design Series updates.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control, and a GCS configuration to allow control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recovery GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed facility GCS. The GCS will continue to evolve and upgrade its capabilities to keep pace with MQ-1 aircraft capabilities and the missions they perform.

This program will participate in the development, testing, and implementation of various standards to pursue joint, Allied, and coalition interoperability. These include FAA, Congressional, or OSD mandated standards; as well as international standards, including NATO standardization agreements.

This program is budget activity 7, Operational Systems Development, because it involves Air Force R&D to field a highly capable operational system and provide

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

essential operational capabilities.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	* MQ-1/MQ-9 Pre-planned Product Improvement. Includes advanced capabilities (such as multiple aircraft control/operations), engine and landing gear upgrades, sensor and radar development/integration, quick reaction capabilities, payload development/integration, weaponization and experimentation, data link upgrades (including encryption and tactical common data link (TCDL)), mission planning, simulator/training devices, and ground station and communication equipment development/upgrades. * MQ-9 data is historical for FY06 and FY07. FY08 and FY09 data is MQ-1-only.	12.230	18.926	12.439	7.165
(U)	MQ-1 Video Verification and Identification (VIVID)		2.000		
(U)	MQ-9 Risk Reduction & Quick Reaction Capability. Includes initial integration of weapons, engine, power upgrades, and tech data.	8.615			
(U)	MQ-9 System Development and Demonstration (SDD). Includes aircraft/GCS/Communication system improvements, development and integration of follow-on sensors, weapon and payload integration, test and training capability, technical data.	12.700	27.867		
(U)	* Continue reliability and maintainability efforts to ensure the continued viability of the MQ-1/MQ-9 aircraft, GCS, and associated communications equipment. * MQ-9 data is historical for FY06 and FY07. FY08 and FY09 data is MQ-1-only.	0.500	0.500	0.500	0.500
(U)	System Concept Studies	1.500	1.500	1.500	1.500
(U)	Developmental and Operational Test support (includes SATCOM, Flight Test, Urgent Services)	5.600	4.092	3.857	3.699
(U)	Operator Simulator/Training	8.955	5.000		2.000
(U)	Small Tactical UAVs for Battlefield Intelligence, Communications, and Atmospheric Data Collection (Congressional Add)	2.500			
(U)	Field Support	1.500	1.300		
(U)	MQ-1 TLA/Metric Sensor			4.000	1.000
(U)	Sense and Avoid for Predator (Congressional Add)		1.000		
(U)	Selectively Targeted Skeet Munition (Congressional Add)		1.000		
(U)	Center for Defense UAV Education (Congressional Add)		3.000		
(U)	Scan Eagle Advanced Concepts Development (Congressional Add)		1.700		
(U)	Total Cost	54.100	67.885	22.296	15.864

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
(U) Aircraft Procurement, AF (PE 0305219F)	253.562	235.027	277.999	287.376	250.941	151.915	134.206	111.132	Continuing	TBD
(U) Aircraft Modification, AF (PE 0305219F)	29.880	58.043	74.692	136.379	128.790	132.673	97.637	94.965	Continuing	TBD

(U) D. Acquisition Strategy

The MQ-1 Predator system will be acquired sole-source with General Atomics-ASI as the prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305219F PREDATOR DEVELOPMENT/FIELDING**

PROJECT NUMBER AND TITLE: **5143 Predator**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
MQ-1/MQ-9 Development	SS/CPIF/ CPFF	General Atomics-ASI , Rancho Bernardo CA		30.575	Feb-06	49.543	Feb-07	12.939	Feb-08	7.665	Feb-09	Continuing	TBD	TBD
Multi-spectral Targeting Systems	MIPR	Raytheon, McKinney TX		4.970	Feb-06	1.250	Feb-07	1.500	Feb-08	1.500	Feb-09	Continuing	TBD	TBD
Operator Simulator	CPFF	677 AESG, Wright-Patterson AFB OH		8.955	Feb-06	5.000	Feb-07			2.000	Feb-09	0.000	15.955	15.955
Target Location Accuracy	Various	Raytheon, McKinney TX						4.000	Apr-08	1.000	Apr-09	Continuing	TBD	TBD
Congressional Adds	Various	Various		2.500	Apr-07	6.700	Apr-07					0.000	9.200	9.200
Subtotal Product Development			0.000	47.000		62.493		18.439		12.165		Continuing	TBD	TBD
Remarks:														
(U) Support														
Field Support	SS/T&M	ASC, Wright-Patterson AFB OH		1.500	Feb-06	1.300	Feb-07					Continuing	TBD	TBD
Subtotal Support			0.000	1.500		1.300		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Development and Operational Test Support	Various	Various		5.600	Feb-06	4.092	Feb-07	3.857	Feb-08	3.699	Feb-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	5.600		4.092		3.857		3.699		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	54.100		67.885		22.296		15.864		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5143 Predator

FOR OFFICIAL USE ONLY

MQ-1 Predator Schedule

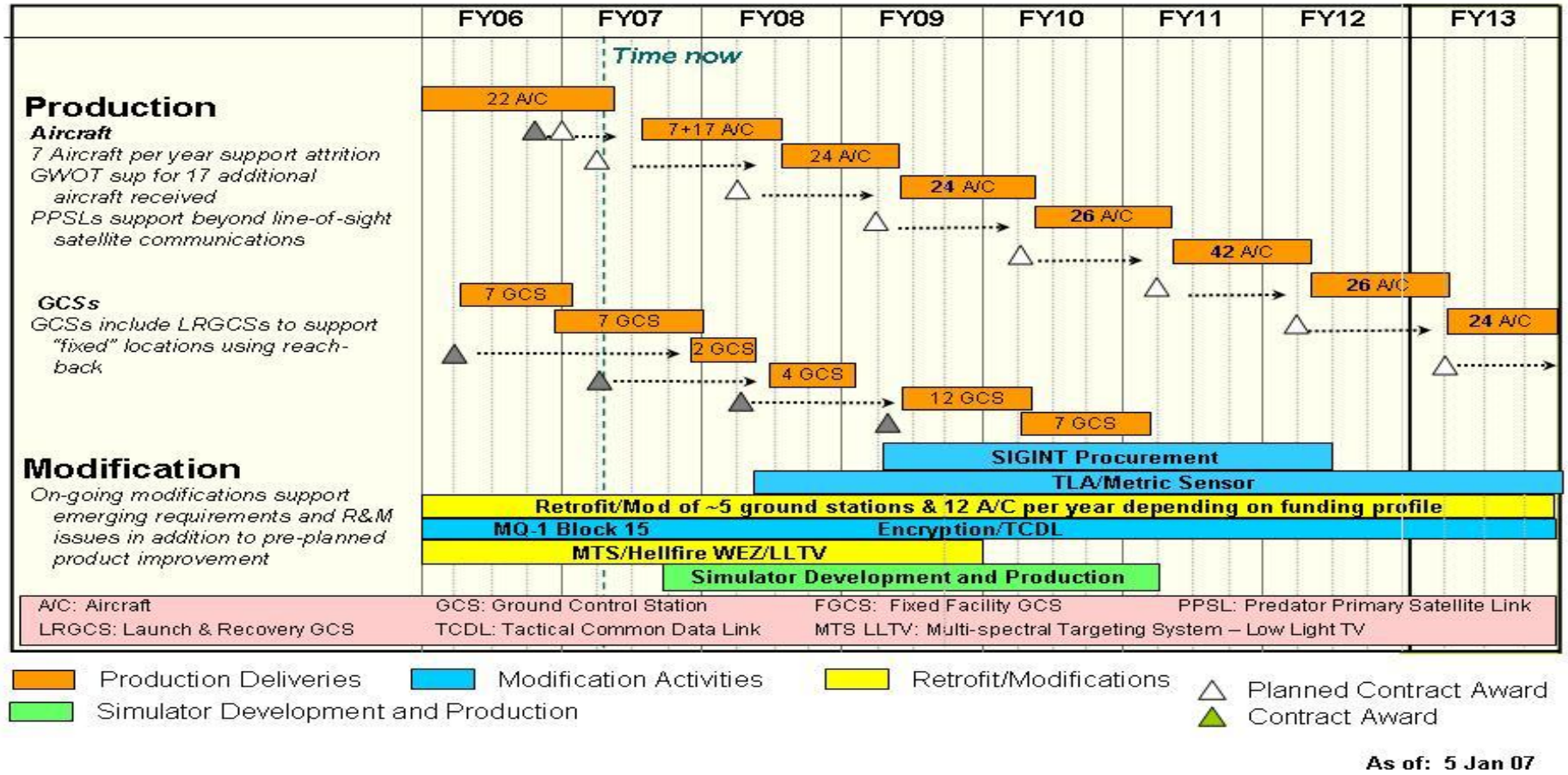


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) MQ-1 P3I	1-4Q	1-4Q	1-4Q	1-4Q
(U) MQ-1 Simulator Development Complete				1Q
(U) MQ-9 Risk Reduction Complete		4Q		
(U) Improved Target Location Accuracy Development Complete			3Q	
(U) SIGINT Payload Integration Complete				1Q

PE NUMBER: 0305220F
PE TITLE: GLOBAL HAWK DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	257.687	247.726	298.501	317.764	246.182	206.873	170.321	172.300	Continuing	TBD
5144 Global Hawk	257.687	247.726	298.501	317.764	246.182	206.873	170.321	172.300	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This funding is developing the highly capable Global Hawk System, which is comprised of aircraft, payload, ground segment, and support segment. The aircraft is fully autonomous, high altitude, long endurance remotely piloted aircraft (RPA). The RQ-4A has one configuration known as the Block 10. The Block 10 is an imagery-intelligence (IMINT) RPA designed to employ 2000 pounds of payload. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor called the integrated sensor suite (ISS). The RQ-4B has three configurations: Block 20, Block 30, and Block 40. All three configurations are designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. Multi-INT collection is intended to mean the simultaneous collection of IMINT and signals intelligence (SIGINT). The Block 20 will employ an upgraded SAR and EO/IR sensors known as the enhanced ISS (EISS) in an IMINT only role. Although the Block 20 is wired for future integration and employment of SIGINT sensors, it is being procured prior to the availability of a modern SIGINT system. Only six aircraft will be procured in the Block 20 configuration. The Air Force will determine at a later time if the Block 20 will be retrofit to become multi-INT, or fill some other role. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a modern, wide-spectrum SIGINT sensor suite capability simultaneously to be used as a multi-INT platform. The Block 40 will integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor, and currently plans to only carry the MP-RTIP sensor. Funds will enable the integration and testing of the improved payload designs. The user will ultimately determine the optimal quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable the Global Hawk System.

The Global Hawk program went through a Title 10, Section 2433 review in 2006, due to unit cost breach (informally known as "Nunn-McCurdy"). The Department certified the program to Congress on June 5, 2006. As a result of the review, the Department directed a program restructure to slow development and reduce risk.

When judged feasible and affordable, this program will participate in the development, testing and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied and coalition interoperability.

This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&D to develop a highly capable operational system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	327.696	247.665	208.507	151.801
(U)	Current PBR/President's Budget	257.687	247.726	298.501	317.764
(U)	Total Adjustments	-70.009	0.061		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.939		
	Congressional Increases		1.000		
	Reprogrammings	-70.009	0.000		
	SBIR/STTR Transfer				

(U) Significant Program Changes:

During 2006 execution year, and as part of the Nunn-McCurdy unit cost breach review, a portion of the 2006 development activities were moved to 2008 and 2009 by the Air Force to reduce risk from concurrency. Also, the remaining years of the system development and demonstration period have been significantly restructured (2008 and beyond) to comply with Department cost estimates to complete the program, which includes the funding of government depot activities beginning in 2008. Also, non-recurring engineering activities have been added in 2008 and beyond for the standup of an additional Global Hawk System main operating base at Grand Forks, North Dakota.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5144 Global Hawk	257.687	247.726	298.501	317.764	246.182	206.873	170.321	172.300	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This funding is developing the highly capable Global Hawk System, which is comprised of aircraft, payload, ground segment, and support segment. The aircraft is fully autonomous, high altitude, long endurance remotely piloted aircraft (RPA). The RQ-4A has one configuration known as the Block 10. The Block 10 is an imagery-intelligence (IMINT) RPA designed to employ 2000 pounds of payload. The Block 10 employs an IMINT system comprised of a synthetic aperture radar (SAR) sensor and an electro-optical (EO) / infrared (IR) sensor called the integrated sensor suite (ISS). The RQ-4B has three configurations: Block 20, Block 30, and Block 40. All three configurations are designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. Multi-INT collection is intended to mean the simultaneous collection of IMINT and signals intelligence (SIGINT). The Block 20 will employ an upgraded SAR and EO/IR sensors known as the enhanced ISS (EISS) in an IMINT only role. Although the Block 20 is wired for future integration and employment of SIGINT sensors, it is being procured prior to the availability of a modern SIGINT system. Only six aircraft will be procured in the Block 20 configuration. The Air Force will determine at a later time if the Block 20 will be retrofit to become multi-INT, or fill some other role. The Block 30 will employ the same EISS sensors as the Block 20 and will also integrate a modern, wide-spectrum SIGINT sensor suite capability simultaneously to be used as a multi-INT platform. The Block 40 will integrate the multi-platform radar technology insertion program (MP-RTIP) radar sensor, and currently plans to only carry the MP-RTIP sensor. Funds will enable the integration and testing of the improved payload designs. The user will ultimately determine the optimal quantities and payloads for each aircraft configuration based on operational requirements. The ground station (GS) includes the mission control element (MCE) and the launch and recovery element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable the Global Hawk System.

The Global Hawk program went through a Title 10, Section 2433 review in 2006, due to unit cost breach (informally known as "Nunn-McCurdy"). The Department certified the program to Congress on June 5, 2006. As a result of the review, the Department directed a program restructure to slow development and reduce risk.

When judged feasible and affordable, this program will participate in the development, testing and implementation of international standards (to include NATO standardization agreements) to enhance joint, allied and coalition interoperability.

This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&D to develop a highly capable operational system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue spiral development and related tasks, to satisfy Capabilities Description Document requirements.				
(U) Aircraft	37.299	20.131	30.807	25.715
(U) Payloads (includes investments for standup of Grand Forks)	30.745	33.407	48.069	63.178
(U) Ground Segment	16.994	29.407	36.695	15.214

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5144 Global Hawk

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Communications (includes investments for standup of Grand Forks)	26.453	16.824	20.370	37.505
(U)	Support Segment (includes investments for depot)	32.230	41.369	58.168	67.145
(U)	Block Load (System Engineering, Program Management, Flight test support, and software maintenance)	53.116	63.180	56.603	58.515
(U)	AFFTC	8.781	7.940	11.826	12.141
(U)	Other Government Costs & Mission Support	17.430	22.143	35.963	38.351
(U)	Multi-Platform Radar Technology Improvement Program (MP-RTIP) sensor adaptation	17.613	7.684		
(U)	Fielding Strategy Acceleration	17.026	5.641		
(U)	Total Cost	257.687	247.726	298.501	317.764

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Airborne SIGINT Enterprise, AF RDT&E (PE 34260F)	4.958	10.520	10.770	11.018	11.258	11.438	11.690	11.946	Continuing	TBD
(U)	* Joint Tactical Radio System, AF RDT&E (PE 27423F)	5.350	16.000	4.580	1.350	20.060	23.940	24.200	24.890	Continuing	TBD
(U)	Other APPN										
(U)	AF MILCON	14.058	52.800								
(U)	AF O&M	65.583	69.102	83.906	123.670	158.401	161.558	173.576	177.468	Continuing	TBD
(U)	AF MILPERS	20.728	29.851	38.802	49.778	55.380	57.070	68.530	80.641	Continuing	TBD
(U)	Aircraft Procurement, APPN 10 AF (HAE UAV)	359.563	448.017	577.846	714.944	523.898	542.626	568.935	484.472	0.000	4,220.301
(U)	Aircraft Procurement, APPN 11 AF (HAE UAV)	0.000	4.592	24.332	106.588	110.841	128.586	110.544	57.563	Continuing	TBD
(U)	Other Procurement, 3080 (HAE UAV)	0.275	0.000	0.816	0.300	0.000	0.000	0.000	0.000	0.000	1.391

* PE 0207423F is the Joint Tactical Radio System (JTRS) development program. JTRS was recently restructured and development activity in support of Global Hawk beyond 2006 is in requirements and standards review at the Department level.

(U) D. Acquisition Strategy

The Global Hawk program uses a Spiral Development strategy to provide the warfighter with a near-term, combat capability with increased, time-phased capability improvements as technology and risk achieve satisfactory levels.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**

PROJECT NUMBER AND TITLE: **5144 Global Hawk**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
EMD (includes Spiral Development increases for depot investment and stand up of Grand Forks main operating base)	SS/CPAF	Northrop Grumman Integrated Systems, San Diego, CA	248.194	210.581	Feb-06	202.100	Feb-07	241.543	Feb-08	226.816	Feb-09	Continuing	TBD	TBD
MP-RTIP Adaptation	SS/CPAF	Northrop Grumman Integrated Systems, El Segundo, CA	33.229	17.613	Jan-06	7.684	Nov-06						58.526	58.526
ASIP	SS/CPAF	Northrop Grumman Electronic Systems Laboratory, San Jose, CA	69.074							31.100	Feb-09		100.174	
Subtotal Product Development			350.497	228.194		209.784		241.543		257.916		Continuing	TBD	TBD
Remarks:														
(U) Support														
Contractor Program Support	SS/CPFF	Northrop Grumman Integrated Systems, San Diego, CA	2.226	3.282	Jan-06	7.859	Jan-07	9.169	Jan-08	9.355	Jan-09	Continuing	TBD	TBD
Government Program Support	Various	Various Government Organizations	1.895	6.321	Dec-05	12.379	Dec-06	24.558	Dec-07	26.319	Dec-08	Continuing	TBD	TBD
Subtotal Support			4.121	9.603		20.238		33.727		35.674		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Flight Test & Evaluation	PO	AFFTC, Edwards	11.891	8.781	Jan-06	7.940	Jan-07	11.826	Jan-08	12.141	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			11.891	8.781		7.940		11.826		12.141		Continuing	TBD	TBD
Remarks:														
(U) Management														
A&AS	PR	Various	6.183	7.273	Mar-06	6.828	Nov-06	7.357	Nov-07	7.902	Nov-08	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

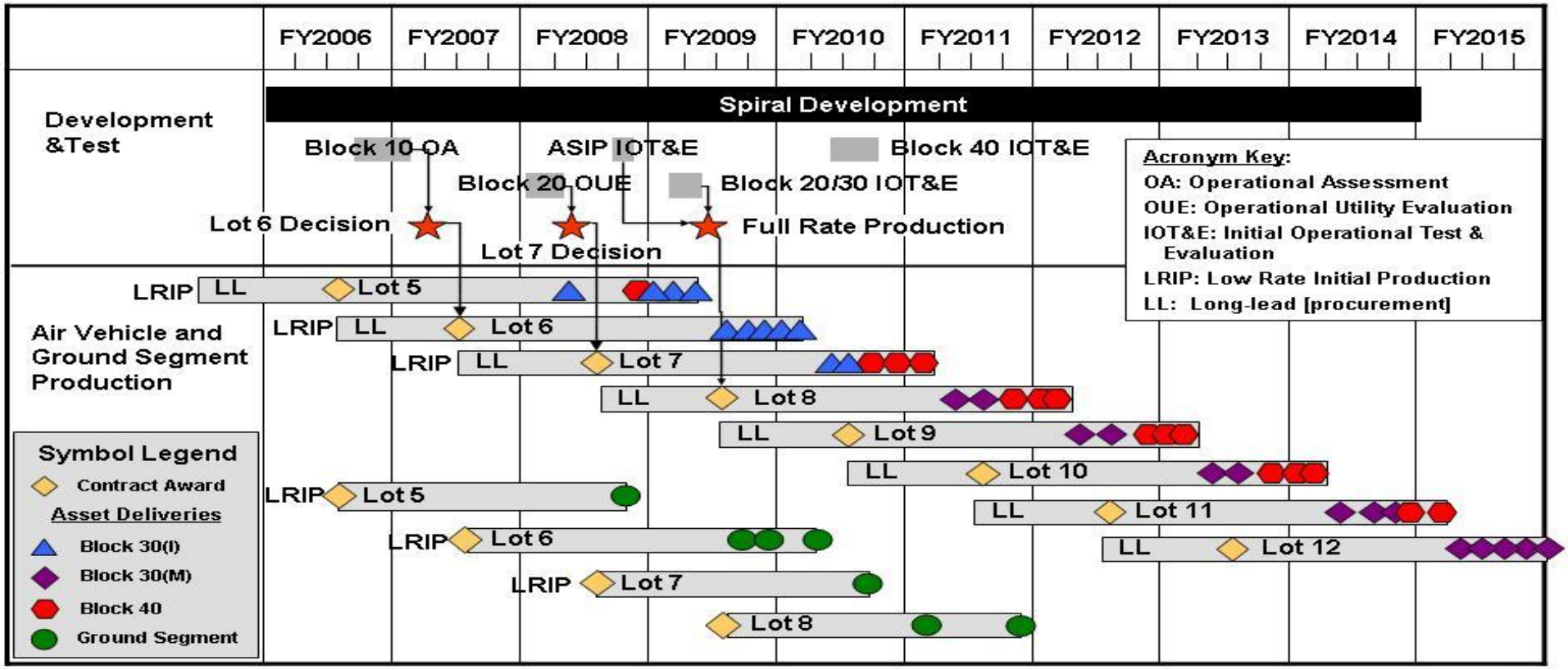
DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**	**5144 Global Hawk**

	Other Government Organizations	Various	Contractors, Dayton, OH Various, Dayton, OH	4.464	3.836	2.936	4.048	4.131	Continuing	TBD	TBD
	Subtotal Management			10.647	11.109	9.764	11.405	12.033	Continuing	TBD	TBD
	Remarks:										
(U)	Total Cost			377.156	257.687	247.726	298.501	317.764	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5144 Global Hawk

Global Hawk Schedule



Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) In-progress review	1Q			
(U) SIGINT High Band Subsystems (HBS) Demonstration	1Q			
(U) Wing Ultimate Load Test	4Q			
(U) Fuselage Ultimate Load Test (V-tail, composite AFT, metallic fuselage)		1Q		
(U) RQ-4B Block 20 First Flight		2Q		
(U) Block 40 Integration CDR		4Q		
(U) ASIP sensor delivers for integration with Block 30		4Q		
(U) Block 20 Operational Utility Evaluation			1Q	
(U) ASIP/Block 30 development test flights begin			2Q	
(U) Spiral 5 Contract Award			2Q	
(U) IOT&E				1Q

PE NUMBER: 0305221F
PE TITLE: Network Centric Collaborative Targeting

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	8.508	8.467	8.641	8.881	8.799	9.063	9.238	9.427	Continuing	TBD
5197 Core Technology	8.508	8.467	8.641	8.881	8.799	9.063	9.238	9.427	Continuing	TBD

In FY 2006, Proj 675197, Network Centric Collaborative Targeting (NCCT), efforts were transferred from PE 0305206F, Airborne Reconnaissance Systems, Proj 675038, NCCT, in order to transition NCCT capabilities from an Advanced Concept Technology Demonstration (ACTD) to an operational system fielding as a program of record.

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record for net-centric collaborative intelligence, surveillance and reconnaissance (ISR) operations. NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol (IP) connectivity to horizontally integrate Battle Management (BM)/Command and Control (C2)/ISR assets and systems to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT develops and deploys the capability to share multi-source, multi-INT sensor-level data, coordinate sensor activity, and provide rapidly correlated results between dissimilar BM/C2/ISR assets, systems and decision-making nodes. NCCT develops and refreshes software and hardware required for net-centric operations. NCCT supports participant program offices with development and fielding of BM/C2/ISR asset, system and decision-making node interfaces.

NCCT Core Technology develops the machine-to-machine hardware and software to horizontally integrate dissimilar BM/C2/ISR assets and systems to include, but is not limited to, RC-135 Rivet Joint, RC-130 Senior Scout, E-8 Joint Surveillance and Target Attack Radar System (JSTARS), U-2/Deployable Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. NCCT Core Technology includes, but is not limited to, network management software, operations interface, network messages and formats, correlation software and data rules of interaction, NCCT unique security hardware/software items, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIMs. Core technology also supports Air Force and Joint experiments, demonstrations, and exercises as necessary.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305221F Network Centric Collaborative Targeting

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	8.524	8.499	8.811	9.047
(U)	Current PBR/President's Budget	8.508	8.467	8.641	8.881
(U)	Total Adjustments	-0.016	-0.032		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.032		
	Congressional Increases				
	Reprogrammings	-0.016			
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5197 Core Technology	8.508	8.467	8.641	8.881	8.799	9.063	9.238	9.427	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record for net-centric collaborative intelligence, surveillance and reconnaissance (ISR) operations. NCCT is a networked application that uses machine-to-machine interfaces and Internet Protocol (IP) connectivity to horizontally integrate Battle Management (BM)/Command and Control (C2)/ISR assets and systems to provide timely detection, identification, and geo-location of time-sensitive and high priority targets to combatant commanders and their forces. NCCT develops and deploys the capability to share multi-source, multi-INT sensor-level data, coordinate sensor activity, and provide rapidly correlated results between dissimilar BM/C2/ISR assets, systems and decision-making nodes. NCCT develops and refreshes software and hardware required for net-centric operations. NCCT supports participant program offices with development and fielding of BM/C2/ISR asset, system and decision-making node interfaces.

NCCT Core Technology develops the machine-to-machine hardware and software to horizontally integrate dissimilar BM/C2/ISR assets and systems to include, but is not limited to, RC-135 Rivet Joint, RC-130 Senior Scout, E-8 Joint Surveillance and Target Attack Radar System (JSTARS), U-2/Deployable Common Ground System (DCGS), Falconer Air and Space Operations Center (AOC), and national systems. NCCT Core Technology includes, but is not limited to, network management software, operations interface, network messages and formats, correlation software and data rules of interaction, NCCT unique security hardware/software items, and platform specific Platform Interface Modules (PIMs). Core technology supports the Systems Integration Lab (SIL) used to test NCCT development, modification and PIMs. Core technology also supports Air Force and Joint experiments, demonstrations, and exercises as necessary.

This program is categorized as Budget Activity 7 because it provides for development of technologies in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) NCCT Core Technology Development and Refresh	7.400	6.267	6.531	6.771
(U) Technical Support	0.001	0.055	0.060	0.060
(U) Test and Evaluation	0.032	0.550	0.450	0.450
(U) Management	1.075	1.595	1.600	1.600
(U) Total Cost	8.508	8.467	8.641	8.881

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0305206F BPAC 675038	0.947	0.000	0.000	0.000	0.000	0.000	0.000	0.000		0.947

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305221F Network Centric Collaborative Targeting**	PROJECT NUMBER AND TITLE **5197 Core Technology**

(U) D. Acquisition Strategy

645 Aeronautical Systems Group (AESG), at Wright Patterson AFB OH, manages the Cost Plus Fixed Fee contract used to develop NCCT core technology. 645 AESG will provide NCCT software and common hardware to platforms for fielding. Individual platform offices (Rivet Joint, Air Force DCGS, AOC, national systems) manage and may contract directly for Platform Interface Module development and integration on their platforms.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305221F Network Centric Collaborative Targeting**

PROJECT NUMBER AND TITLE: **5197 Core Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Core Technology	CPFF	L3 ComCept / Rockwall, TX	0.000	7.400	Oct-05	6.267	Nov-06	6.531	Nov-07	6.771	Nov-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	7.400		6.267		6.531		6.771		Continuing	TBD	TBD
Remarks:														
(U) Technical Support														
Security Certification	Various	Various	0.000	0.001	Jul-06	0.055	Jan-07	0.060	Nov-07	0.060	Nov-08	Continuing	TBD	TBD
Subtotal Technical Support			0.000	0.001		0.055		0.060		0.060		Continuing	TBD	TBD
Remarks:														
(U) Test and Evaluation														
Operational Test	MIPR	605 TES	0.000	0.032	Apr-06	0.550	Nov-06	0.450	Nov-07	0.450	Nov-08	Continuing	TBD	TBD
Subtotal Test and Evaluation			0.000	0.032		0.550		0.450		0.450		Continuing	TBD	TBD
Remarks:														
(U) Management														
Program Office	Various	645 AESG / Wright-Patterson AFB, OH	0.000	0.828	Jan-06	1.245	Nov-06	1.250	Nov-07	1.250	Nov-08	Continuing	TBD	TBD
Other Government	MIPR	Various	0.000	0.247	Nov-05	0.350	Nov-06	0.350	Nov-07	0.350	Nov-08	Continuing	TBD	TBD
Subtotal Management			0.000	1.075		1.595		1.600		1.600		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	8.508		8.467		8.641		8.881		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE 5197 Core Technology

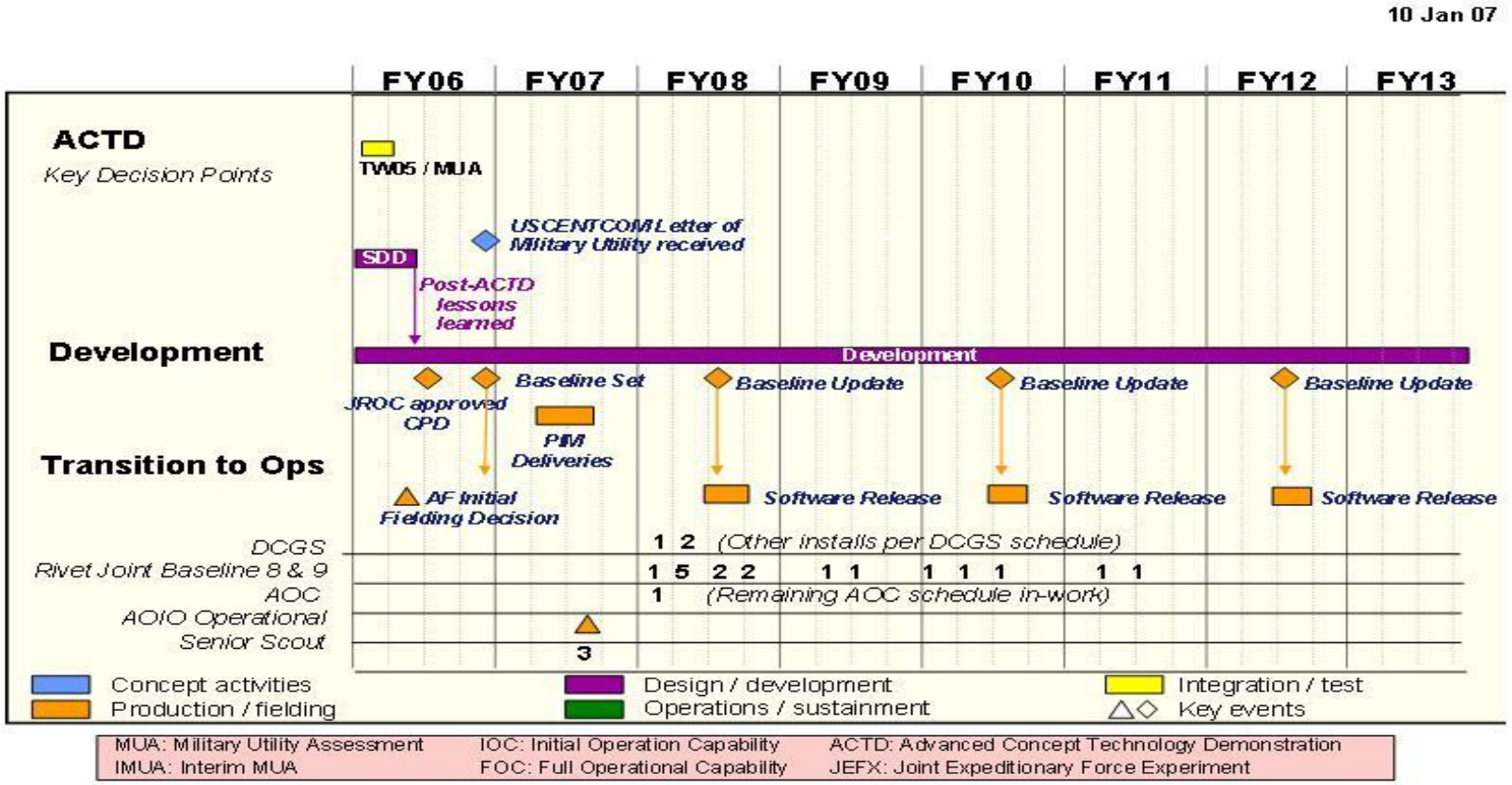


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continued Core Technology Development and Refinement	1-4Q	1-4Q	1-4Q	1-4Q
(U) Systems Integration Lab operation	1-4Q	1-4Q	1-4Q	1-4Q
(U) Platform Interface Module (PIM) deliveries		2-3Q		
(U) Network Controller and Operations Interface Upgrade Software Release			3Q	

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PE NUMBER: 0305887F
PE TITLE: Electronic Combat Intelligence Support

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305887F Electronic Combat Intelligence Support

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.944	5.144	5.362	5.485	5.639	5.711	5.821	5.939	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	0.944	5.144	5.362	5.485	5.639	5.711	5.821	5.939	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with Air Force Policy on Information Operations, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry users and battle labs to set priorities and find synergistic combinations of new technology, doctrine and training. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the Air Force IOCP and other applicable requirements documents.

(U) This program funds studies to leverage current DoD lab efforts. Studies will be deconflicted with and will complement PE 0208021 Information Warfare Support. This program will be protected under the PANTHER DEN Special Access Program. Data available upon request.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops, and fields IO technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305887F Electronic Combat Intelligence Support

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.961	5.163	5.335	5.452
(U)	Current PBR/President's Budget	0.944	5.144	5.362	5.485
(U)	Total Adjustments	-0.017	-0.019		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.019		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.017			

(U) Significant Program Changes:

This PE received additional funding beginning in FY07 as a SECAF directed, OSD approved effort in support of current and future PANTHER DEN activities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305887F Electronic Combat Intelligence Support	PROJECT NUMBER AND TITLE: 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	0.944	5.144	5.362	5.485	5.639	5.711	5.821	5.939	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with Air Force Policy on Information Operations, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry users and battle labs to set priorities and find synergistic combinations of new technology, doctrine and training. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the Air Force IOCP and other applicable requirements documents.

(U) This program funds studies to leverage current DoD lab efforts. Studies will be deconflicted with and will complement PE 0208021 Information Warfare Support. This program will be protected under the PANTHER DEN Special Access Program. Data available upon request.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops, and fields IO technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	The IO Technology Program provides security, systems engineering, rapid prototyping, and demonstrations of state-of-the-art IO technologies to meet the warfighters IO requirements. The IO Capabilities Team (IOCT) and the IO Capabilities Plan will be supported through these developmental efforts.	0.944	5.144	5.362	5.485
(U)	Total Cost	0.944	5.144	5.362	5.485

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 28021 Information Warfare Support	15.204	24.717	26.166	26.610	27.580	28.096	28.596	29.096	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts within this program element are awarded after full and open competition unless other than full and open is justified to the Program Executive Officer (PEO).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305887F Electronic Combat Intelligence Support**

PROJECT NUMBER AND TITLE: **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Security Systems Engineering	CPFF	Lockheed Martin, Hanscom AFB MA		0.050	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Fielded System	T&M	General Dynamics, Lackland AFB, TX	0.000	0.000		2.345	Jan-07	2.446	Jan-08	2.509	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.050		2.345		2.446		2.509		Continuing	TBD	TBD
Remarks:														
(U) Support														
Security Support	ITSP	Various, Hanscom AFB MA		0.486	Jan-06	0.000		0.000		0.000		Continuing	TBD	TBD
Security Support	ITSP	Various, LAFB, TX				1.392	Jan-07	1.203	Jan-08	1.240	Jan-09	Continuing	TBD	
Engineering Support	FFRDC	MITRE, Bedford MA		0.233	Oct-05	0.510	Oct-06	0.701	Oct-07	0.721	Oct-08	Continuing	TBD	TBD
Subtotal Support			0.000	0.719		1.902		1.904		1.961		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Funded Via Platform SPOs	MASKED (SPECIAL ACCESS REQUIRED)	MASKED (SPECIAL ACCESS REQUIRED)				0.643		0.693		0.700		Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.643		0.693		0.700		Continuing	TBD	TBD
Remarks:														
(U) Management														
Operating Costs		950th ELSG/KIZP, Hanscom AFB MA		0.175	Sep-06	0.254	Sep-07	0.319	Sep-08	0.315	Sep-09	Continuing	TBD	TBD
Subtotal Management			0.000	0.175		0.254		0.319		0.315		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	0.944		5.144		5.362		5.485		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

PANTHER DEN Schedule

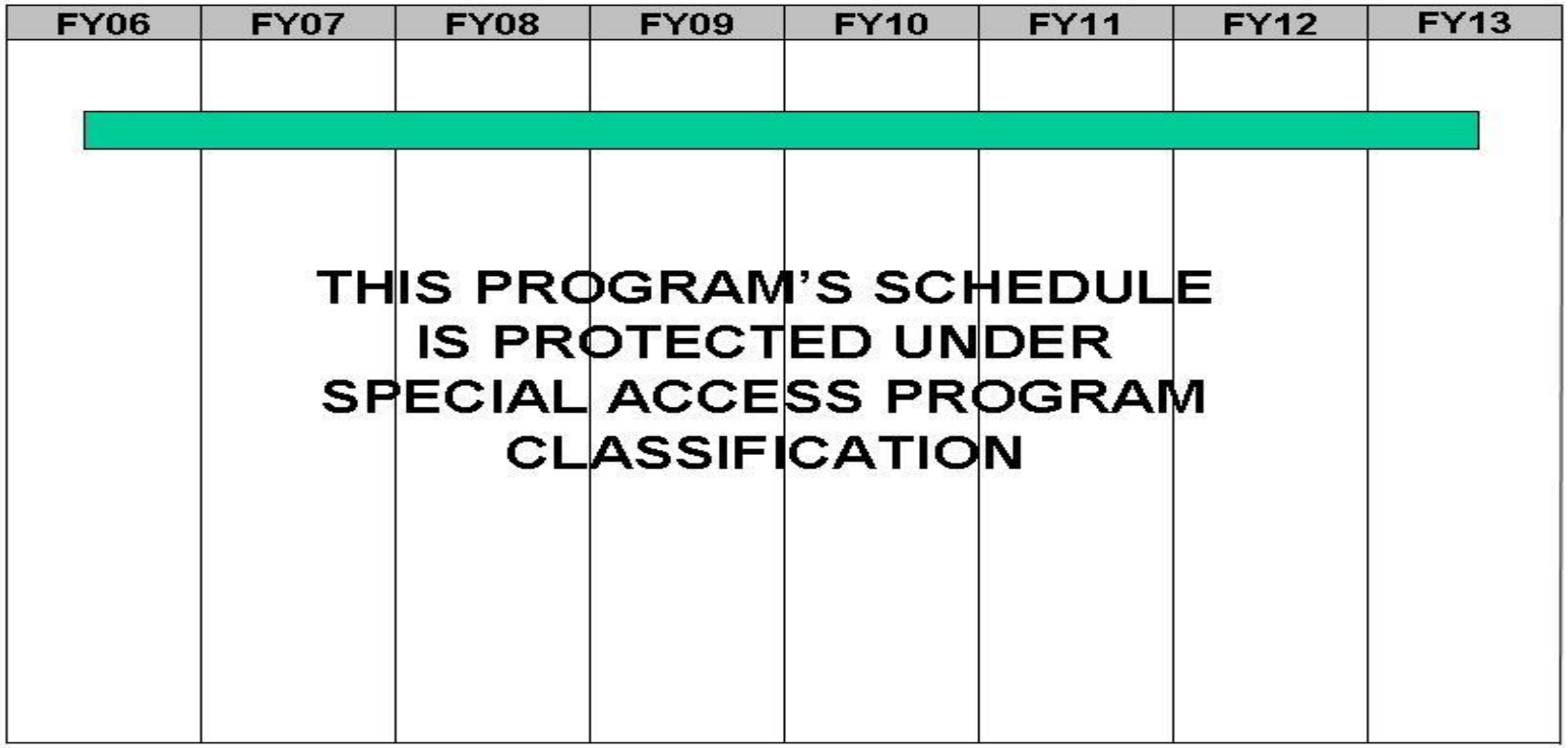

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Schedule Profile

FY 2006	FY 2007	FY 2008	FY 2009

(U) Program schedules are protected under Special Access Program classification

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PE NUMBER: 0305906F
PE TITLE: NCMC - TW/AA System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	55.306	43.271	11.882	0.033	0.001	0.000	0.000	0.000	Continuing	TBD
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	55.306	43.271	11.882	0.033	0.001	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Combatant Commander's Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S initially addressed all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to meet evolving mission needs (e.g.,Space-Based Infrared System, Command and Control Battle Management and Communications, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	57.329	50.908	31.785	4.259
(U)	Current PBR/President's Budget	55.306	43.271	11.882	0.033
(U)	Total Adjustments	-2.023			
(U)	Congressional Program Reductions		-7.473		
	Congressional Rescissions		-0.164		
	Congressional Increases				
	Reprogrammings	-0.412			
	SBIR/STTR Transfer	-1.611			

(U) Significant Program Changes:

The Space Surveillance and Warning FY08-13 portion of the CCIC2S program has been transferred to PE 64425F. The Space C2 (FY08-13) portion of the CCIC2S program has been transferred to PE27410F to provide an integrated approach to Air & Space C2.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System

PROJECT NUMBER AND TITLE: 4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	55.306	43.271	11.882	0.033	0.001	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Combatant Commander's Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S initially addressed all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to meet evolving mission needs (e.g.,Space-Based Infrared System, Command and Control Battle Management and Communications, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Core C2 Services: Continue enterprise network infrastructure (Core C2) development to support mission elements. The infrasture is comprised of systems operations and enterprise services (database, workstations, security information assurance, and scenario services). Additionally, the communications systems upgrade, which provides critical data to the USSTRATCOM Joint Space Operations Center (JSpOC) and replaces the unsupportable legacy Communication System Segment Replacement (CSSR) will be completed in FY08.	13.061	29.841	11.882	0.033
(U) Missile Mission Development/Test: Missile Warning mission capability was delivered in Dec 06 providing Global Command and Control System (GCCS)-based core missile warning capability adaptable to operating locations and interoperable with other National Command Centers. Missile monitoring and status tools, theater event displays, and simulated threat environments for improved training capability were also delivered.	39.181	8.836		
(U) Space Surveillance and Warning: Development efforts (FY08-13) transferred to PE 64425F.	0.834			

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305906F NCMC - TW/AA System**	PROJECT NUMBER AND TITLE **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) B. Accomplishments/Planned Program ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Single Integrated Space Picture (SISP): develops prototype net-centric space services to present an integrated space User Defined Operational Picture (UDOP). This Space UDOP will contain relevant space data that allows space commanders to know status of Blue, Red, and Grey space forces, recognize and understand the impacts of space events, and facilitate command of their space forces to support global and theater operations. Delivers multiple prototypes and operational pilots that utilize rapid development principles to obtain continuous user feedback. Reduces technical risk to future Space C2 System.	2.230	4.594		
(U)	Total Cost	55.306	43.271	11.882	0.033

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN										
(U)	OPAF (PE 0305906F, Cheyenne Mountain Complex, P-1 Line Item #42, BA 3)	18.188	6.869	14.438	9.483	19.071	19.366	19.745	20.137	Continuing	TBD
(U)	OPAF (PE 0305906F, Spares and Repair Parts, P-1 Line Item #104, BA 5)	0.704	0.700	0.730	0.748	0.762	0.772	0.787	0.803	Continuing	TBD

(U) D. Acquisition Strategy

Contract awarded with full and open competition--uses an evolutionary acquisition strategy based on spiral/incremental development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305906F NCMC - TW/AA System**

PROJECT NUMBER AND TITLE: **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed Martin	CP/AF	Colorado Springs, CO Lockheed Martin (Denver, CO)		48.947	Oct-05	36.697	Oct-06	9.202	Oct-07				94.846	TBD
													0.000	
Subtotal Product Development			0.000	48.947		36.697		9.202		0.000		0.000	94.846	TBD
Remarks:														
(U) Support														
MITRE	CP/FF	Colorado Springs, CO		2.602	Nov-05	2.578	Nov-06	0.315	Nov-07				5.495	TBD
A&AS	CP/FF	various, Colorado Springs, CO		3.339	Nov-05	3.220	Nov-06	1.958	Nov-07				8.517	TBD
Program Support	Various	various, Colorado Springs, CO		0.418	Nov-05	0.776	Nov-06	0.407	Nov-07	0.033	Nov-08		1.634	TBD
													0.000	
Subtotal Support			0.000	6.359		6.574		2.680		0.033		0.000	15.646	TBD
Remarks:														
(U) Total Cost			0.000	55.306		43.271		11.882		0.033		0.000	110.492	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System	PROJECT NUMBER AND TITLE: 4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)

Exhibit R-4 CCIC2S

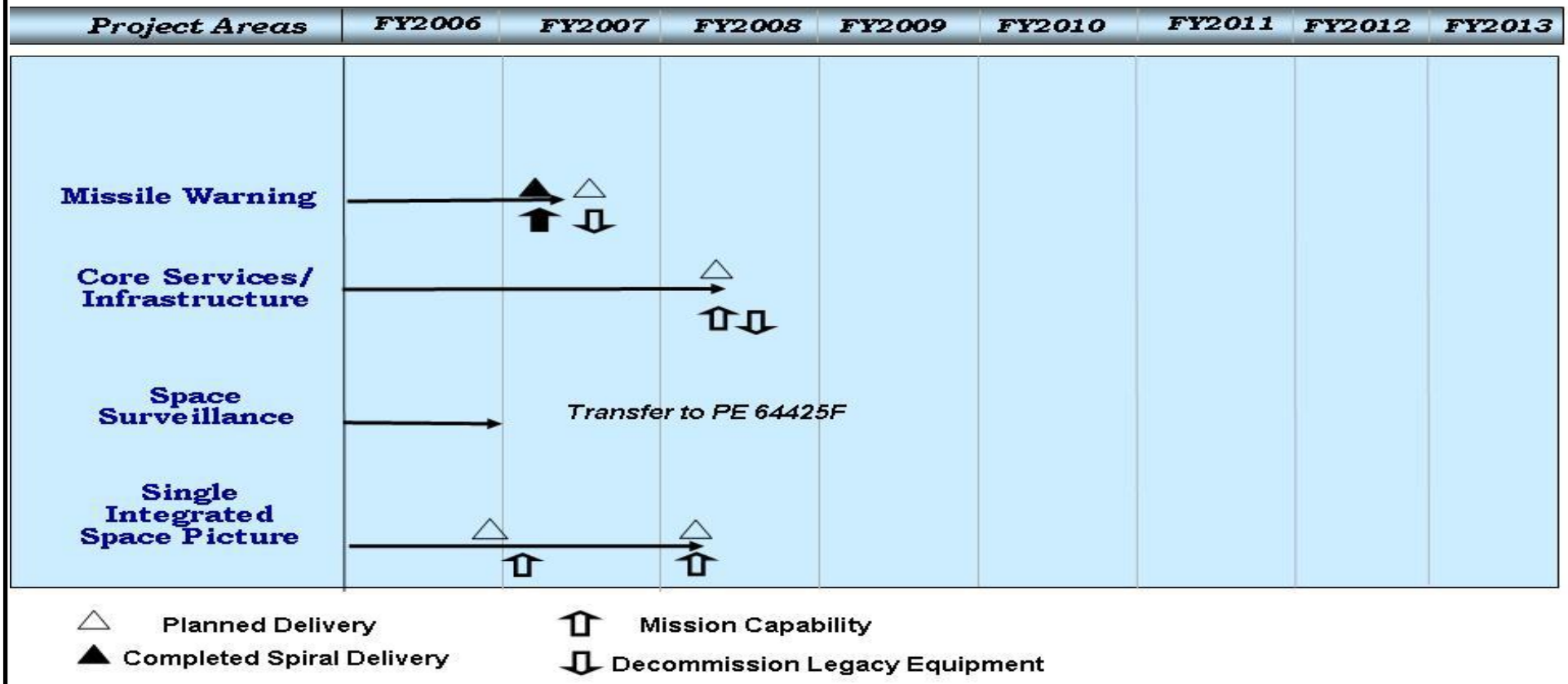

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305906F NCMC - TW/AA System**	PROJECT NUMBER AND TITLE **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Missile Warning/Missile Defense Deliveries		1Q		
(U) Core Services/Infrastructure Deliveries			2Q	
(U) Single Integrated Space Picture (SISP) 1.0 Delivery	4Q			
(U) Single Integrated Space Picture (SISP) Enhanced Dev Del			1Q	

PE NUMBER: 0305910F
PE TITLE: SPACETRACK

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	182.779	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	432.178
4930	Space Based Space Surveillance	107.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	252.038
5011	Space Situational Awareness Initiatives	14.469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.043
A008	Sensor Service Life Extension Programs (Sensor SLEPs)	34.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	87.397
A009	Orbital Deep Space Imager (ODSI)	20.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.800
A015	Space Fence	6.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.900

In FY 2007 these projects all transferred to PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the Space Situation Awareness construct, with two exceptions: Project 67A008 transferred to PE 0305940F, Space Situation Awareness Operations, for the same reason, and Project 67A009 was terminated in FY 2006 rather than transferred to another PE.

(U) A. Mission Description and Budget Item Justification

The Spacetrack program element funds a worldwide network of electro-optical and radar sensors that conduct surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification and cataloging; satellite attack warning; notification to U.S. forces of satellite flyovers; space treaty monitoring; and technical intelligence gathering. Ongoing modernization efforts are upgrading existing sensors, improving data integration across the sensor network, and developing new network sensors in order to meet current and emerging requirements for Space Situation Awareness (SSA). Spacetrack activities transferred to new SSA program elements in FY 2007 to reflect evolution to the SSA concept.

All development efforts in this program element are in Budget Activity 7, Operational Systems Development, because they develop, field, modify, and integrate sensors within the operational SSA network.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305910F SPACETRACK

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	164.190	0.000	0.000	0.000
(U)	Current PBR/President's Budget	182.779	0.000	0.000	0.000
(U)	Total Adjustments	18.589			
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.005			
	Congressional Increases				
	Reprogrammings	22.154			
	SBIR/STTR Transfer	-3.560			

(U) Significant Program Changes:

FY 2006: +$5.5M Omnibus reprogram and +$3.9M below threshold reprogram to fund Haystack radar antenna cost growth; +$10.0M Omnibus reprogram and +$2.8M below threshold reprogram to fund Space-Based Space Surveillance program cost growth

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: 4930 Space Based Space Surveillance

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4930 Space Based Space Surveillance	107.012	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	252.038
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 this effort transferred to Project 65A006, Space Based Space Surveillance, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2006 - FY 2013 schedule for it is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

Building upon the success of the Space-Based Visible technology demonstration, which proved the utility of surveilling orbiting objects from space, the Space-Based Space Surveillance (SBSS) project will develop a constellation of optical sensing satellites to search, detect, and track objects in Earth orbit. It will accomplish this via collecting and processing space object identification and satellite metric data, then communicating it to command and control nodes. Migrating surveillance to space augments existing ground sensors with timely 24-hour, all-weather object search capabilities. In conjunction with information from other Space Situation Awareness network sensors, SBSS data will enable more timely detection and tracking of space objects, particularly those in geosynchronous orbits.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 10 design, development, and risk reduction	91.241	0.000	0.000	0.000
(U) Block 10 launch vehicle integration	4.372	0.000	0.000	0.000
(U) Block 20 concept studies	0.302	0.000	0.000	0.000
(U) Program operations and Systems Engineering & Integration	11.097	0.000	0.000	0.000
(U) Total Cost	107.012	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	110.141	157.457	122.715	196.118	240.695	245.804	159.103	Continuing	TBD
(U) Missile Procurement, Air Force (PE 305940F, Space Situation Awareness Operations)	0.000	0.000	0.000	0.000	0.000	0.000	31.824	95.783	Continuing	TBD

(U) D. Acquisition Strategy

This system is being acquired via a block approach. Block 10 will develop and field a pathfinder satellite-based capability to replace the aging Space-Based Visible

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

sensor on the orbiting Midcourse Space Experiment research & development spacecraft with a capability significantly improving the timeliness of data on objects in geosynchronous orbit. Block 20 will develop additional satellites to provide simultaneous, worldwide space surveillance in order to observe smaller objects on shorter timelines. Lessons learned from the former block will guide development of the latter. Block 10 began as an option on the existing Mission Area Prime Integrating Contract for the space control mission area to expedite fielding but was transformed into its own contract when a competitive award was held for the Block 10 subcontract. The contracting approaches for additional capabilities will be determined in the future.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **4930 Space Based Space Surveillance**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Block 10 design and development	C/CPAF	Northrop Grumman, Redondo Beach, CA	126.105	91.241	Oct-05	0.000		0.000		0.000		0.000	217.346	
Technical risk reduction, mission planning, and mission data processing	SS/CPFF	MIT Lincoln Laboratory, Lexington, MA	1.700	1.070	Jan-06	0.000		0.000		0.000		0.000	2.770	
Launch vehicle integration	MIPR	Space and Missile Systems Center Det., Kirtland AFB, NM	2.871	4.372	Oct-05	0.000		0.000		0.000		0.000	7.243	
Block 20 concept studies	Various	Various	0.000	0.302	Jan-06	0.000		0.000		0.000		0.000	0.302	
Subtotal Product Development			130.676	96.985		0.000		0.000		0.000		0.000	227.661	0.000
Remarks:														
(U) Support														
Program operations and Systems Engineering & Integration	Various	Space and Missile Systems Center, Los Angeles AFB, CA	14.350	10.027	Oct-05	0.000		0.000		0.000		0.000	24.377	
Subtotal Support			14.350	10.027		0.000		0.000		0.000		0.000	24.377	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable												0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable												0.000	0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			145.026	107.012		0.000		0.000		0.000		0.000	252.038	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

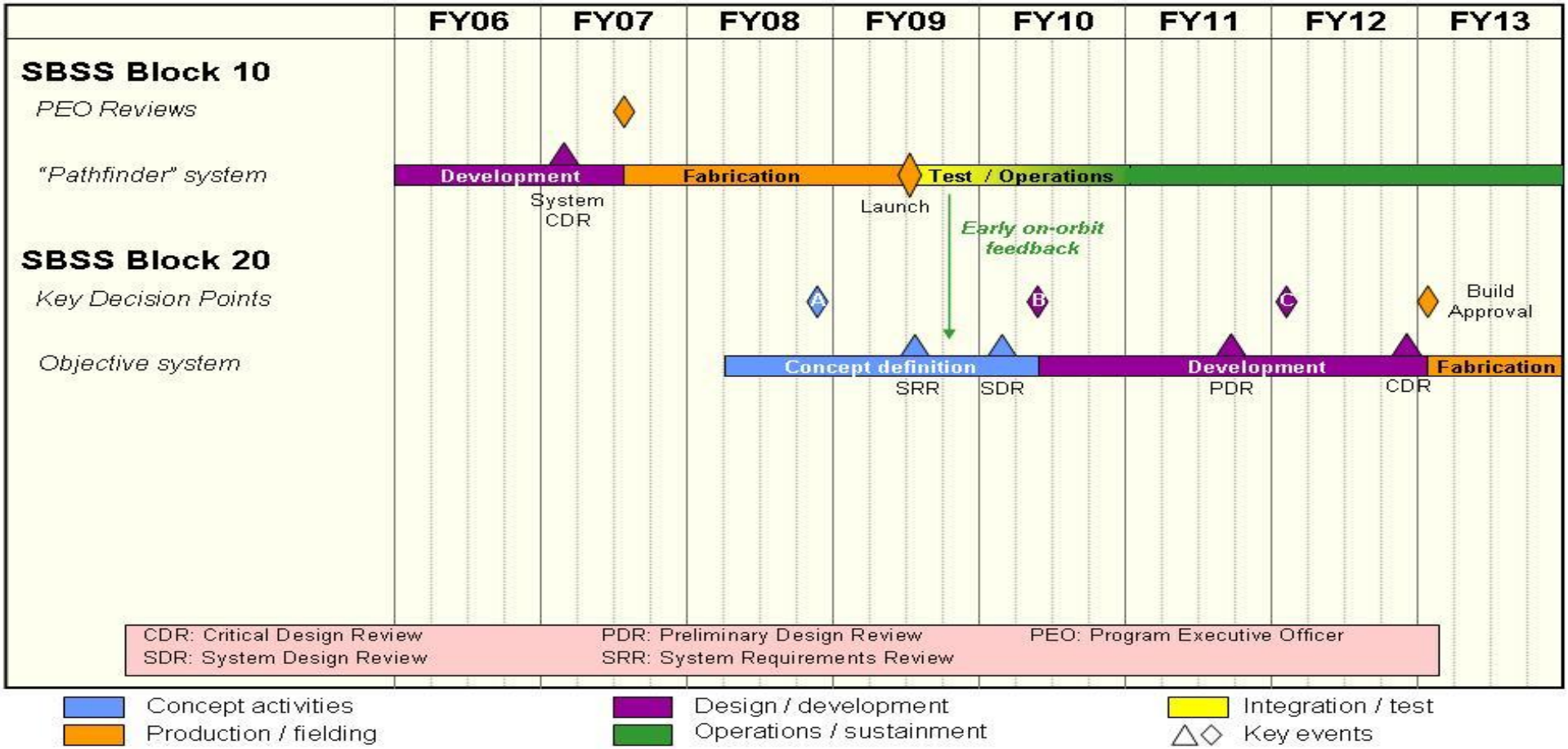

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 10 development	1-4Q			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: 5011 Space Situational Awareness Initiatives

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5011	Space Situational Awareness Initiatives	14.469	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	54.043
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 these efforts transferred to Project 65A008, Integrated Space Situation Awareness, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2006 - FY 2013 schedule for them is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness Initiatives improve the integration of the disparate information components of Space Situation Awareness (SSA) in order to better support space command, control, operations, and planning activities with timely data. These projects primarily develop hardware and software to collect, process, correlate, fuse, disseminate, and/or access intelligence, surveillance, reconnaissance, and environmental data; conduct operational utility evaluations of these using the SSA data fusion testbed, as necessary; integrate them into space command & control applications; and upgrade the testbed to ensure its ability to evaluate the utility of future applications under operationally-representative conditions. A related Extended Space Sensors Architecture Advanced Concept Technology Demonstration is developing and demonstrating SSA data fusion capabilities. Other projects conduct architecture, computer modeling, and study efforts to capture SSA needs; develop short- and mid-term enterprise architectures; and identify and evaluate satisfaction of capabilities to guide budget formulation, systems integration, operations, and requirements allocation toward improved fulfillment of SSA requirements.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Intelligence data integration and applications	1.751	0.000	0.000	0.000
(U) Surveillance & reconnaissance data integration and applications	3.329	0.000	0.000	0.000
(U) Environmental data integration and applications	0.854	0.000	0.000	0.000
(U) Fusion tool development, assessments, requirements development, and technical support	5.906	0.000	0.000	0.000
(U) Extended Space Sensors Architecture Advanced Concept Technology Demonstration (ESSA ACTD)	1.200	0.000	0.000	0.000
(U) SSA architecture development and modeling activities	1.429	0.000	0.000	0.000
(U) Total Cost	14.469	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	11.555	26.212	22.998	50.614	43.517	24.697	22.416	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: 5011 Space Situational Awareness Initiatives

(U) C. Other Program Funding Summary ($ in Millions)

(U) Other Procurement, Air Force (PE 0305940F, Space Situation Awareness Operations)	0.000	0.000	0.000	9.133	0.000	0.000	0.000	0.000	0.000	9.133

(U) D. Acquisition Strategy

SSA Initiatives utilize existing engineering and study contracts awarded and maintained by space planning and development organizations throughout the Department of Defense in order to accomplish required development activities and to obtain infrastructure and technical support. Many activities develop, test, and deliver capabilities or provide products in successive spirals. Operational needs drive the prioritization and selection of particular applications, modeling tools, and architecture products for development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **5011 Space Situational Awareness Initiatives**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Intelligence data applications	Various	Various	1.478	1.751	Oct-05	0.000		0.000		0.000		0.000	3.229	
Surveillance & reconnaissance data applications	Various	Various	17.731	3.329	Nov-05	0.000		0.000		0.000		0.000	21.060	
Environmental data applications	MIPR	Space and Missile Systems Center Det., Peterson AFB, CO	5.028	0.854	Feb-06	0.000		0.000		0.000		0.000	5.882	
ESSA ACTD	SS/Cost reimbursement (no fee)	MIT Lincoln Laboratory, Lexington, MA	0.000	1.200	Mar-06	0.000		0.000		0.000		0.000	1.200	
SSA architecture development	Various	Various	4.386	1.429	Dec-05	0.000		0.000		0.000		0.000	5.815	
Various (including Eglin, Haystack, and others)	Various	Various	6.744	0.000		0.000		0.000		0.000		0.000	6.744	
Subtotal Product Development			35.367	8.563		0.000		0.000		0.000		0.000	43.930	0.000
Remarks:														
(U) Support														
Fusion tool development, requirements, and technical support	Various	Electronic Systems Center Det., Peterson AFB, CO	4.207	5.906	Dec-05	0.000		0.000		0.000		0.000	10.113	
Subtotal Support			4.207	5.906		0.000		0.000		0.000		0.000	10.113	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			39.574	14.469		0.000		0.000		0.000		0.000	54.043	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

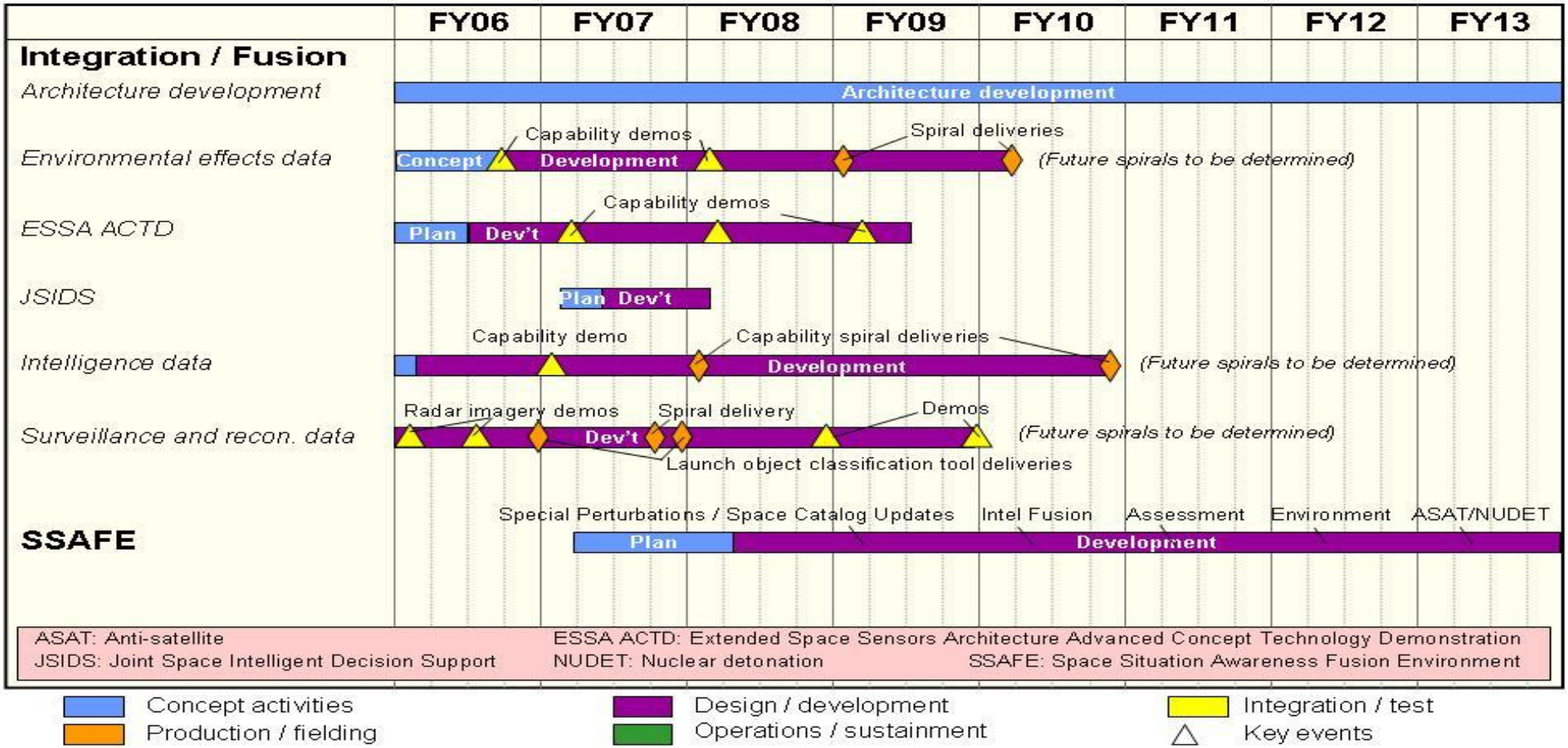

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: 5011 Space Situational Awareness Initiatives

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) ESSA ACTD development commencement	3Q			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: A008 Sensor Service Life Extension Programs (Sensor SLEPs)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A008	Sensor Service Life Extension Programs (Sensor SLEPs)	34.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	87.397
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 these efforts transferred to Project 67A017, Sensor Service Life Extension Programs, in PE 0305940F, Space Situation Awareness Operations, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2006 - FY 2013 schedule for them is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetimes of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort replaces aging, increasingly unsupportable radar components.

The second effort in this project, the Haystack Ultra-wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides radar imagery, space object identification, and metric data to the Air Force to aid SSA operations. The upgrade effort builds a W-band high-power transmitter enabling object imaging with resolution significantly greater than that of the X-band system; it also replaces the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations. The resulting architecture will enable seamless W- and X-band operations as well as easier switching between X-band space surveillance and radio astronomy activities. Greater radar resolution is necessary to maintain current levels of space object characterization since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Eglin radar life extension engineering design, development and support	15.585	0.000	0.000	0.000
(U) Haystack radar upgrade engineering design, development, and support	18.511	0.000	0.000	0.000
(U) Total Cost	34.096	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305940F, Space Situation Awareness Operations)	0.000	31.282	23.980	16.405	0.000	0.000	0.000	0.000	0.000	71.667

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: A008 Sensor Service Life Extension Programs (Sensor SLEPs)

(U) D. Acquisition Strategy

The acquisition strategy for the Eglin SLEP effort was re-examined due to program cost growth. Instead of completing the full SLEP originally envisioned, the effort will now only conduct a partial SLEP replacing key items. This program utilizes an option on the System Engineering, Sustainment, and Modernization (SENSOR) contract competitively awarded to ITT Industries for sustaining and upgrading various Air Force radars, including the Eglin radar, in February 2002.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the Haystack upgrade effort under a master contract with the Electronics System Center. This effort is classified as applied research under that contract. MIT/LL transferred ownership of the radar to the Air Force but continues to operate it as part of its Lincoln Space Surveillance Complex per contract with the Air Force.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Eglin architecture development and life extension	C/CPAF	ITT Industries, Colorado Springs, CO	21.425	12.785	Oct-05	0.000		0.000		0.000		0.000	34.210	
Haystack radar upgrade design and build	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	19.725	18.087	Oct-05	0.000		0.000		0.000		0.000	37.812	
Prior Eglin, Haystack, and Space Fence design evaluation and other activities	Various	Various	9.119	0.000		0.000		0.000		0.000		0.000	9.119	
Subtotal Product Development			50.269	30.872		0.000		0.000		0.000		0.000	81.141	0.000
Remarks:														
(U) Support														
Development review and management	C/FP-LOE	L-3 Titan, Billerica, MA	1.315	2.233	Dec-05	0.000		0.000		0.000		0.000	3.548	
Development review and management	Various	Electronic Systems Center, Hanscom AFB, MA	1.717	0.991	Nov-05	0.000		0.000		0.000		0.000	2.708	
Subtotal Support			3.032	3.224		0.000		0.000		0.000		0.000	6.256	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			53.301	34.096		0.000		0.000		0.000		0.000	87.397	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

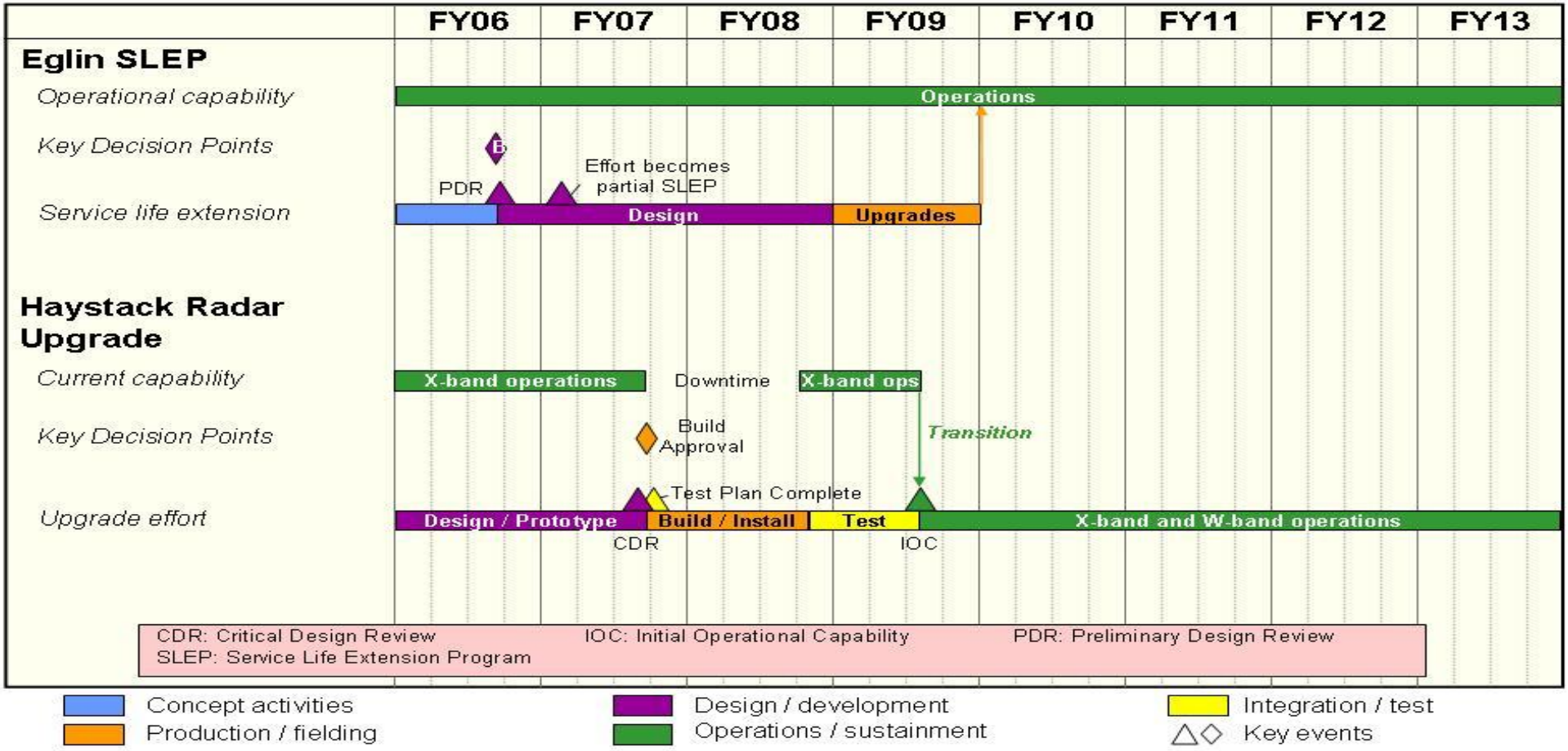

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Eglin life extension Prelimary Design Review	3Q			
(U) Haystack upgrade design effort	1-4Q			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: A009 Orbital Deep Space Imager (ODSI)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A009	Orbital Deep Space Imager (ODSI)	20.302	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	31.800
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2006 this project was terminated.

(U) A. Mission Description and Budget Item Justification

The Orbital Deep Space Imager (ODSI) effort develops a system to provide imagery of deep space objects for satellite characterization. In concert with other Space Situation Awareness network sensors, ODSI will permit improved knowledge of space activities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Funds directed per classified direction	20.302	0.000	0.000	0.000
(U) Total Cost	20.302	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

Not applicable

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A009 Orbital Deep Space Imager (ODSI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Pre-phase A activities and architecture development	SS/CPAF *	Northrop Grumman, Redondo Beach, CA	5.822	0.000		0.000		0.000		0.000		0.000	5.822	
Concept definition studies	C/FFP	Lockheed Martin, Denver, CO	1.000	0.000		0.000		0.000		0.000		0.000	1.000	
Concept definition studies	C/FFP	Boeing, Seal Beach, CA	1.000	0.000		0.000		0.000		0.000		0.000	1.000	
Concept definition studies	C/FFP	Northrop Grumman, Redondo Beach, CA	1.000	0.000		0.000		0.000		0.000		0.000	1.000	
Funds directed per classified direction			0.000	20.302		0.000		0.000		0.000		0.000	20.302	
Subtotal Product Development			8.822	20.302		0.000		0.000		0.000		0.000	29.124	0.000
Remarks: *Utilized Mission Area Prime Integrating Contract for space control mission area														
(U) Support														
Program operations	Various	Space and Missile Systems Center, Los Angeles AFB, CA	2.676	0.000		0.000		0.000		0.000		0.000	2.676	
Subtotal Support			2.676	0.000		0.000		0.000		0.000		0.000	2.676	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable				0.000		0.000						0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable				0.000		0.000						0.000	0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			11.498	20.302		0.000		0.000		0.000		0.000	31.800	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A009 Orbital Deep Space Imager (ODSI)**

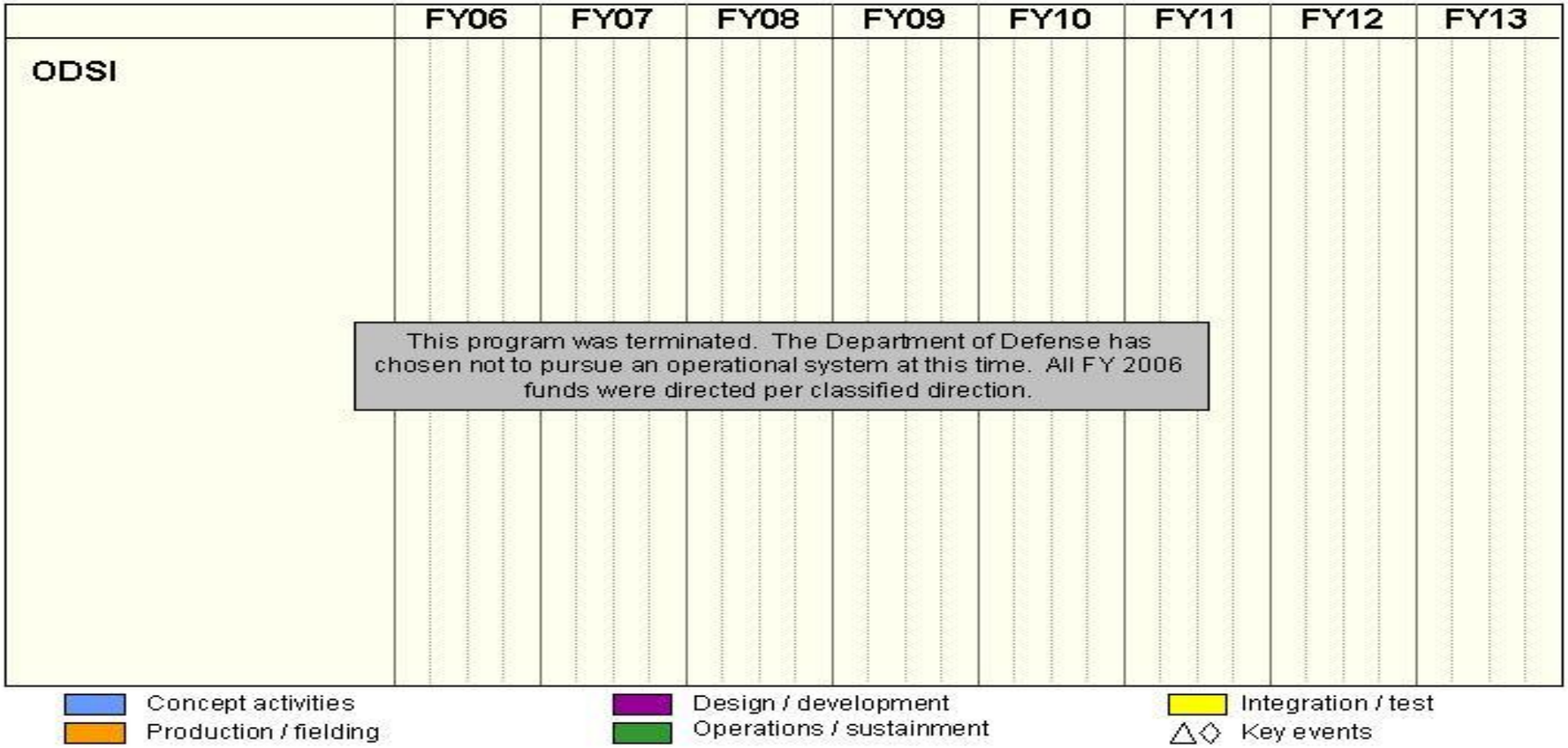

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A009 Orbital Deep Space Imager (ODSI)**

(U) Schedule Profile

FY 2006	FY 2007	FY 2008	FY 2009

(U) Not applicable

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: A015 Space Fence

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A015 Space Fence	6.900	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	6.900
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 this project transferred to Project 65A009, Space Fence, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2006 - FY 2013 schedule for the effort is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

The Space Fence effort will develop a system of ground-based sensors to replace the aging Air Force Space Surveillance System (AFSSS), a Very High Frequency radar operational since 1961. By using higher radio frequencies in conjunction with radar transmitters and receivers co-located at sites dispersed worldwide, the Space Fence will provide timely detection of smaller orbiting objects, primarily those in Low Earth Orbit. As a result, it will expand the detection and tracking capacity of the Space Situation Awareness network by an order of magnitude, from 10,000 to 100,000 objects, while working in concert with other network sensors.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Engineering design, development, and support	5.408	0.000	0.000	0.000
(U) Initial design activities	1.492	0.000	0.000	0.000
(U) Total Cost	6.900	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	0.000	4.135	14.745	66.606	95.695	81.176	82.767	Continuing	TBD
(U) Other Procurement, Air Force (PE 0305940F, Space Situation Awareness Operations)	0.000	0.000	0.000	0.000	0.000	0.000	62.522	63.890	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force competitively awarded requirements definition contracts for the effort in FY 2006. A block approach acquisition strategy for the program will be developed in FY 2007 - FY 2008 with a development contract award to follow in FY 2009 after a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: A015 Space Fence

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Industry design tasks	C/FFP	Lockheed Martin, Moorestown, NJ	0.000	0.498	Jun-06	0.000		0.000		0.000		0.000	0.498	
Industry design tasks	C/FFP	Northrop Grumman, Linthicum, MD	0.000	0.500	Jun-06	0.000		0.000		0.000		0.000	0.500	
Industry design tasks	C/FFP	Raytheon, Colorado Springs, CO	0.000	0.494	Jun-06	0.000		0.000		0.000		0.000	0.494	
Design/development	C/FP-LOE	L-3 Titan, Billerica, MA	0.000	2.697	Jun-06	0.000		0.000		0.000		0.000	2.697	
Design/development	C/FP-LOE	Tecolote, Goleta, CA	0.000	0.220	Jun-06	0.000		0.000		0.000		0.000	0.220	
Design evaluation	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	0.000	0.900	May-06	0.000		0.000		0.000		0.000	0.900	
Design evaluation	SS/FP-LOE	MITRE Corporation, Bedford, MA	0.000	0.568	Apr-06	0.000		0.000		0.000		0.000	0.568	
Design evaluation	Various	Air Force Space Command, Peterson AFB, CO	0.000	0.375	Sep-06	0.000		0.000		0.000		0.000	0.375	
Subtotal Product Development			0.000	6.252		0.000		0.000		0.000		0.000	6.252	0.000
Remarks:														
(U) Support														
Design review and management	Various	Electronic Systems Command, Hanscom AFB, MA; others	0.000	0.648	Jul-06	0.000		0.000		0.000		0.000	0.648	
Subtotal Support			0.000	0.648		0.000		0.000		0.000		0.000	0.648	0.000
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis						DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development			PE NUMBER AND TITLE: 0305910F SPACETRACK		PROJECT NUMBER AND TITLE: A015 Space Fence			
(U) Test & Evaluation								
Not applicable							0.000	
Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Management								
Not applicable							0.000	
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Remarks:								
(U) Total Cost	0.000	6.900	0.000	0.000	0.000	0.000	6.900	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: A015 Space Fence

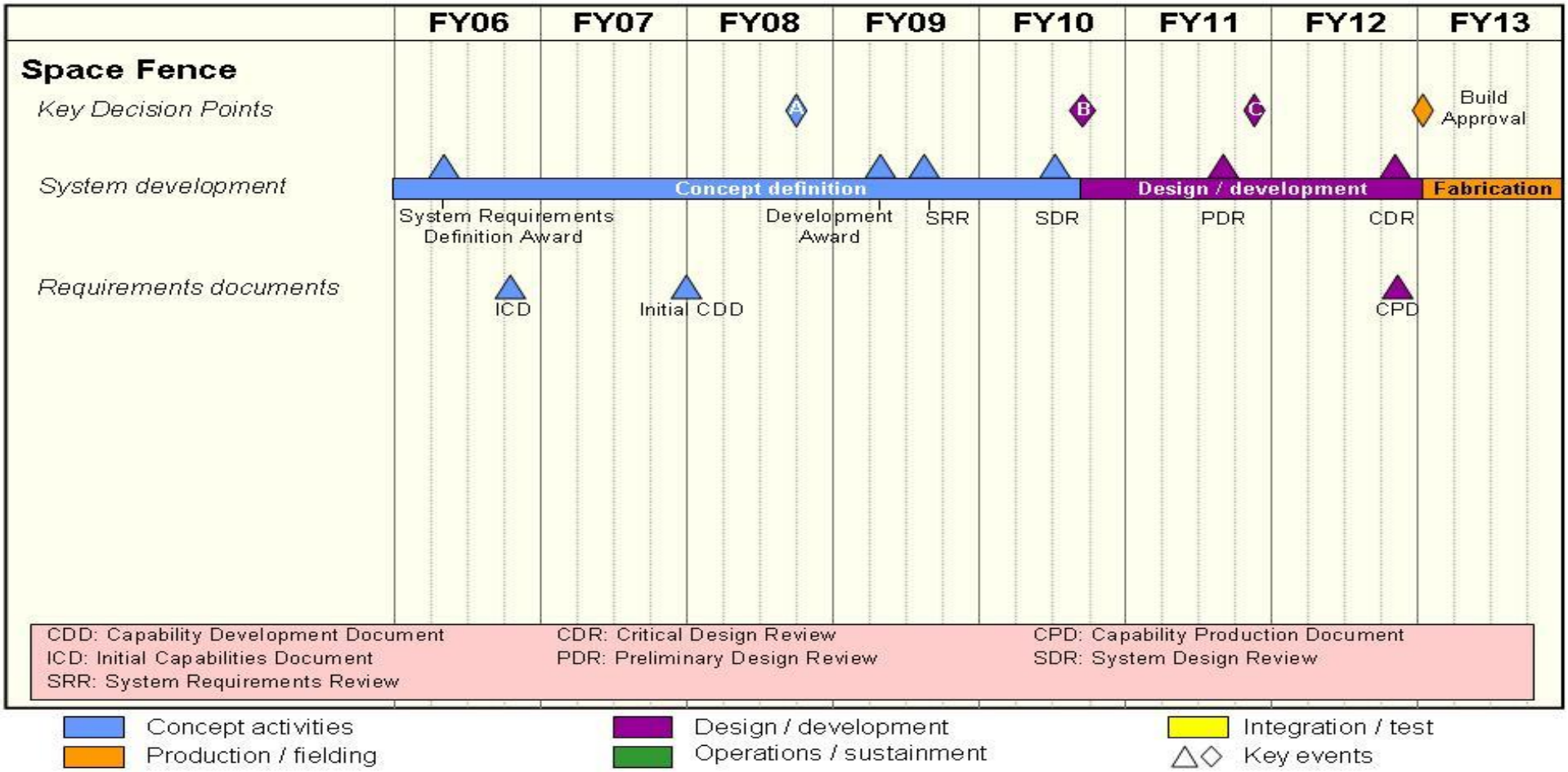

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A015 Space Fence**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) System requirements definition contract awards*	2Q			
(U) Industry design tasks contract award	3Q			

*Partially supported by FY 2005 Space Fence congressional add in Project 67A008 of this program element

PE NUMBER: 0305913F
PE TITLE: NUDET Detection System (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	32.265	59.917	38.974	41.903	39.983	39.005	39.756	40.566	Continuing	TBD
2808 Nuc Detonation Det Sys (sensors)	32.265	59.917	38.974	41.903	39.983	39.005	39.756	40.566	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Nuclear Detonation (NUDET) Detection System (NDS) provides a worldwide, highly survivable capability to detect, locate, and report any nuclear detonations in the earth's atmosphere or in near space in near-real time. The NDS supports NUDET detection requirements for United States Northern Command (USNORTHCOM)/North American Aerospace Defence Command (NORAD) (Integrated Tactical Warning and Attack Assessment (ITW/AA)), United States Strategic Command (USSTRATCOM) (Nuclear Force Management), and Air Force Technical Applications Center (AFTAC) (Treaty Monitoring). NDS consists of space and ground segments. The current space segment consists of NUDET detection sensors (optical, x-ray, dosimeters and electromagnetic pulse (EMP) sensor) on Global Positioning System (GPS) satellites and (optical, x-rays, and neutron and gamma rays) on Defense Support Program (DSP) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

The NDS program element funds Research and Development of ICADS, GNT, and the integration of Space and Atmospheric Burst Reporting System (SABRS) sensors on Geostationary (GEO) satellites. ICADS provides a fixed ground receiving station and GNT provides the survivable ground receiving station. SABRS is the future neutron/gamma sensor payload that will be hosted on SBIRS and a classified GEO satellite to replace the NDS sensor payload on DSP satellites. The GPS Space & Control PE (0305165F) funds sensor integration for Block IIF satellites with ground segment development remaining in the NDS PE. DOE funds new NDS sensor research and production .

This program is in Budget Activity 7 - Operational System Development because it supports operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	32.266	60.281	38.610	41.393
(U) Current PBR/President's Budget	32.265	59.917	38.974	41.903
(U) Total Adjustments	-0.001	-0.364		
(U) Congressional Program Reductions	-0.001	-0.136		
Congressional Rescissions		-0.228		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)	PROJECT NUMBER AND TITLE: 2808 Nuc Detonation Det Sys (sensors)

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2808 Nuc Detonation Det Sys (sensors)	32.265	59.917	38.974	41.903	39.983	39.005	39.756	40.566	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Nuclear Detonation (NUDET) Detection System (NDS) provides a worldwide, highly survivable capability to detect, locate, and report any nuclear detonations in the earth's atmosphere or in near space in near-real time. The NDS supports NUDET detection requirements for United States Northern Command (USNORTHCOM)/North American Aerospace Defence Command (NORAD) (Integrated Tactical Warning and Attack Assessment (ITW/AA)), United States Strategic Command (USSTRATCOM) (Nuclear Force Management), and Air Force Technical Applications Center (AFTAC) (Treaty Monitoring). NDS consists of space and ground segments. The current space segment consists of NUDET detection sensors (optical, x-ray, dosimeters and electromagnetic pulse (EMP) sensor) on Global Positioning System (GPS) satellites and (optical, x-rays, and neutron and gamma rays) on Defense Support Program (DSP) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

The NDS program element funds Research and Development of ICADS, GNT, and the integration of Space and Atmospheric Burst Reporting System (SABRS) sensors on Geostationary (GEO) satellites. ICADS provides a fixed ground receiving station and GNT provides the survivable ground receiving station. SABRS is the future neutron/gamma sensor payload that will be hosted on SBIRS and a classified GEO satellite to replace the NDS sensor payload on DSP satellites. The GPS Space & Control PE (0305165F) funds sensor integration for Block IIF satellites with ground segment development remaining in the NDS PE. DOE funds new NDS sensor research and production .

This program is in Budget Activity 7 - Operational System Development because it supports operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue ICADS and GNT development	22.564	17.108	18.847	24.351
(U) Continue NDS sensor on-orbit qualification	3.463	3.500	3.500	3.600
(U) Continue Mission and Program support and system studies	2.386	3.789	2.510	2.593
(U) Continue Technical Support	3.852	3.970	4.617	4.759
(U) Begin SABRS on GEO host development/integration	0.000	31.550	9.500	6.600
(U) Total Cost	32.265	59.917	38.974	41.903

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Operations & Maintenance, (PE 0305913F, BA 1, Operating Forces)	8.829	9.378	9.153	9.279	9.723	9.689	9.885	10.086	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)	PROJECT NUMBER AND TITLE: 2808 Nuc Detonation Det Sys (sensors)	

(U) C. Other Program Funding Summary ($ in Millions)

(U) Other Procurement, (PE 0305913F, BA 3 - Electronics and Telecom Equipment, P-63)	9.270	13.371	16.459	27.812	21.931	10.532	10.764	11.001	Continuing	TBD
(U) Missile Procurement, (PE 0305913F, BA 5 - Space & Other support, P-23)	0.000	0.000	0.000	1.262	3.591	4.388	4.473	4.568	Continuing	TBD

(U) D. Acquisition Strategy

The NDS Acquisition Strategy is to develop, field and sustain NDS satellite sensors and NDS ground data processing and distribution hardware and software as well as mission operational and technical program support to sustain the NDS capability on a variety of satellites; funding is sent by Military Interdepartmental Purchase Request (MIPR) from DoD and Department of Energy (DoE) to Sandia and Los Alamos National Laboratories and other agencies on existing DOE contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305913F NUDET Detection System (Space)**

PROJECT NUMBER AND TITLE: **2808 Nuc Detonation Det Sys (sensors)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ICADS and GNT	MIPR	Department of Energy; Sandia National Laboratory, Albuquerque NM	134.658	22.564	Dec-05	17.108	Nov-06	18.847	Nov-07	24.351	Nov-08	Continuing	TBD	
GNT: Intermetrics	CPFF		1.262	0.000		0.000		0.000		0.000		0.000	1.262	
SAIC (Intg/Grd Supt)	Time/Matls		5.219	0.000		0.000		0.000		0.000		0.000	5.219	
Combined GOSC/NAP: Lockheed Martin	FFP		6.166	0.000		0.000		0.000		0.000		0.000	6.166	
W-Sensor: SRI (Stanford Rsch Inst.)	CPFF		0.415	0.000		0.000		0.000		0.000		0.000	0.415	
On-orbit sensor testing	MIPR	Department of Energy; Los Alamos National Laboratory, Los Alamos NM, Sandia National Laboratory, Albuquerque NM	12.918	3.463	Dec-05	3.500	Nov-06	3.500	Nov-07	3.600	Nov-08	Continuing	TBD	
SABRS	MIPR	Classified	0.000	0.000		31.550	Nov-06	9.500	Nov-07	6.600	Nov-08	Continuing	TBD	
Subtotal Product Development			160.638	26.027		52.158		31.847		34.551		Continuing	TBD	0.000
Remarks:														
(U) Support														
Mission Support	Various		11.239	2.327	Dec-05	3.728	Nov-06	2.365	Nov-07	2.388	Nov-08	Continuing	TBD	
Prog Contractual Spt.	Various		5.185	0.000		0.000		0.000		0.000		0.000	5.185	
Technical Support	Various		14.803	3.852	Dec-05	3.970	Nov-06	4.617	Nov-07	4.759	Nov-08	Continuing	TBD	
Subtotal Support			31.227	6.179		7.698		6.982		7.147		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
17th TS, Schriever AFB CO	Various		0.355	0.059	Dec-05	0.061	Dec-06	0.145	Nov-07	0.205	Nov-08	Continuing	TBD	
Subtotal Test & Evaluation			0.355	0.059		0.061		0.145		0.205		Continuing	TBD	0.000
Remarks:														
(U) Management														

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305913F NUDET Detection System (Space)**	**2808 Nuc Detonation Det Sys (sensors)**

								0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Total Cost	192.220	32.265	59.917	38.974	41.903	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305913F NUDET Detection System (Space)	PROJECT NUMBER AND TITLE 2808 Nuc Detonation Det Sys (sensors)

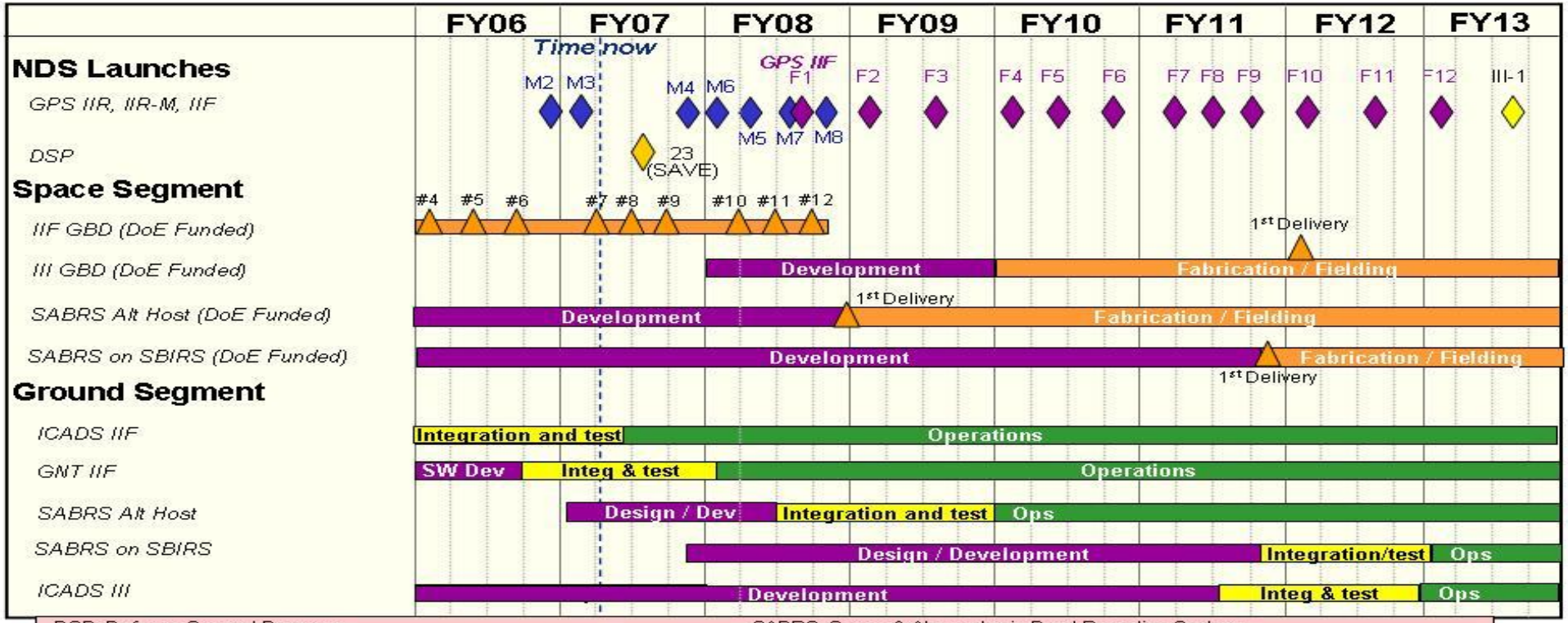

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305913F NUDET Detection System (Space)**	PROJECT NUMBER AND TITLE **2808 Nuc Detonation Det Sys (sensors)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) ICADS IIF Force Development Evaluation (FDE)	4Q			
(U) ICADS IIF Operational		2Q		
(U) GNT IIF FDE		2Q		
(U) SABRS on SBIRS CDR		4Q		
(U) GNT IIF Operational			1Q	
(U) SABRS Testing on Alternate Host Complete				4Q

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PE NUMBER: 0305917F
PE TITLE: Space Architect

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305917F Space Architect

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	12.331	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.090
4746 Space Architect	12.331	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.090

In FY 2007 these efforts transferred to PE 0305924F, National Security Space Office, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.

(U) A. Mission Description and Budget Item Justification

In May 2004 the National Security Space Architect (NSSA) merged with the National Security Space Integration directorate and the Transformational Communications Office to become the National Security Space Office (NSSO) with expanded roles and responsibilities. NSSO is a joint Department of Defense (DoD) / intelligence community organization that provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	12.676	0.000	0.000	0.000
(U) Current PBR/President's Budget	12.331	0.000	0.000	0.000
(U) Total Adjustments	-0.345			
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-0.025			
SBIR/STTR Transfer	-0.320			
(U) Significant Program Changes:				
None				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305917F Space Architect

PROJECT NUMBER AND TITLE: 4746 Space Architect

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4746 Space Architect	12.331	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.090
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 this project was transferred to Project 67A016, National Security Space Office, in PE 0305924F, National Security Space Office, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations. The full FY 2006 - FY 2013 schedule for these efforts is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

In May 2004 the National Security Space Architect (NSSA) merged with the National Security Space Integration directorate and the Transformational Communications Office to become the National Security Space Office (NSSO) with expanded roles and responsibilities. NSSO is a joint Department of Defense (DoD) / intelligence community organization that provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) NSS Strategy and Capstone Operating Framework development	1.674	0.000	0.000	0.000
(U) NSS Plan development	1.804	0.000	0.000	0.000
(U) NSS Program Assessments	1.931	0.000	0.000	0.000
(U) Space architecture and study development and support	4.162	0.000	0.000	0.000
(U) Architecture transition planning and implementation support	0.644	0.000	0.000	0.000
(U) Enterprise engineering	2.116	0.000	0.000	0.000
(U) Total Cost	12.331	0.000	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305917F Space Architect	PROJECT NUMBER AND TITLE 4746 Space Architect

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305924F, National Security Space Office)	0.000	13.365	10.821	10.956	11.226	11.400	11.619	11.856	Continuing	TBD

(U) D. Acquisition Strategy

NSSO conducted a full and open competition to award the contract for the technical assistance and management support it uses to execute its space architecture, strategy, development, and planning activities. It will also continue to utilize existing contract vehicles maintained by other DoD organizations for supplemental assistance and support, as required.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305917F Space Architect**

PROJECT NUMBER AND TITLE: **4746 Space Architect**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
NSSO architecture/other product development	Various	Various	64.759	12.331	Oct-05	0.000		0.000		0.000		0.000	77.090	
Subtotal Product Development			64.759	12.331		0.000		0.000		0.000		0.000	77.090	0.000
Remarks:														
(U) Support														
Not applicable													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			64.759	12.331		0.000		0.000		0.000		0.000	77.090	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305917F Space Architect	PROJECT NUMBER AND TITLE 4746 Space Architect

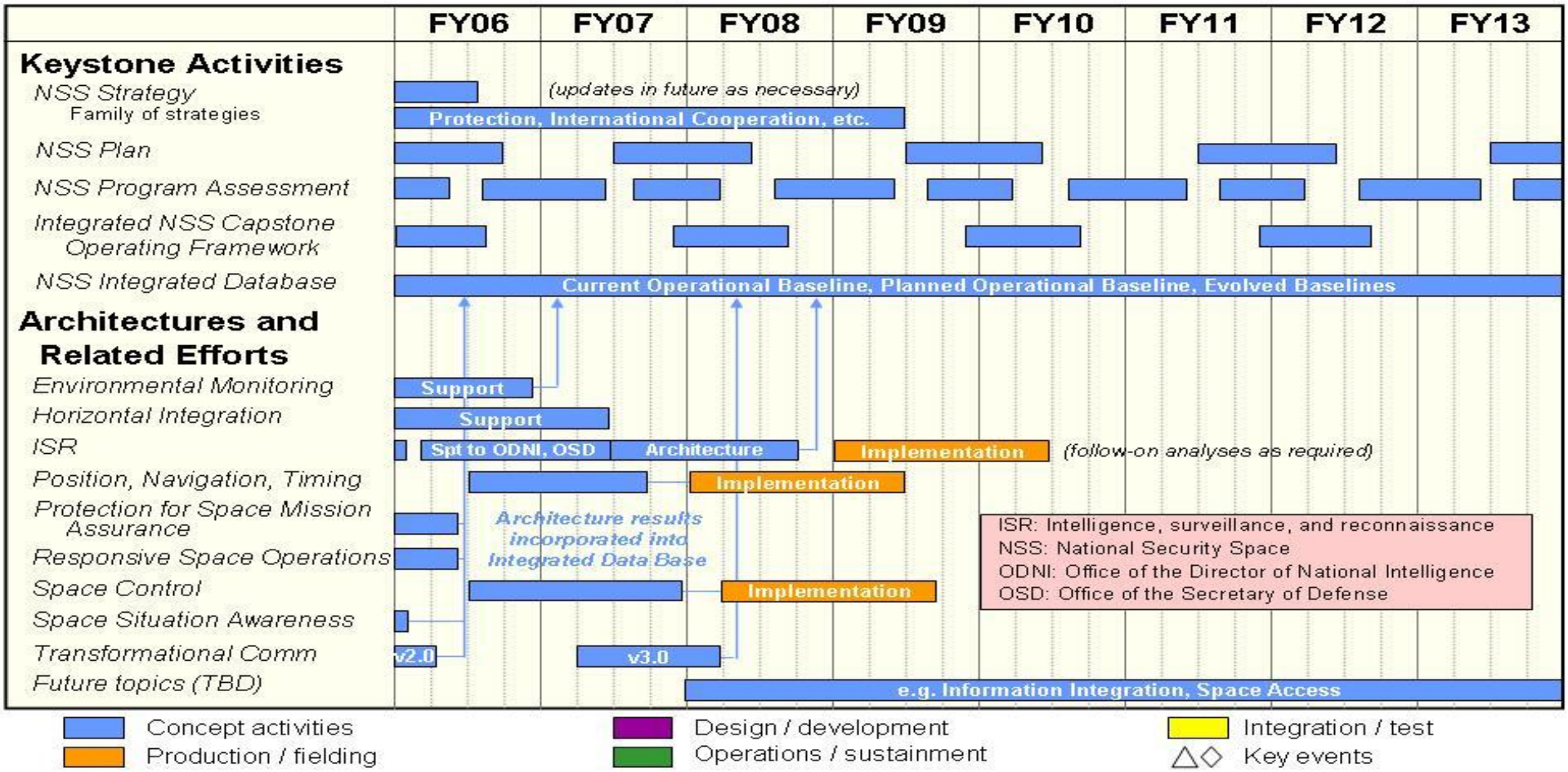

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305917F Space Architect	PROJECT NUMBER AND TITLE: 4746 Space Architect

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete NSS Strategy	3Q			
(U) Complete biannual NSS Plan update	3Q			
(U) Complete annual NSS Program Assessment	2Q			
(U) Complete recurring Integrated NSS Capstone Operating Framework	3Q			
(U) Continue space architecture efforts	1-4Q			

PE NUMBER: 0305924F
PE TITLE: National Security Space Office

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305924F National Security Space Office

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	13.365	10.821	10.956	11.226	11.400	11.619	11.856	Continuing	TBD
A016 National Security Space Office	0.000	13.365	10.821	10.956	11.226	11.400	11.619	11.856	Continuing	TBD

In FY 2007 these efforts transferred from PE 0305917F, Space Architect, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.

(U) A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	0.000	13.437	14.292	14.430
(U) Current PBR/President's Budget	0.000	13.365	10.821	10.956
(U) Total Adjustments	0.000	-0.072		
(U) Congressional Program Reductions		-0.021		
Congressional Rescissions		-0.051		
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

FY 2008 - FY 2009: Reductions for higher Air Force priorities

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305924F National Security Space Office	PROJECT NUMBER AND TITLE: A016 National Security Space Office

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A016 National Security Space Office	0.000	13.365	10.821	10.956	11.226	11.400	11.619	11.856	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 this project transferred from Project 674746, Space Architect, in PE 0305917F, Space Architect, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations. The full FY 2006 - FY 2013 schedule for these efforts is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further details on activities prior to FY 2007.

(U) A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) NSS Strategy and Capstone Operating Framework development	0.000	1.727	1.381	1.392
(U) NSS Plan development	0.000	1.860	1.484	1.498
(U) NSS Program Assessments	0.000	1.993	1.587	1.605
(U) Space architecture and study development and support	0.000	4.578	3.811	3.878
(U) Architecture transition planning and implementation support	0.000	0.664	0.530	0.535
(U) Enterprise engineering	0.000	2.543	2.028	2.048
(U) Total Cost	0.000	13.365	10.821	10.956

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305917F, Space Architect)	12.331	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	77.090

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305924F National Security Space Office**	PROJECT NUMBER AND TITLE **A016 National Security Space Office**

(U) D. Acquisition Strategy

NSSO conducted a full and open competition to award a contract for the technical assistance and management support it uses to execute its space architecture, strategy, development, and planning activities. It will also continue to utilize existing contract vehicles maintained by other DoD organizations for supplemental assistance and support, as required.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305924F National Security Space Office**

PROJECT NUMBER AND TITLE: **A016 National Security Space Office**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Architecture/other product development	C/CPAF	SAIC, San Diego, CA	0.000	0.000		10.165	Dec-06	7.021	Dec-07	7.156	Dec-08	Continuing	TBD	
Architecture/other product development	SS/CPAF	Aerospace Corp., El Segundo, CA	0.000	0.000		1.300	Nov-06	1.900	Nov-07	1.900	Nov-08	Continuing	TBD	
Architecture/other product development	Cost (reimbursable)	MITRE, Bedford, MA	0.000	0.000		1.900	Oct-06	1.900	Oct-07	1.900	Oct-08	Continuing	TBD	
Subtotal Product Development			0.000	0.000		13.365		10.821		10.956		Continuing	TBD	0.000
Remarks:														
(U) Support														
Not applicable													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		13.365		10.821		10.956		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305924F National Security Space Office	PROJECT NUMBER AND TITLE A016 National Security Space Office

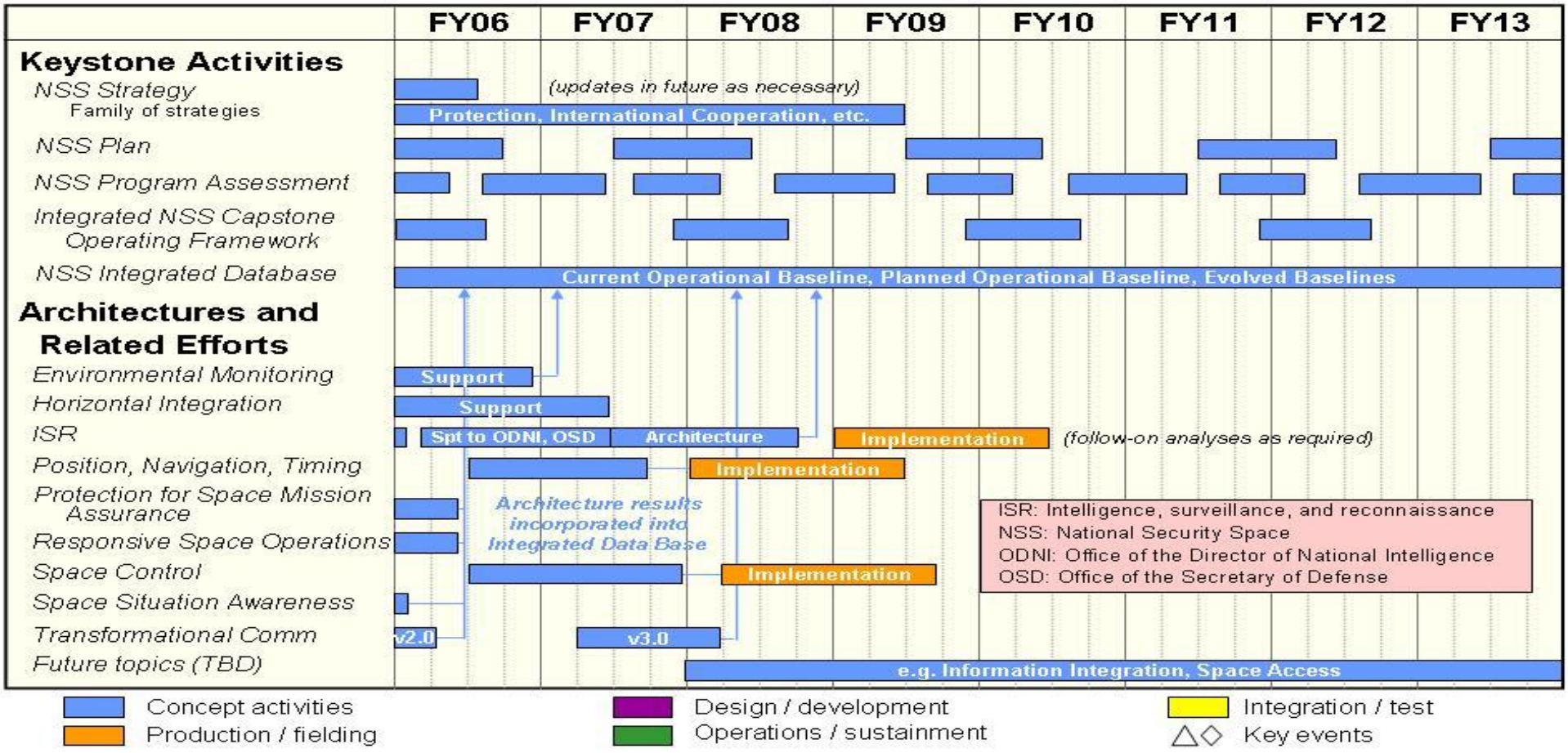

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305924F National Security Space Office**	PROJECT NUMBER AND TITLE **A016 National Security Space Office**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete biannual NSS Plan			2Q	
(U) Complete annual NSS Program Assessment		2Q	1Q	2Q
(U) Complete Integrated NSS Capstone Operating Framework update			3Q	
(U) Continue space architecture efforts		1-4Q	1-4Q	1-4Q

PE NUMBER: 0305940F
PE TITLE: Space Situation Awareness Operations

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305940F Space Situation Awareness Operations

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	31.282	23.980	16.405	0.000	0.000	0.000	0.000	0.000	71.667
A017 Sensor Service Life Extension Programs	0.000	31.282	23.980	16.405	0.000	0.000	0.000	0.000	0.000	71.667

In FY 2007 this project transferred from PE 0305910F, Spacetrack, to reflect evolution of space surveillance to the new Space Situation Awareness construct.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors and information integration capabilities within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improved information integration capabilities across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetimes of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort replaces aging, increasingly unsupportable radar components.

The second effort in this project, the Haystack Ultra-wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides radar imagery, space object identification, and metric data to the Air Force to aid SSA operations. The upgrade effort builds a W-band high-power transmitter enabling object imaging with resolution significantly greater than that of the X-band system; it also replaces the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations. The resulting architecture will enable seamless W- and X-band operations as well as easier switching between X-band space surveillance and radio astronomy activities. Greater radar resolution is necessary to maintain current levels of space object characterization since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305940F Space Situation Awareness Operations

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	31.401	10.778	0.505
(U)	Current PBR/President's Budget	0.000	31.282	23.980	16.405
(U)	Total Adjustments	0.000	-0.119		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.119		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

FY 2008 - FY 2009: Adjustments to fund Haystack radar antenna cost growth and to restructure Eglin SLEP funding in order to conduct a partial SLEP only

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305940F Space Situation Awareness Operations	PROJECT NUMBER AND TITLE: A017 Sensor Service Life Extension Programs	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
A017	Sensor Service Life Extension Programs	0.000	31.282	23.980	16.405	0.000	0.000	0.000	0.000	0.000	71.667
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

In FY 2007 this project transferred from Project 67A008, Sensor Service Life Extension Programs, in PE 0305910F, Spacetrack, to reflect the evolution of space surveillance to the Space Situation Awareness construct. The full FY 2006 - FY 2013 schedule for this project is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities prior to FY 2007.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors and information integration capabilities within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improved information integration capabilities across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetimes of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort replaces aging, increasingly unsupportable radar components.

The second effort in this project, the Haystack Ultra-wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides radar imagery, space object identification, and metric data to the Air Force to aid SSA operations. The upgrade effort builds a W-band high-power transmitter enabling object imaging with resolution significantly greater than that of the X-band system; it also replaces the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations. The resulting architecture will enable seamless W- and X-band operations as well as easier switching between X-band space surveillance and radio astronomy activities. Greater radar resolution is necessary to maintain current levels of space object characterization since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305940F Space Situation Awareness Operations	PROJECT NUMBER AND TITLE A017 Sensor Service Life Extension Programs

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Eglin radar life extension engineering design, development, and support	0.000	17.706	15.121	15.696
(U) Haystack radar upgrade engineering design, development, and support	0.000	13.576	8.859	0.709
(U) Total Cost	0.000	31.282	23.980	16.405

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305190F, Spacetrack)	34.096	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	86.111

(U) D. Acquisition Strategy

The acquisition strategy for the Eglin SLEP effort was re-examined due to program cost growth. Instead of completing the full SLEP originally envisioned, the effort will now only conduct a partial SLEP replacing key items. This program utilizes an option on the System Engineering, Sustainment, and Modernization (SENSOR) contract competitively awarded to ITT Industries for sustaining and upgrading various Air Force radars, including the Eglin radar, in February 2002.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the Haystack upgrade effort under a master contract with the Electronics System Center. This effort is classified as applied research under that contract. MIT/LL transferred ownership of the radar to the Air Force but continues to operate it as part of its Lincoln Space Surveillance Complex per contract with the Air Force.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305940F Space Situation Awareness Operations**

PROJECT NUMBER AND TITLE: **A017 Sensor Service Life Extension Programs**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Eglin architecture development and life extension	C/CPAF	ITT Industries, Colorado Springs, CO	0.000	0.000		15.146	Nov-06	12.448	Nov-07	12.879	Nov-08	0.000	40.473	
Haystack radar upgrade design and build	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	0.000	0.000		12.531	Oct-06	8.101	Oct-07	0.588	Oct-08	0.000	21.220	
Subtotal Product Development			0.000	0.000		27.677		20.549		13.467		0.000	61.693	0.000
Remarks:														
(U) Support														
Development review and management	C/FP-LOE	L-3 Titan, Billerica, MA	0.000	0.000		1.966	Nov-06	2.436	Nov-07	1.805	Nov-08	0.000	6.207	
Development review and management	Various	Electronic Systems Center, Hanscom AFB, MA	0.000	0.000		1.639	Nov-06	0.995	Nov-07	1.133	Nov-08	0.000	3.767	
Subtotal Support			0.000	0.000		3.605		3.431		2.938		0.000	9.974	0.000
Remarks:														
(U) Test & Evaluation														
Not applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		31.282		23.980		16.405		0.000	71.667	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305940F Space Situation Awareness Operations**	PROJECT NUMBER AND TITLE **A017 Sensor Service Life Extension Programs**

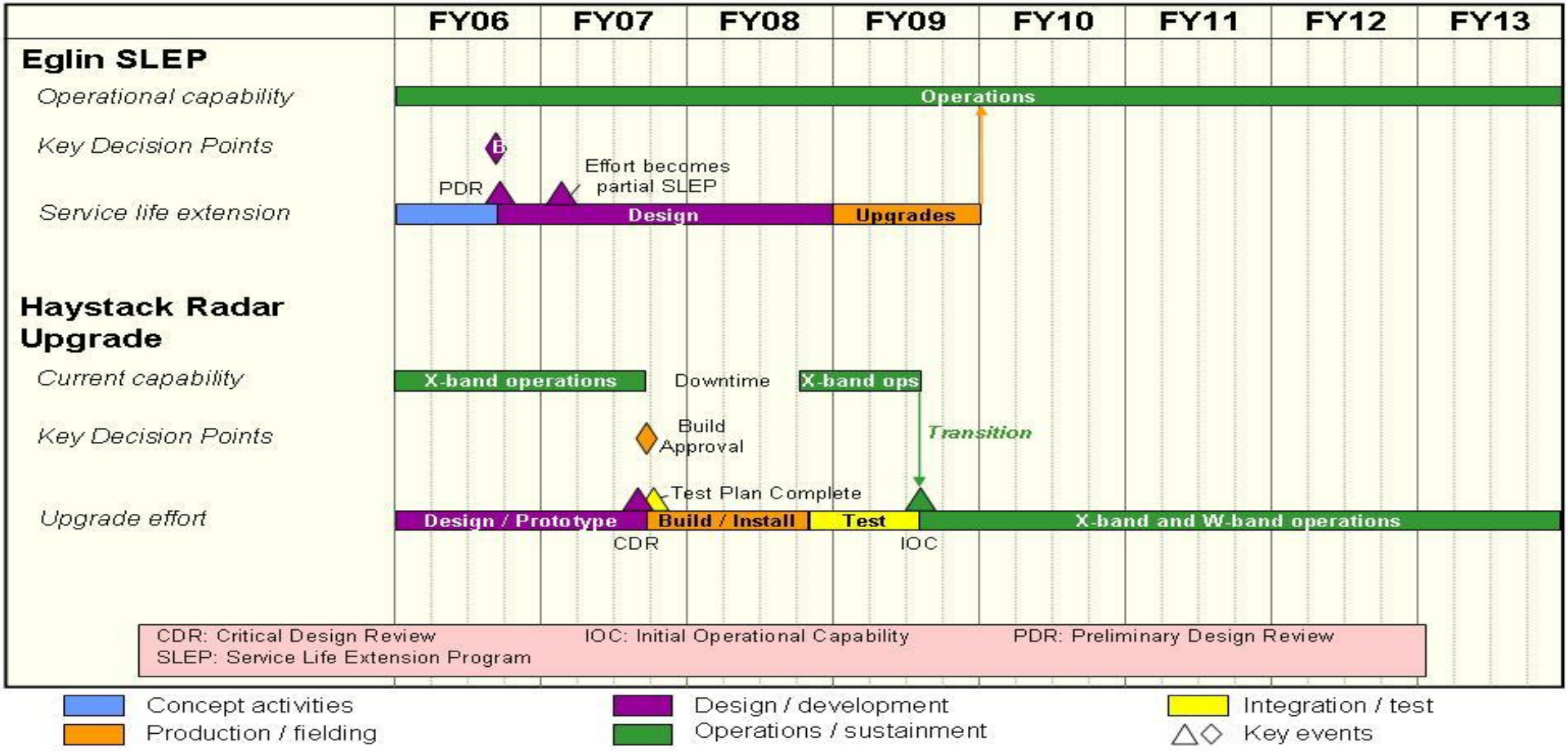

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305940F Space Situation Awareness Operations**	PROJECT NUMBER AND TITLE **A017 Sensor Service Life Extension Programs**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Eglin life extension modifications and upgrades				1-4Q
(U) Haystack upgrade Critical Design Review		3Q		
(U) Haystack upgrade Build Approval decision		3Q		
(U) Haystack transition to dual-band operations				3Q

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PE NUMBER: 0307141F
PE TITLE: NASS, IO TECH INTEGRATION & TOOL DEV

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.507	15.391	15.681	15.857	15.881	15.813	16.116	16.443	Continuing	TBD
4871 Information Operations Technology	14.507	15.391	15.681	15.857	15.881	15.813	16.116	16.443	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrates and synchronizes the efforts with USSTRATCOM's Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.
This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	14.965	15.449	15.605	15.766
(U)	Current PBR/President's Budget	14.507	15.391	15.681	15.857
(U)	Total Adjustments	-0.458	-0.058		
(U)	Congressional Program Reductions				
	Congressional Rescissions	0.000	-0.058		
	Congressional Increases				
	Reprogrammings	-0.037			
	SBIR/STTR Transfer	-0.421			
(U)	Significant Program Changes:				
	None				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4871	Information Operations Technology	14.507	15.391	15.681	15.857	15.881	15.813	16.116	16.443	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. Further detail is classified and can be provided upon request.

JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrates and synchronizes the efforts with USSTRATCOM's Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.
This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Conducted further research, testing and evaluation of the Information Operations Toolbox	7.256	6.292	6.370	6.453
(U)	Tool Assurance	1.000	1.000	1.000	1.000
(U)	Requirements Capabilities and Gap Analysis	6.251	8.099	8.311	8.404
(U)	Total Cost	14.507	15.391	15.681	15.857

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Joint HQ Information Operations, Operations and Maintenance, AF PE 37141F	9.491	10.626	15.328	14.999	15.616	14.340	14.669	15.932	Continuing	TBD

(U) D. Acquisition Strategy

Contracts will be awarded on open and fair competition. variations of both Fixed Price (FFP) and Cost Plus (CP) contracting vehicles will be use. FP will represent approximately 20% of the total contracting actions while CP will represent approximately 80%.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0307141F NASS, IO TECH INTEGRATION & TOOL DEV**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) J81-NWARS														
Net Warfare Assurance, Risk Assessment and Safeguards	Various	NSA/STRATCOM with multiple users		7.256	Jul-07	6.292	Jan-08	6.370	Jan-09	6.453	Sep-09	Continuing	TBD	TBD
Tool Assurance	Various	NSA/STRATCOM with multiple users		1.000	Jul-07	1.000	Jan-08	1.000	Jan-09	1.000	Sep-09	Continuing	TBD	TBD
Subtotal J81-NWARS			0.000	8.256		7.292		7.370		7.453		Continuing	TBD	TBD
Remarks:														
(U) J82														
Requirements, Capabilities and Gap Analysis	Various	NSA/STRATCOM with multiple users		6.251	Sep-07	8.099	Jan-08	8.311	Jan-09	8.404	Sep-09	Continuing	TBD	TBD
Subtotal J82			0.000	6.251		8.099		8.311		8.404		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	14.507		15.391		15.681		15.857		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

JFCC-NW NASS IO TECH INTEGRATION & TOOL DEVELOPMENT

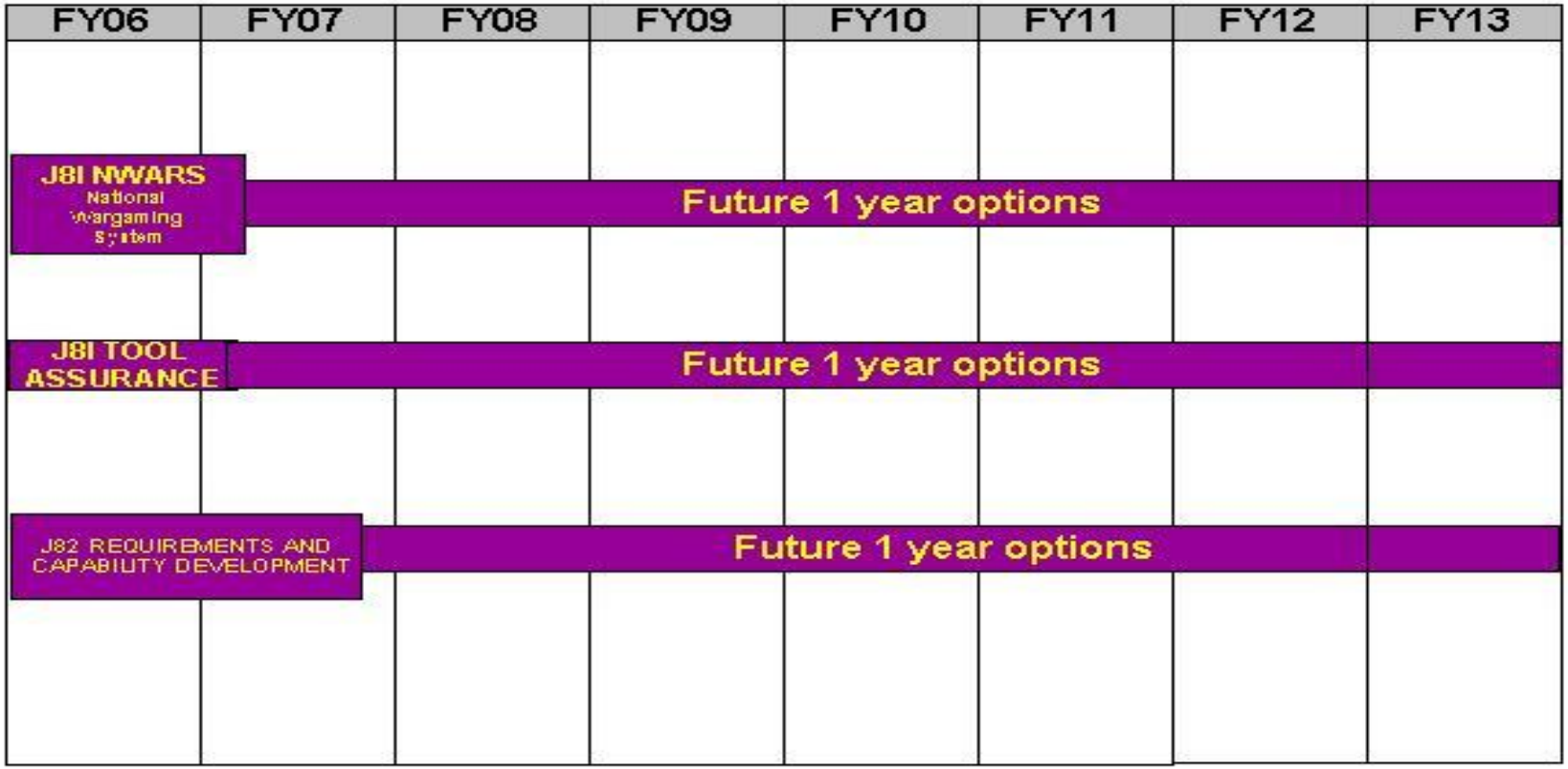

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) J81 -National Wargaming System	1-4Q	1-4Q	1-4Q	1-4Q
(U) J81 -Tool Assurance	1-4Q	1-4Q	1-4Q	1-4Q
(U) J82 -Requirements and Capability Development	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0308699F
PE TITLE: Shared Early Warning System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0308699F Shared Early Warning System

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.959	2.975	3.152	3.178	3.240	3.245	2.923	2.983	Continuing	TBD
4838 Shared Early Warning System	2.959	2.975	3.152	3.178	3.240	3.245	2.923	2.983	Continuing	TBD

FY 07 Reductions due to higher USAF/DOD priorities.

(U) A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. SEWS was established in December 1998 as a formal DoD program with the Air Force as the lead service. It is centrally managed to eliminate the previous ad hoc approach. The SEWS provides Theater Combatant Commanders and foreign nation partners direct operational benefit. Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. SEWS is comprised of: program management by the System Program Office (including the use of Federally Funded Research & Development Centers (FFRDC) and Systems Engineering and Technical Assistance (SETA) contractors); design, development, and acquisition of a common SEWS architecture; design, development, and test of a Joint Data Exchange Center (JDEC) in Moscow, Russia; development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System information; and site preparation for additional systems, as required.

This program is in Budget Activity 7 - Operational System Development, because it supports work on currently operating systems and/or upgrades still in engineering development.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	3.235	2.999	3.118	3.136
(U)	Current PBR/President's Budget	2.959	2.975	3.152	3.178
(U)	Total Adjustments	-0.276			
(U)	Congressional Program Reductions		-0.013		
	Congressional Rescissions		-0.011		
	Congressional Increases				
	Reprogrammings	-0.185			
	SBIR/STTR Transfer	-0.091			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0308699F Shared Early Warning System	PROJECT NUMBER AND TITLE: 4838 Shared Early Warning System

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4838 Shared Early Warning System	2.959	2.975	3.152	3.178	3.240	3.245	2.923	2.983	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. SEWS was established in December 1998 as a formal DoD program with the Air Force as the lead service. It is centrally managed to eliminate the previous ad hoc approach. The SEWS provides Theater Combatant Commanders and foreign nation partners direct operational benefit. Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. SEWS is comprised of: program management by the System Program Office (including the use of Federally Funded Research & Development Centers (FFRDC) and Systems Engineering and Technical Assistance (SETA) contractors); design, development, and acquisition of a common SEWS architecture; design, development, and test of a Joint Data Exchange Center (JDEC) in Moscow, Russia; development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System information; and site preparation for additional systems, as required.

This program is in Budget Activity 7 - Operational System Development, because it supports work on currently operating systems and/or upgrades still in engineering development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Continue SEWS design, development, and test efforts to include but not be limited to: SEWS common architecture, SEWS initiatives as identified by theater commanders, a JDEC system planned to be installed in Moscow, and a Pre-Launch Notification System.	2.959	2.975	3.152	3.178
(U) Total Cost	2.959	2.975	3.152	3.178

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other APPN										
(U) OPAF (PE 0308699F, Comm Elect Mods,	1.508	0.290	0.302	0.256	0.244	0.322	0.329	0.335	Continuing	TBD
(U) Operations and Maintenance AF	6.902	7.114	7.433	7.414	7.699	7.594	7.748	7.902	Continuing	TBD

Note: Fiscal year 2006 provides for major technological refresh of the SEWS system.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0308699F Shared Early Warning System	PROJECT NUMBER AND TITLE: 4838 Shared Early Warning System

(U) D. Acquisition Strategy

The acquisition strategy builds on existing capabilities, using evolutionary acquisition and spiral development, to modernize and sustain SEWS.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

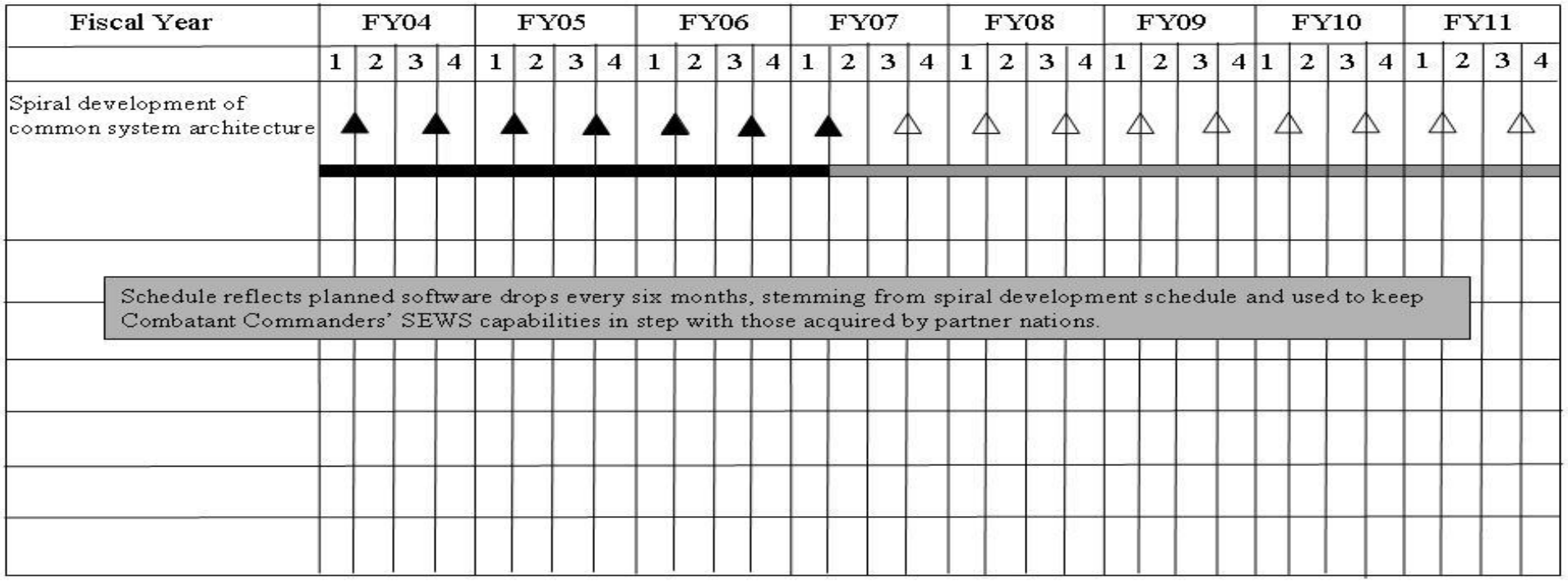
PE NUMBER AND TITLE: **0308699F Shared Early Warning System**

PROJECT NUMBER AND TITLE: **4838 Shared Early Warning System**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed Martin	C/CPAF	Colorado Springs, CO	11.429	1.335	Jan-06	1.143	Dec-06	1.389	Oct-07	1.350	Oct-08	Continuing	TBD	TBD
Navy	MIPR	San Diego, CA	0.868	0.150	Feb-06	0.385	Jan-07	0.312	Jan-08	0.324	Jan-09	Continuing	TBD	TBD
Various Ctrs/Gov Agencies	MIPR	Colorado Springs, CO	3.567	0.225	Jan-06	0.593	Jan-07	0.566	Jan-08	0.586	Jan-09	Continuing	TBD	TBD
Subtotal Product Development			15.864	1.710		2.121		2.267		2.260		Continuing	TBD	TBD
Remarks:														
(U) Support														
MITRE	SS/CPFF	Colorado Springs, CO	3.268	0.529	Nov-05	0.153	Oct-06	0.160	Oct-07	0.167	Oct-08	Continuing	TBD	TBD
A&AS	C/T&M	Colorado Springs, CO	5.188	0.713	Dec-05	0.695	Dec-06	0.719	Oct-07	0.745	Oct-08	Continuing	TBD	TBD
PMA	N/A	Colorado Springs, CO	1.143	0.007	Oct-05	0.006	Oct-06	0.006	Oct-07	0.006	Oct-08	Continuing	TBD	TBD
Subtotal Support			9.599	1.249		0.854		0.885		0.918		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			25.463	2.959		2.975		3.152		3.178		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0308699F Shared Early Warning System	PROJECT NUMBER AND TITLE 4838 Shared Early Warning System

Exhibit R-4 SEWS



Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0308699F Shared Early Warning System**	PROJECT NUMBER AND TITLE **4838 Shared Early Warning System**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Spiral development of common system architecture	1,3Q	1,3Q	1,3Q	1,3Q

PE NUMBER: 0401115F
PE TITLE: C-130 AIRLIFT SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	232.342	230.709	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD
4885	Avionics Modernization Program (AMP)	232.342	227.427	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD
5243	C-130 Initiatives	0.000	3.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM)] and the C-130 Broad Area Review requirements on the AF's 434 C/AC/EC/HC/LC/MC-130s that are not being replaced with new C/EC/WC-130Js. These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's 434 C/AC/EC/HC/LC/MC-130s complete access to the CNS/ATM international air space. Also, AMP and USSOCOM's Common Avioics Architecture for Penetration (CAAP) have been combined to eliminate any duplication of effort in these avionics programs.

USAF's C-130 fleet consists of 14 different mission design series (MDS) to be modified by the AMP. Within each of these MDSs are multiple variants (C-130H2, etc.) to be modified by AMP. These different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program).

Shown here are RDT&E funds for C-130 AMP. SOCOM's AC/MC-130s will have additional CAAP equipment installed that will be funded in MFP-11. These SOCOM funds are not shown here.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 variant or group of variants will require a specific kit development and test. Then, each will proceed through development and production serially. This waterfall approach will result in an orderly development and production sequencing for the 14 different C-130 MDSs.

Development activities continue to focus on two areas: AMP's architecture and kit development for the first Combat Delivery aircraft (C-130H2) and the first Special Mission aircraft (MC-130H), as well as software development of the SOF AMP and Common Avionics Architecture for Penetration (CAAP) capabilities.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C/AC /EC/HC/ LC/MC-130 fleets of aircraft.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	233.028	217.602		
(U)	Current PBR/President's Budget	232.342	230.709	188.069	137.692
(U)	Total Adjustments	-0.686			
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases	-0.686			
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				
	None				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE: 4885 Avionics Modernization Program (AMP)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4885	Avionics Modernization Program (AMP)	232.342	227.427	188.069	137.692	87.886	25.240	9.707	9.389	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM)] and the C-130 Broad Area Review requirements on 268 of the AF's C-130s . These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's C-130s complete access to the CNS/ATM international air space.

USAF's C-130 fleet consists of 4 different mission design series (MDS) to be modified by the AMP (H1, H2, H2.5, and H3). Within each of these MDSs are multiple variants that will be modified by AMP. Today, these different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package and a common cockpit layout, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program). Shown here are RDT&E funds for C-130 AMP. USSOCOM's Common Avionics Architecture for Penetration (CAAP) program has been segregated from the AMP program. Funding for CAAP was not included in this program documentation, but was found in USSOCOM's funding lines.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 variant or group of variants will require a specific kit development and test. Then, each will proceed through development and production serially. This waterfall approach will result in an orderly development and production sequencing for the 4 different C-130 MDSs.

Current development activities focus on completing the Core/Defensive Systems software and the Group A (wiring and equipment racks) & Group B (radios, instruments, etc); testing of the H2 aircraft which achieved first flight in October 06, and completion of the trial install on the H2.5. .

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years. Funding shortfalls experienced in FY05 resulted in another need to Rebaseline the program; this activity is on-going and a Contract Modification award is anticipated to occur in the 1st Quarter of FY08.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C-130 fleets of aircraft.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Detailed design work continues for both Group A(wiring, racks, etc) and B (computers, instrumentation, etc.) equipment for the C/AC/EC/HC/LC/MC-130 fleets. Coding and unit testing for the software integration facility continues.	201.505	148.364	118.829	91.538
(U)	Engineering Change Orders (ECO), Govt Furnished Parts and Information (GFP/GFI), and Award Fee.	10.506	30.926	23.619	11.456
(U)	Developmental Test and Evaluation.	4.333	12.538	13.734	12.645
(U)	Training System development upgrades.	6.000	19.900	20.108	11.993
(U)	Program office support (A&AS, TDY, training and supplies).	9.998	14.100	11.779	10.060
(U)	Total Cost	232.342	225.828	188.069	137.692

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) PE 0401115F, 3010, C-130 AMP, BP1100	0.000	0.000	113.332	351.888	265.535	260.779	281.867	287.986	2,699.853	4,261.240

(U) D. Acquisition Strategy

The C-130 AMP contract was awarded 30 July 2001. This is a Cost-Plus Award Fee contract to develop and install AMP kits for the development aircraft and conduct development flight test. Kit installation for the majority of the 268 aircraft will be competitively bid at a future date.

Revisions to the AF training system began in July 2006 under the AMP contract. This effort will modify the various Training Programs and Weapons Systems Trainers to the AMP configuration.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 2003. The ECP rebaselines the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program by up to 2 years.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **4885 Avionics Modernization Program (AMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Boeing, Long Beach, CA	CPAF		638.530	212.690	Dec-05	198.739	Dec-06	162.556	Dec-07	114.987	Dec-08	108.251	1,435.753	
Subtotal Product Development			638.530	212.690		198.739		162.556		114.987		108.251	1,435.753	0.000
Remarks: Note: Funds shown here contain System Design & Development, ECO, Training System Upgrades and the Award Fee.														
(U) Support														
Program Support Office	N/A		52.106	15.319		14.550		11.779		10.060		14.884	118.698	
Subtotal Support			52.106	15.319		14.550		11.779		10.060		14.884	118.698	0.000
Remarks: Award Dates vary throughout the year depending on activity (TDY, Training, Contractor Support)														
(U) Test & Evaluation														
Various			16.648	4.333	Jan-06	12.538	Jan-07	13.734	Jan-08	12.645	Jan-09	9.088	68.986	
Subtotal Test & Evaluation			16.648	4.333		12.538		13.734		12.645		9.088	68.986	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			707.284	232.342		225.827		188.069		137.692		132.223	1,623.437	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)

C-130 AMP Program Office Schedule

(As briefed to OSD on 9 Nov)

Dominant Air Power: Design For Tomorrow...Deliver Today

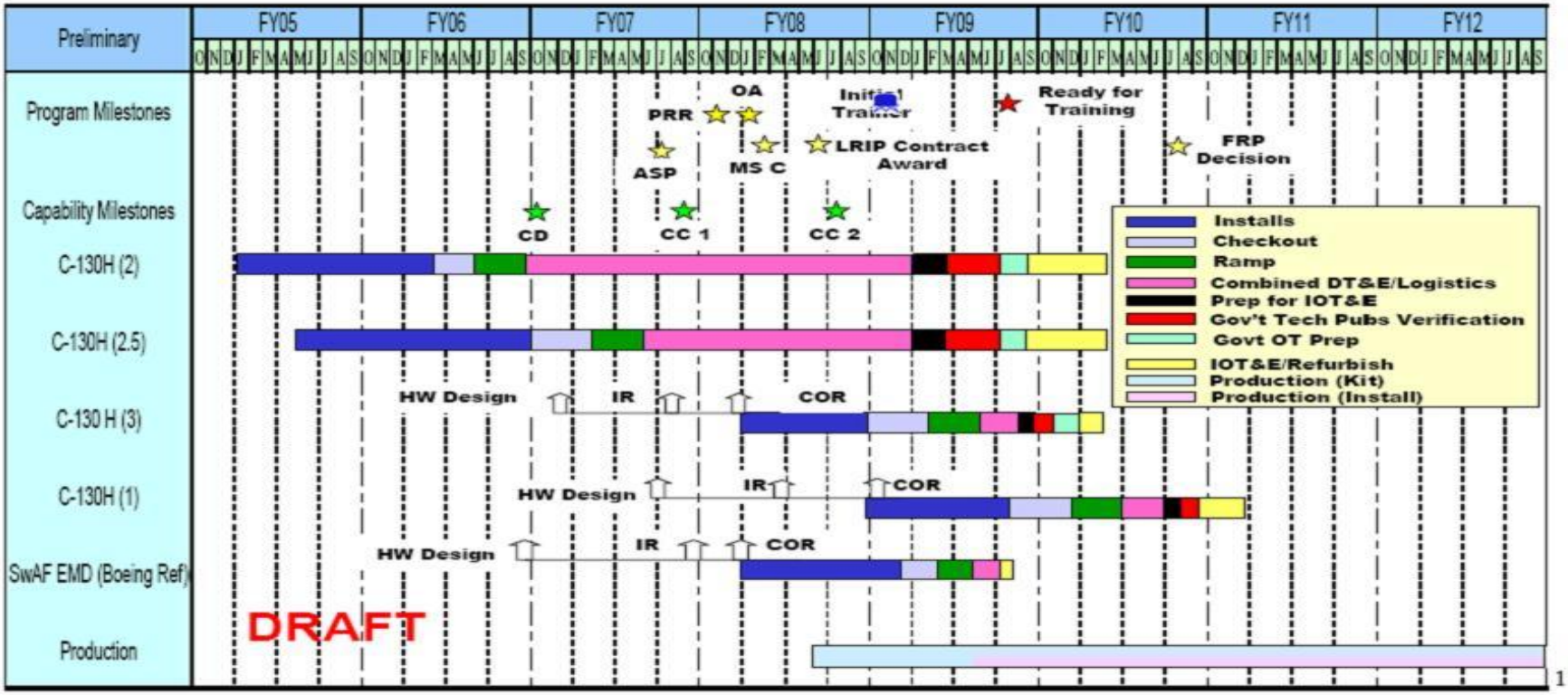


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE: 4885 Avionics Modernization Program (AMP)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) C-130H2.5 First Flight		3Q		
(U) Software: Core Complete 1		4Q		
(U) M/SC/LRIP Decision			2Q	
(U) Software: Core Complete 2			4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **5243 C-130 Initiatives**

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5243 C-130 Initiatives	0.000	3.282	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U)				
(U)				
(U)				
(U) Total Cost	0.000	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)										

(U) D. Acquisition Strategy

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **5243 C-130 Initiatives**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development													0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Support													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2007**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401115F C-130 AIRLIFT SQUADRONS**	PROJECT NUMBER AND TITLE **5243 C-130 Initiatives**

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401115F C-130 AIRLIFT SQUADRONS**	PROJECT NUMBER AND TITLE **5243 C-130 Initiatives**

(U) Schedule Profile

FY 2006	FY 2007	FY 2008	FY 2009

(U)

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PE NUMBER: 0401119F
PE TITLE: C-5 Airlift Squadrons

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	225.730	150.638	203.585	28.276	28.405	20.259	10.103	0.000	0.000	1,928.449
4495	Avionics Modernization Program	3.000	0.000	12.615	1.845	0.000	0.000	0.000	0.000	0.000	409.501
4835	Reliability Enhancement & Reengining Program	222.730	150.638	190.970	26.431	28.405	20.259	10.103	0.000	0.000	1,518.948

(U) A. Mission Description and Budget Item Justification

674495: Avionics Modernization Program (AMP): Phase I of an Air Force planned two-phase modernization effort for the C-5 (Phase II is the Reliability Enhancement and Re-engining Program (RERP)) . AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM) [formerly, Global Air Traffic Management (GATM)] and navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs Deputy Secretary of Defense (DepSecDef) directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements will be incorporated into the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress towards free flight capability. The AWFCS portion of AMP replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities will also be incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. Two AMP RDT&E test articles were funded in FY99 for installation and flight test in FY02/03/04/05. AMP's first flight occurred in Dec 02. The final software build completed Jun 05, and operational testing completed Jul 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, which is Phase II of the C-5 Modernization program, or in a follow-on software block upgrade program. The C-5 modernization program was approved in FY04 to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System.

674835: Reliability Enhancement and Re-engining Program (RERP): Phase II of an Air Force planned two-phase modernization effort for the C-5 (Phase I is the Avionics Modernization Program (AMP)). RERP is a comprehensive modernization effort to improve aircraft reliability, maintainability and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability) while reducing Total Ownership Costs (TOC). This effort centers around replacing TF39 engines with a more reliable, Commercial Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrics, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. Three RDT&E test articles were funded in FY04 for installation and flight test in FY05-09.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401119F C-5 Airlift Squadrons

RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air Vehicle Critical Design Review (CDR) completed in Mar 04. First Flight of the first test article occurred in Jun 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, or in a follow-on software block upgrade program. The C-5 modernization program was approved in FY04 to use the Contractor Supported Weapon System (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	226.479	151.209	51.691	0.000
(U)	Current PBR/President's Budget	225.730	150.638	203.585	28.276
(U)	Total Adjustments	-0.749	-0.571		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-3.234	-0.571		
	Congressional Increases				
	Reprogrammings	8.758			
	SBIR/STTR Transfer	-6.273			

(U) Significant Program Changes:

FY08 PB:

FY06 has been reduced by -$0.7M. This funding reduction was made as a result of Congressional actions, a SBIR transfer, and reprogramming.

FY07 has been reduced by -$0.571M. This reduction rescinded funds based upon economic assumptions.

FY08 has been increased $151.9M since the FY07 PB submittal. Increase is a result of an increase in program development testing requirements.

FY09 has been increased $28.3M since the FY07 PB submittal. Increase is a result of an increase in program development testing requirements.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4495 Avionics Modernization Program

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4495 Avionics Modernization Program	3.000	0.000	12.615	1.845	0.000	0.000	0.000	0.000	0.000	409.501
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

674495: Avionics Modernization Program (AMP): Phase I of an Air Force planned two-phase modernization effort for the C-5 (Phase II is the Reliability Enhancement and Re-engining Program (RERP)) . AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM) [formerly, Global Air Traffic Management (GATM)] and navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs Deputy Secretary of Defense (DepSecDef) directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements will be incorporated into the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress towards free flight capability. The AWFCS portion of AMP replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities will also be incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. Two AMP RDT&E test articles were funded in FY99 for installation and flight test in FY02/03/04/05. AMP's first flight occurred in Dec 02. The final software build completed Jun 05, and operational testing completed Jul 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, which is Phase II of the C-5 Modernization program, or in a follow-on software block upgrade program. The C-5 modernization program was approved in FY04 to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) System Engineering/Program Management	0.392		1.387	0.203
(U) AMP Kit Design/Development/Contractor Test	1.887		6.657	0.974
(U) Prototype Fabrication/Install	0.341		1.202	0.176
(U) Mission Support			1.622	0.237
(U) Government Flight Test Cost	0.380		1.747	0.255
(U) Total Cost	3.000	0.000	12.615	1.845

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE 4495 Avionics Modernization Program

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-11	77.820	54.836	94.679	96.166	79.539	75.966	78.155	75.984	21.851	963.366
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-19			23.744	7.503	5.019	1.525				37.791
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)	30.585	143.372	253.262	540.784	845.259	963.558	935.319	940.416	5,166.286	9,818.841

(U) D. Acquisition Strategy

Avionics Modernization Program: Program acquisition strategy establishes a single integrating contractor (Lockheed Martin Aeronautics Company) to modify and qualify integrated Commercial Off-the-Shelf (COTS) line replaceable units (LRUs) and software to meet C-5 performance and communication, navigation, surveillance/air traffic management (CNS/ATM) requirements; update existing C-5 engineering and technical data; develop interface control specifications based on performance requirements; prototype the new system; and support flight testing. The AMP contract was awarded to the Lockheed Martin/Honeywell team on 22 January 1999. $9.7M in FY99 procurement was added in the FY00 PB to accelerate Traffic Alert and Collision Avoidance System (TCAS) installations ahead of the rest of AMP. The AMP modification is planned for the entire C-5 fleet.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401119F C-5 Airlift Squadrons**

PROJECT NUMBER AND TITLE: **4495 Avionics Modernization Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed Martin Aeronautics Co	CPAF		348.525	2.620	Oct-05	0.000		9.246	Oct-07	1.353	Oct-08	0.000	361.744	361.744
N/A													0.000	
Subtotal Product Development			348.525	2.620		0.000		9.246		1.353		0.000	361.744	361.744
Remarks: Engineering complete.														
(U) Support														
730 ACSG. Robins AFB, GA			9.079										9.079	9.079
716 AESG, Wright-Patterson AFB, OH			14.903					1.622		0.237			16.762	16.762
N/A													0.000	
Subtotal Support			23.982	0.000		0.000		1.622		0.237		0.000	25.841	25.841
Remarks: Engineering complete.														
(U) Test & Evaluation														
418 Test Squadron		Edwards AFB	19.534	0.380	Apr-06			1.747	Apr-08	0.255	Apr-09		21.916	21.916
N/A													0.000	
Subtotal Test & Evaluation			19.534	0.380		0.000		1.747		0.255		0.000	21.916	21.916
Remarks: Engineering complete.														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks: Engineering complete.														
(U) Total Cost			392.041	3.000		0.000		12.615		1.845		0.000	409.501	409.501

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4495 Avionics Modernization Program

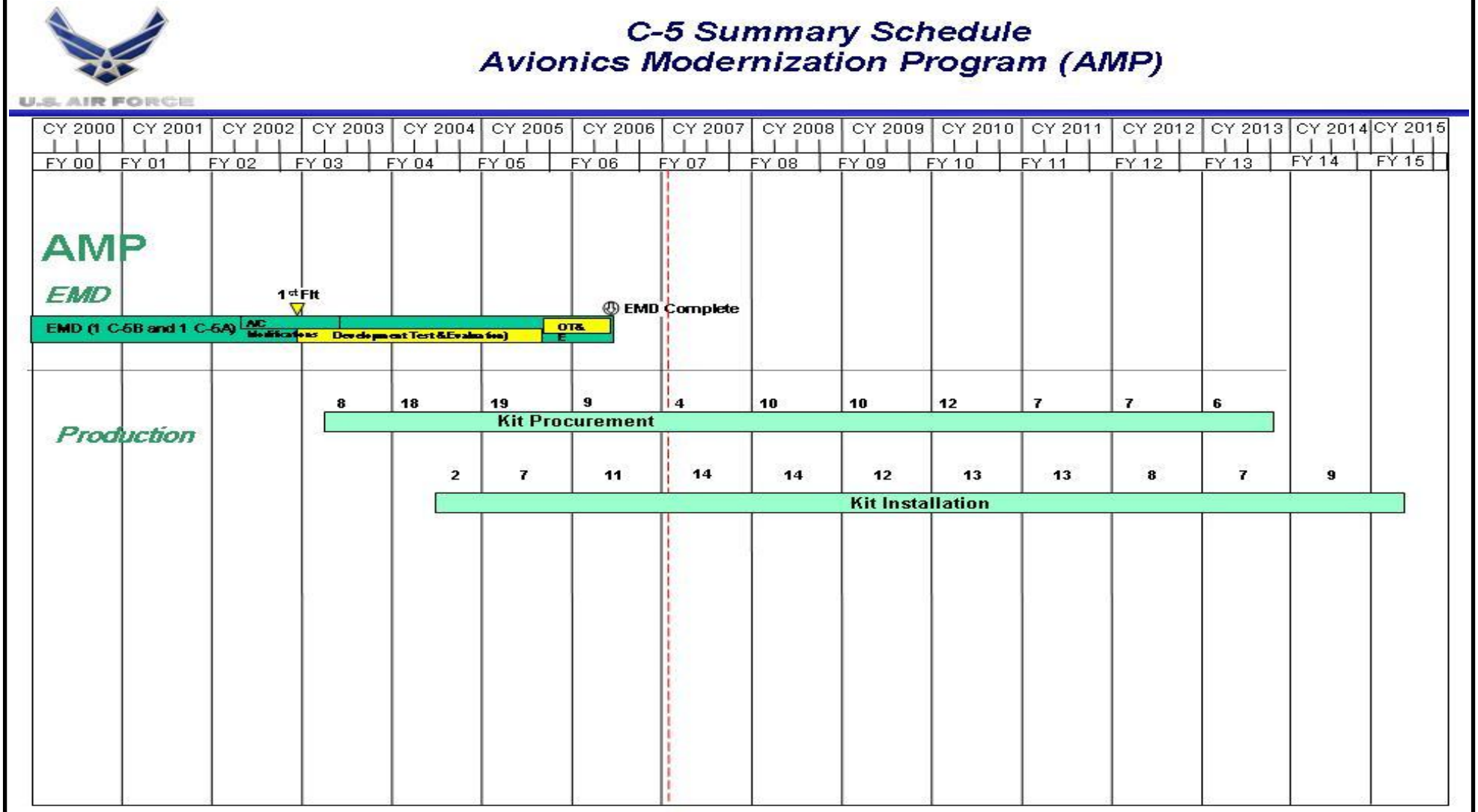

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4495 Avionics Modernization Program**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AMP Flight Test Complete (FY06/3)	4Q			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4835	Reliability Enhancement & Reengining Program	222.730	150.638	190.970	26.431	28.405	20.259	10.103	0.000	0.000	1,518.948
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

674835: Reliability Enhancement and Re-engining Program (RERP): Phase II of an Air Force planned two-phase modernization effort for the C-5 (Phase I is the Avionics Modernization Program (AMP)). RERP is a comprehensive modernization effort to improve aircraft reliability, maintainability and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability) while reducing Total Ownership Costs (TOC). This effort centers around replacing TF39 engines with a more reliable, Commercial Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrics, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. Three RDT&E test articles were funded in FY04 for installation and flight test in FY05-09. RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air Vehicle Critical Design Review (CDR) completed in Mar 04. First Flight of the first test article occurred in Jun 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, or in a follow-on software block upgrade program. The C-5 modernization program was approved in FY04 to use the Contractor Supported Weapon System (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Systems Engineering/Program Management	15.220	9.777	12.100	0.803
(U)	RERP Design/Development/Contractor Test	118.720	76.264	94.384	5.894
(U)	Prototype Fabrication/Install	69.000	44.324	54.856	3.734
(U)	Mission Support	14.196	11.353	8.900	0.500
(U)	Government Test Support	5.594	8.920	8.730	0.500
(U)	Aircrew & Maintenance Trainer	0.000	0.000	12.000	15.000
(U)	Total Cost	222.730	150.638	190.970	26.431

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE 4835 Reliability Enhancement & Reengining Program

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										
(U) Aircraft Procurement,AF, BA-5,C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)	30.585	143.372	253.262	540.784	845.259	963.558	935.319	940.416	5,166.286	9,818.841
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-11	77.820	54.836	94.679	96.166	79.539	75.966	78.155	75.984	21.851	963.366
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-19			23.744	7.503	5.019	1.525				37.791

(U) D. Acquisition Strategy

Reliability Enhancement and Re-engining Program (RERP): The approved FY02 and the updated FY06 acquisition strategy called for the modification of the entire C-5 aircraft fleet starting with the 49 B-models first. System Development & Demonstration (SDD) includes 1 C-5A and 2 C-5Bs. The program acquisition strategy is to consider every opportunity to use commercially available components and processes to modernize C-5 products and processes to meet or exceed required system performance and support, so as to renew the weapon system until 2040. The program acquisition strategy also seeks to construct a government/industry partnership to identify solutions, assign responsibility, and execute to achieve AMC requirements. Fleet availability, ownership cost, and system performance will be used to balance solutions against program cost. Lockheed Martin Aeronautics Co has been selected as the prime contractor through a sole source arrangement. Lockheed has selected General Electric (Powerplant), Goodrich (Pylon), and Honeywell (Avionics) as the major subcontractors.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401119F C-5 Airlift Squadrons**

PROJECT NUMBER AND TITLE: **4835 Reliability Enhancement & Reengining Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Lockheed Martin Aeronautics Co (Pre-EMD)	FFP		46.738									0.000	46.738	46.738
Lockheed Martin Aeronautics Co (SDD)	CPAF		773.929	202.940	Oct-05	130.365	Oct-06	161.340	Oct-07	10.431	Oct-08	8.767	1,287.772	1,287.772
													0.000	
Subtotal Product Development			820.667	202.940		130.365		161.340		10.431		8.767	1,334.510	TBD
Remarks:														
(U) Support														
730.ACSG, Robins AFB, GA			12.588	3.457		2.673						0.000	18.718	18.718
716 AESG, Wright-Patterson AFB, OH			19.578	10.739		8.680		8.900		0.500		0.000	48.397	48.397
N/A													0.000	
Subtotal Support			32.166	14.196		11.353		8.900		0.500		0.000	67.115	67.115
Remarks:														
(U) Test & Evaluation														
418 Test Squadron (Edwards AFB)			16.579	5.594		8.920		8.730		0.500			40.323	40.323
N/A													0.000	
Subtotal Test & Evaluation			16.579	5.594		8.920		8.730		0.500		0.000	40.323	40.323
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Aircrew & Maintenance Trainer														
								12.000		15.000		50.000	77.000	77.000
Subtotal Aircrew & Maintenance Trainer			0.000	0.000		0.000		12.000		15.000		50.000	77.000	77.000
Remarks:														
(U) Total Cost			869.412	222.730		150.638		190.970		26.431		58.767	1,518.948	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

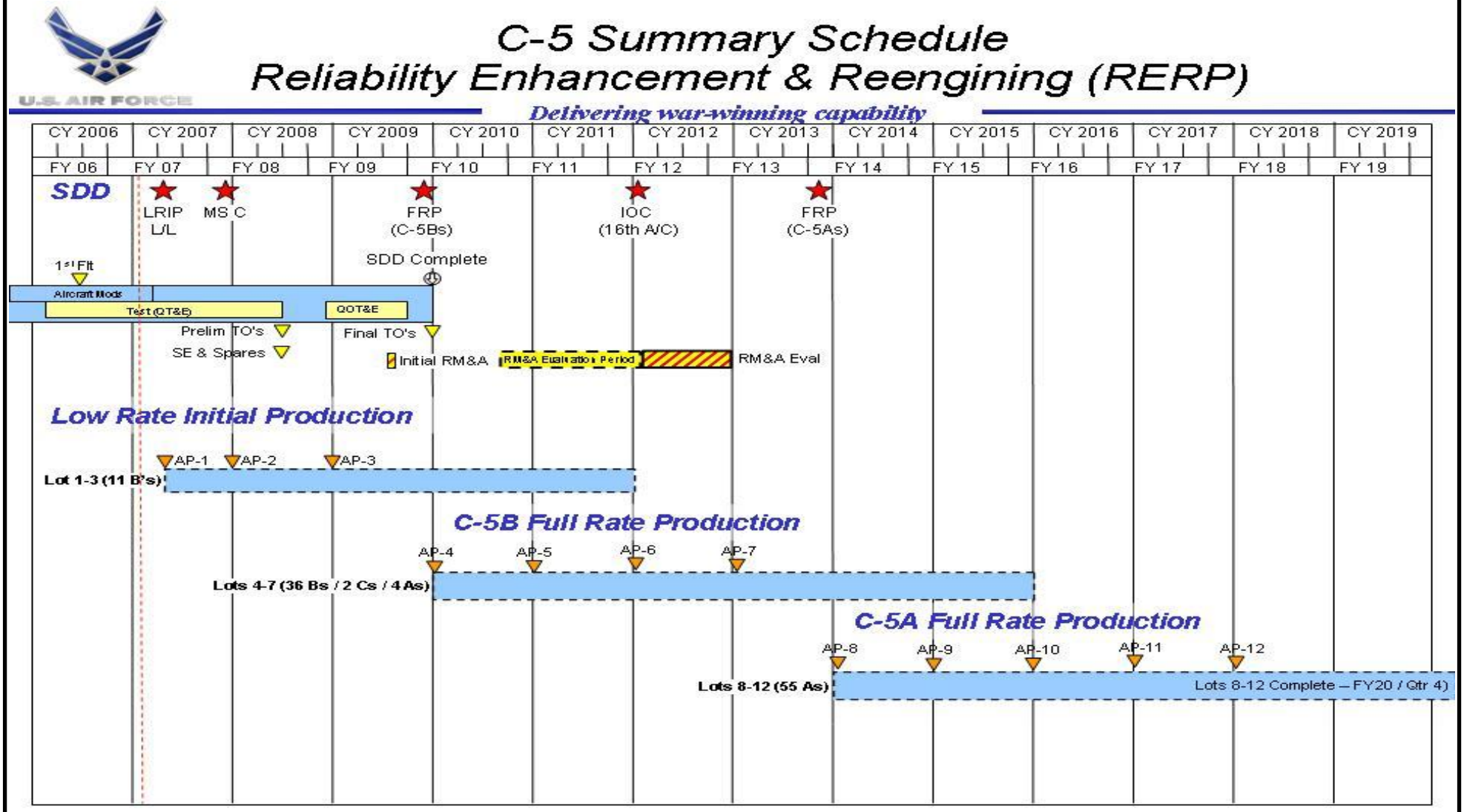

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4835 Reliability Enhancement & Reengining Program**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) First Prototype Flight (FY06/3)	3Q			
(U) Milestone C (FY08/1)			1Q	

PE NUMBER: 0401130F
PE TITLE: C-17 Aircraft

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401130F C-17 Aircraft

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	160.608	173.125	181.734	238.017	218.100	208.527	224.736	225.356	Continuing	TBD
2569 C-17 Aircraft	160.608	173.125	181.734	238.017	218.100	208.527	224.736	225.356	Continuing	TBD

FY02 and later funds for LAIRCM were ZBTed to PE 41134F.

(U) A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's National Military Strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is budget activity 7, Operational System Development, because the program has completed Milestone III and is continuing performance improvements to increase the operational capability of the C-17 through programmed modifications.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	164.781	173.781		
(U) Current PBR/President's Budget	160.608	173.125	181.734	238.017
(U) Total Adjustments	-4.173			
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings	-4.173	-0.656		
SBIR/STTR Transfer				

(U) Significant Program Changes:

FY08 increase is for several new projects, including Identification Friend/Foe (IFF) Communication, Navigation, Surveillance and Air Traffic Management (CNS/ATM) Mode 5, Emergency Locator Transmitter (ELT) Frequency Change, Crew Armor Protection Phase II (12.7mm) and VNAV Capability and RNP RNAV <0.3.

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning FY06; this reduction in FY06-11 is a result of the ZBT transferring indirect dollars from the customer accounts to PE 65807F.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401130F C-17 Aircraft

PROJECT NUMBER AND TITLE: 2569 C-17 Aircraft

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2569 C-17 Aircraft	160.608	173.125	181.734	238.017	218.100	208.527	224.736	225.356	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's National Military Strategy and constitutes the most responsive means of meeting U.S. mobility requirements. Specific tasks associated with the airlift mission include deployment, employment (airland and airdrop), sustaining support, retrograde, and combat redeployment. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is budget activity 7, Operational System Development, because the program has completed Milestone III and is continuing performance improvements to increase the operational capability of the C-17 through programmed modifications.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Performance Improvement Development & Testing	89.278	96.654	86.988	138.390
(U) Systems Engineering/Program Management	29.802	36.900	50.231	60.563
(U) Producibility Enhancement/Performance Improvement (PE/PI) Contractor Flight Test	27.000	22.571	30.015	26.150
(U) Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test	14.528	17.000	14.500	12.914
(U) Total Cost	160.608	173.125	181.734	238.017

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) APAF, MYP, BA02, PE0401130F	3449.050	4347.201	260.601	589.707	265.560	236.896	223.643	203.783	0.000	9,576.441
(U) APAF, ICS, PE0401130F	0.000	0.000	0.000	0.000	0.000	0.000			0.000	
(U) APAF, A/C Mods, BA05, PE0401130F/PE0401134F	257.358	250.488	211.206	403.605	589.708	451.718	404.283	633.697	0.000	3,202.063
(U) MilCon, Facilities, PE0401130F	77.347	174.338	44.071	0.000	0.000	0.000			0.000	295.756

In FY06, aircraft interim contract support (ICS) transitioned to contractor logistic support (CLS). Sustainment funds were transferred from ICS to O&M. Funds for initial spares and other non-CLS efforts were transferred from ICS to MYP.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE 2569 C-17 Aircraft

(U) C. Other Program Funding Summary ($ in Millions)

The A/C mods funding includes the LAIRCM PE since those funds are included in the C-17 11C17A BPAC (P-1 line)

(U) D. Acquisition Strategy

The C-17 Acquisition Strategy is based on several separate contracts to support the entire scope of the C-17 weapon system. These contracts are: 1) a multi-year procurement (MYP) aircraft contract (to economically purchase the remaining complement of 180 production aircraft) - (APAF), additionally a new IDIQ contract was issued for the procurement of C-17s beyond 180, including the additional 10 aircraft authorized in the FY07 PB and foreign orders that may materialize; 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract (to develop cost reduction changes, capability enhancements, and design fixes to service-revealed problems) - (RDT&E, APAF); 3) a Globemaster III Sustainment Partnership (field support) contract (to support the current and future fielded aircraft) - (O&M, TWCF); 4) a MYP engine contract (for Government Furnished Equipment [GFE] engines) - (APAF, O&M, TWCF); 5) a set of aircrew simulator and training contracts: one for aircrew simulators and one for training & concurrency upgrades; and 6) a maintenance training device contract (for devices & concurrency upgrades) - (APAF).

Two C-17 Defense Acquisition Board (DAB) decisions, contained in the 3 Nov 95 and 1 Feb 96 USD(A&T) Acquisition Decision Memoranda (ADM), directed the Air Force to proceed with a 120-aircraft production program. The Air Force proceeded with procuring 40 aircraft followed by an 80-aircraft MYP program (along with engines to support them). Sixty additional C-17s were programmed at the end of the 80-aircraft MYP to meet requirements not included in the 120 aircraft program. Most recently, the FY07 PB authorized funding for 10 additional aircraft bringing the total fleet number to 190 aircraft.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401130F C-17 Aircraft**

PROJECT NUMBER AND TITLE: **2569 C-17 Aircraft**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Boeing	C,FPI/FP		5,337.804										5,337.804	
Boeing	C,CPAF		1,048.313	145.930	Nov-05	155.965	Oct-06	158.229	Nov-07	215.885	Nov-08	784.069	2,508.391	
Pratt & Whitney	C,FP		25.346									0.000	25.346	
Boeing	C,FPI		83.885									0.000	83.885	
Pratt & Whitney	FP+EPA		7.506									0.000	7.506	
None													0.000	
Subtotal Product Development			6,502.854	145.930		155.965		158.229		215.885		784.069	7,962.932	0.000
Remarks:														
(U) Support														
Mission Support OGC	PO		97.800					8.835	Oct-07	9.038	Oct-08	38.279	153.952	
Site Activation OGC	PO		1.500									0.000	1.500	
Miscellaneous			22.400									0.000	22.400	
None													0.000	
Subtotal Support			121.700	0.000		0.000		8.835		9.038		38.279	177.852	0.000
Remarks:														
(U) Test & Evaluation														
Combined Test Force	PO		313.960	10.243	Oct-05	15.000	Oct-06	14.500	Nov-07	12.914	Nov-08	53.551	420.168	
Wright Labs	PO		10.732	0.150	Jan-06	0.160	Dec-06	0.170	Dec-07	0.180	Dec-08	0.820	12.212	
Other (Army funds for testing)	PO		9.016	4.285	Jan-06	2.000	Feb-07					0.000	15.301	
None													0.000	
Subtotal Test & Evaluation			333.708	14.678		17.160		14.670		13.094		54.371	447.681	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			6,958.262	160.608		173.125		181.734		238.017		876.719	8,588.465	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE 2569 C-17 Aircraft

C-17 Aircraft Schedule

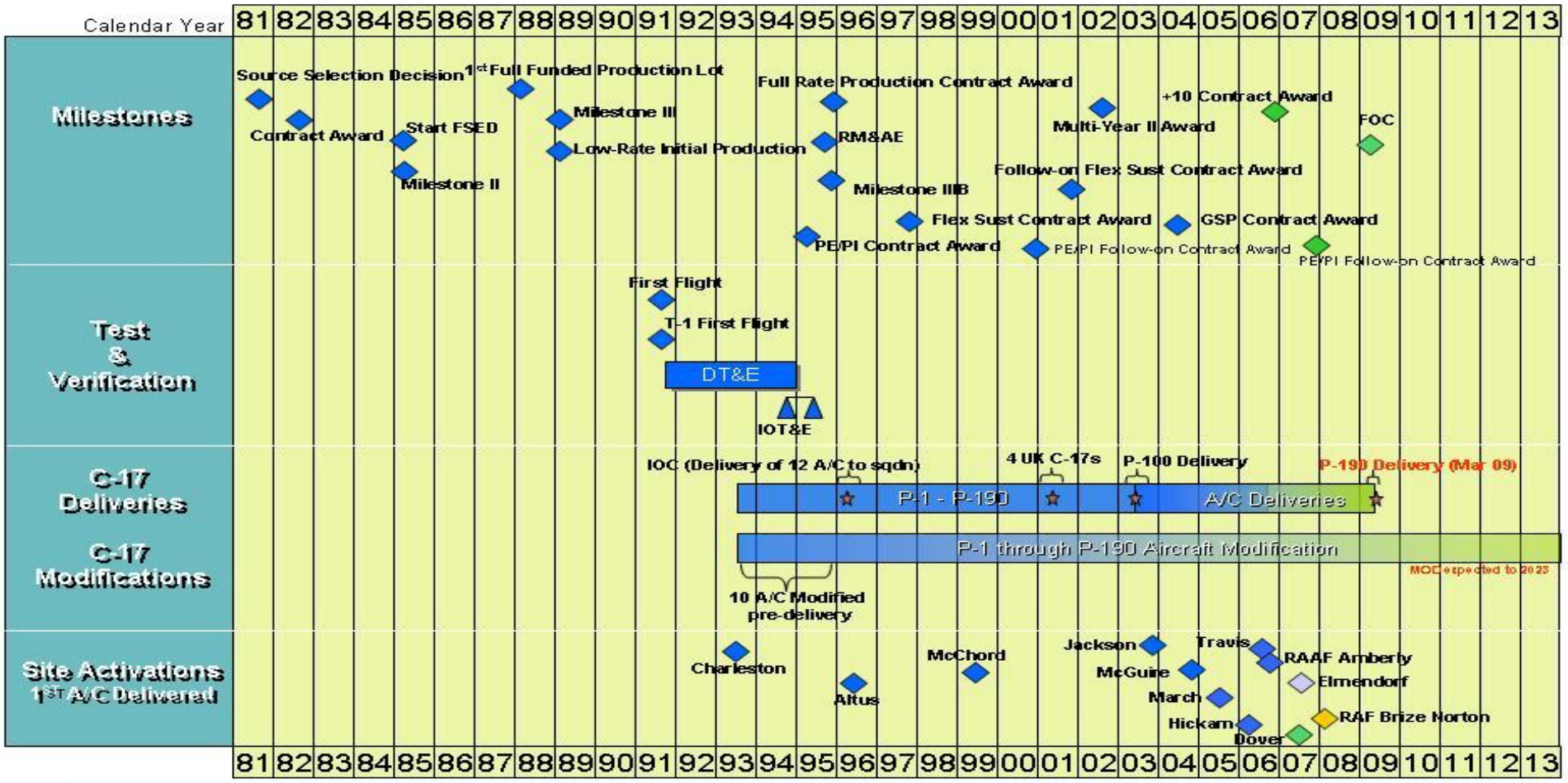

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE: 2569 C-17 Aircraft	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Incremental Funding of Ongoing Performance Improvement Projects (Boeing)	1-3Q	1-3Q	1-3Q	1-3Q
(U) Airdrop Improvements		3Q	1Q	1Q
(U) CNS/ATM IFF Mode S Enhanced S	2Q	1Q	1Q	2Q
(U) IFF CNS/ATM Mode 5			2Q	1Q
(U) ELT Frequency Change			3Q	1Q
(U) Crew Armor Protection Phase II			3Q	2Q
(U) RNAV/VNAV Capability			2Q	1Q
(U) Air Force Flight Test Center	1Q	1Q	1Q	1Q

PE NUMBER: 0401132F
PE TITLE: C-130J PROGRAM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	11.401	40.389	74.223	52.790	42.606	60.455	60.480	58.896	Continuing	TBD
5061 C-130J	11.401	40.389	74.223	52.790	42.606	60.455	60.480	58.896	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

FY08 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades which primarily address mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7.0 is the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) Communication, Navigation & Identification (CNI) upgrades
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade
d.) Tactical Datalink (TDL)
e.) Mission Computer (MC) upgrades

3.) AMC Requirements and Planning Council (R&PC) activities. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily addresses deficiencies and system improvements. This includes Navigation Safety upgrades, Formation Positioning System (FPS), Large Aircraft Infrared Counter Measures (LAIRCM), and Sensor Cant, among other priorities.

FY09 C-130J program RDT&E funding provides for:
1.) Continued participation in COSSURM.
2.) Continuation and testing of Block 7.0 Upgrades
3.) Continuation of R&PC activities
4.) Start of Block 8.0 Upgrades

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM

This effort is assigned to Budget Activity 7, as it supports an operational system.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	11.496	40.542	45.430	40.605
(U)	Current PBR/President's Budget	11.401	40.389	74.223	52.790
(U)	Total Adjustments	-0.095			
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.095	-0.153		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				

(U) Significant Program Changes:

Increase in current FY08 & FY09 funding is for development activities to address AMC prioritized requirements that are not contained in the International Block Upgrade program. For FY08 & FY09, these development activities include Navigation Safety upgrades, Formation Positioning System (FPS), Large Aircraft Infrared Counter Measures (LAIRCM), and Sensor Cant, among other priorities associated with planned C-130J aircraft modifications.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE: 5061 C-130J	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5061 C-130J	11.401	40.389	74.223	52.790	42.606	60.455	60.480	58.896	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY08 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades which primarily address mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7.0 is the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) Communication, Navigation & Identification (CNI) upgrades
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade
d.) Tactical Datalink (TDL)
e.) Mission Computer (MC) upgrades

3.) AMC Requirements and Planning Council (R&PC) activities. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily addresses deficiencies and system improvements. This includes Navigation Safety upgrades, Formation Positioning System (FPS), Large Aircraft Infrared Counter Measures (LAIRCM), and Sensor Cant, among other priorities.

FY09 C-130J program RDT&E funding provides for:
1.) Continued participation in COSSURM.
2.) Continuation and testing of Block 7.0 Upgrades
3.) Continuation of R&PC activities
4.) Start of Block 8.0 Upgrades

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

This effort is assigned to Budget Activity 7, as it supports an operational system.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	COSSURM payment	0.822	1.759	1.770	1.900
(U)	Congressional Rescissions	0.095	0.153		
(U)	Reprogrammings				
(U)	SBIR/STTR Transfer				
(U)	Continue Block 6.0 non-recurring engineering design and software development. Conduct laboratory testing of CNS/ATM / nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and one C-130J weapon system trainer.	10.077	20.474		
(U)	Flight Test	0.407	1.000	1.500	1.500
(U)	Initiate non-recurring engineering design and software development for Block 7.0 CNS/ATM / nav safety requirements and aircraft deficiencies/product improvements.		12.107		
(U)	Continue Block 7.0 non-recurring engineering design and software development. Conduct laboratory testing of CNS/ATM / nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and one C-130J weapon system trainer.			25.002	17.984
(U)	Initiate non-recurring engineering design and software development for Block 8.0 CNS/ATM / nav safety requirements and aircraft deficiencies / product improvements.				12.780
(U)	Requirements and Planning Council (R&PC) activities		1.159	41.981	14.566
(U)	International Program Office (IPO) Support (A&AS, Travel, Supplies)		3.737	3.970	4.060
(U)	Total Cost	11.401	40.389	74.223	52.790

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	PE 0401132F, C-130J Procurement (BP1100)										
(U)	Mod MN-_1701 Blk 6.0		16.070	21.870	1.520					0.000	39.460
(U)	Mod MN-_1411 MWS			1.681	2.400	0.519				0.000	4.600
(U)	Mod MN-_2612 Av Sys			10.110	17.040	6.896				0.000	34.046
(U)	Mod MN-_6298 Blk 7.0				35.650	46.512	21.650	5.166		0.000	108.978
(U)	Mod MN-_8629 LAIRCM					39.640	15.200	8.700	8.873		TBD
(U)	Mod MN-_5448 FPS					18.190	20.308	17.393	7.618	0.000	63.509
(U)	Mod MN-_5222 Blk 8.0						36.207	70.997	10.128	0.000	117.332
(U)	Mod MC-_1151 Blk 9.0								88.950		TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

(U) D. Acquisition Strategy

C-130J aircraft will be modified using a 'block upgrade' strategy. The full CNS/ATM / nav safety requirement will be met in four block upgrades: Block 6.0, which began with FY03 RDT&E funding and continues through FY07 RDT&E funding, Block 7.0, which will start in FY07, Block 8.0, which will start in FY09, and Block 9.0, which will start in FY11. The proportion of CNS/ATM / nav safety requirements allocated to Blocks 6.0 through 9.0 was determined via a design trade study conducted by Lockheed Martin (the C-130J prime contractor) and verified by the C-130J system program office and AMC. The development costs are being shared via a Global Project arrangement by the United States, the United Kingdom, Italy, Australia, and Denmark. An international program office, with USAF lead (Wright Patterson AFB, OH) manages the block upgrade development effort. Embodiment of a Block on the aircraft is the responsibility of each nation.

Lockheed Martin will be the prime contractor for these efforts, perform the non-recurring engineering and, following the successful conclusion of flight testing and certification of each block upgrade, will provide production retrofit kits on USAF C-130J aircraft. Installation will be performed by contractor, depot, and Air Force personnel.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401132F C-130J PROGRAM**

PROJECT NUMBER AND TITLE: **5061 C-130J**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA		10.172	Jan-06	33.893	Oct-06	66.983	Oct-07	45.330	Oct-08		156.378	
Subtotal Product Development			0.000	10.172		33.893		66.983		45.330		0.000	156.378	0.000
Remarks:														
(U) Support														
IPO Support	N/A					3.737	Jan-07	3.970	Oct-97	4.060			11.767	
Subtotal Support			0.000	0.000		3.737		3.970		4.060		0.000	11.767	0.000
Remarks: A&AS, Travel, Supplies - all vary on support needed														
(U) Test & Evaluation														
Air Force Materiel Command (DT&E)				0.407	Jan-06	1.000	Oct-06	1.500	Oct-07	1.500	Oct-08		4.407	
Subtotal Test & Evaluation			0.000	0.407		1.000		1.500		1.500		0.000	4.407	0.000
Remarks:														
(U) Management														
COSSURM				0.822	Jan-06	1.759	Oct-06	1.770	Oct-07	1.900	Oct-08		6.251	
Subtotal Management			0.000	0.822		1.759		1.770		1.900		0.000	6.251	0.000
Remarks:														
(U) Lockheed Martin Aeronautics, Marietta, GA														
(U) Total Cost			0.000	11.401		40.389		74.223		52.790		0.000	178.803	0.000
Remarks:														

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

C-130J Strategic Block Upgrade Plan

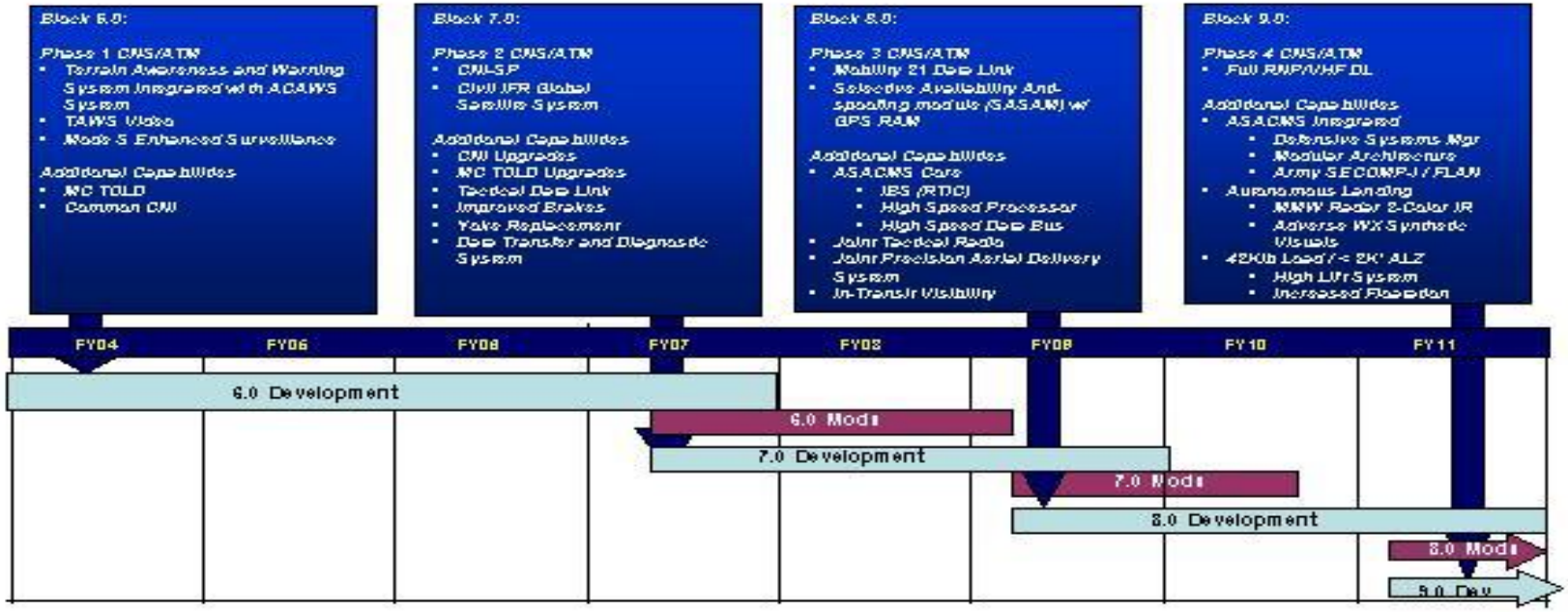

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401132F C-130J PROGRAM**	PROJECT NUMBER AND TITLE **5061 C-130J**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 6.0 FY06 award	1Q			
(U) Block 6.0 DT&E payment to AFFTC	1Q			
(U) Start of Block 6.0 DT&E	4Q			
(U) Block 6.0 FY07 award		1Q		
(U) Block 7.0 FY07 contract award		2Q		
(U) Block 7.0 FY08 award			1Q	
(U) Block 7.0 FY09 award				1Q
(U) Start of Block 7.0 DT&E				1Q
(U) Block 8.0 FY09 contract award				1Q

PE NUMBER: 0401133F
PE TITLE: Aeromedical Evacuation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401133F Aeromedical Evacuation

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4910 Aeromedical Readiness	1.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

In FY06, this is a new PE.

(U) A. Mission Description and Budget Item Justification

The program will modify COTS based Patient Isolation Units (PIU) in order to faciliate air transport of patients that may have been exposed to Critical List infections and/or Biological Warfare agents.

The funding may be transferred to another USAF Program where it will be more properly executed.

This program is in BA 7, Operational Systems Development, and it will modify existing COTS systems for use on deployed, operational aircraft.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	2.047			
(U) Current PBR/President's Budget	1.989			
(U) Total Adjustments	-0.058			
(U) Congressional Program Reductions				
Congressional Rescissions	-0.058			
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401133F Aeromedical Evacuation

PROJECT NUMBER AND TITLE: 4910 Aeromedical Readiness

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4910 Aeromedical Readiness	1.989	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The program will modify COTS based Patient Isolation Units (PIU) in order to faciliate air transport of patients that may have been exposed to Critical List infections and/or Biological Warfare agents.

The funding may be transferred to another USAF Program where it will be more properly executed.

This program is in BA 7, Operational Systems Development, and it will modify existing COTS systems for use on deployed, operational aircraft.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Analysis of User Requirements	0.100			
(U) Design of Patient Isolation Units	0.670			
(U) Manufacture and Modification of Initial Design	0.250			
(U) Developmental Testing of R&D Products	0.200			
(U) Modifications Based on Developmental Test	0.120			
(U) Purchase Prototypes for Evaluation & Testing	0.150			
(U) Operational Testing of Patient Isolation Unit	0.300			
(U) Program Management Support, Travel, Administration	0.199			
(U) Total Cost	1.989	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

Contract will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401133F Aeromedical Evacuation**

PROJECT NUMBER AND TITLE: **4910 Aeromedical Readiness**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Analysis, Design, Manufacture, Development, Testing and Purchase	TBD	TBD		1.800	Apr-06							Continuing	TBD	TBD
Subtotal Product Development			0.000	1.800		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Support														
Program Support	TBD	TBD		0.189	Apr-06							Continuing	TBD	TBD
Subtotal Support			0.000	0.189		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	1.989		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401133F Aeromedical Evacuation**	PROJECT NUMBER AND TITLE **4910 Aeromedical Readiness**

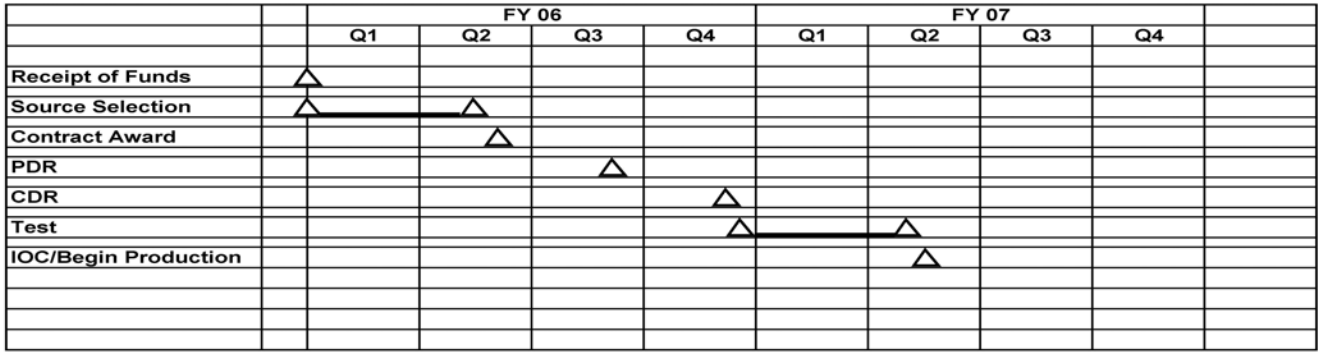

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401133F Aeromedical Evacuation**	PROJECT NUMBER AND TITLE **4910 Aeromedical Readiness**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Receipt of funds	1Q			
(U) Source selection	1-2Q			
(U) Contract Award	2Q			
(U) PDR	3Q			
(U) CDR	4Q			
(U) Testing	4Q			

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PE NUMBER: 0401134F
PE TITLE: Large Aircraft InfraRed Counter Measures (LAIRCM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	Continuing	TBD
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for the AF's airlift and tanker aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat.

The current LAIRCM system configuration [AN/AAQ-24V(13)] consists of an ultra-violet missile-warning sensor (MWS), a missile-tracking system, multi-band laser jammers, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of turrets per aircraft is determined by the size and signature of the aircraft. This system is fully automatic following system power-up. LAIRCM requirements are documented in the multi-command Operational Requirements Document (ORD) - LAIRCM ORD 314-92, validated on 3 Aug 98. LAIRCM satisfies AMC's Urgent and Compelling Need for protection of selected AMC aircraft. The system was first fielded in May 03 on the C-17 aircraft.

The AF plans to equip a minimum of 444 aircraft with LAIRCM across a range of platform types (C-17s, C-130s, C-5s, C-40s, C-37s, C-130Js). Aircraft quantities are based on the "Study Report on Current and Future Threats to Mobility Aircraft" directed by the AF's FY06-11 Annual Planning and Program Guidance.

LAIRCM is two phased evolutionary acquisition.

Phase I installs today's LAIRCM small laser turret assembly (SLTA), ultra-violet MWS, processor, Control Interface Unit (CIU) on C-17s and C-130 aircraft to meet AMC's urgent and compelling need for advanced IR countermeasures.

Phase II covers development of the Next Generation Missile Warning System (NexGen MWS) and a Guardian Laser Tracking Assembly (GLTA) which replaces the Phase I MWS and SLTA respectively. Phase II developments increase the effectiveness and affordability of the LAIRCM system. Phase I equipment (SLTAs and MWS) on C-17s will be retrofitted with Phase II equipment (GLTA and NexGen MWS) as Phase II equipment becomes available. Phase II initial procurement of the GLTA and NexGen MWS is planned for FY07. The SLTAs removed from C-17s will be placed on C-130s.
LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	55.743	34.916	26.893	26.042
(U)	Current PBR/President's Budget	49.951	40.463	19.324	26.369
(U)	Total Adjustments	-5.792			
(U)	Congressional Program Reductions	-1.179	-0.153		
	Congressional Rescissions	-0.257			
	Congressional Increases	3.700	5.700		
	Reprogrammings	-8.056			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

The reduction in FY08 may impact planned C-130J integration.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE: 4942 Large Aircraft Infrared Counter Measures (LAIRCM)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	49.951	40.463	19.324	26.369	6.189	7.189	7.328	7.478	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for the AF's airlift and tanker aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat.

The current LAIRCM system configuration [AN/AAQ-24V(13)] consists of an ultra-violet missile-warning sensor (MWS), a missile-tracking system, multi-band laser jammers, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of turrets per aircraft is determined by the size and signature of the aircraft. This system is fully automatic following system power-up. LAIRCM requirements are documented in the multi-command Operational Requirements Document (ORD) - LAIRCM ORD 314-92, validated on 3 Aug 98. LAIRCM satisfies AMC's Urgent and Compelling Need for protection of selected AMC aircraft. The system was first fielded in May 03 on the C-17 aircraft.

The AF plans to equip a minimum of 444 aircraft with LAIRCM across a range of platform types (C-17s, C-130s, C-5s, C-40s, C-37s, C-130Js). Aircraft quantities are based on the "Study Report on Current and Future Threats to Mobility Aircraft" directed by the AF's FY06-11 Annual Planning and Program Guidance.

LAIRCM is two phased evolutionary acquisition.

Phase I installs today's LAIRCM small laser turret assembly (SLTA), ultra-violet MWS, processor, Control Interface Unit (CIU) on C-17s and C-130 aircraft to meet AMC's urgent and compelling need for advanced IR countermeasures.

Phase II covers development of the Next Generation Missile Warning System (NexGen MWS) and a Guardian Laser Tracking Assembly (GLTA) which replaces the Phase I MWS and SLTA respectively. Phase II developments increase the effectiveness and affordability of the LAIRCM system. Phase I equipment (SLTAs and MWS) on C-17s will be retrofitted with Phase II equipment (GLTA and NexGen MWS) as Phase II equipment becomes available. Phase II initial procurement of the GLTA and NexGen MWS is planned for FY07. The SLTAs removed from C-17s will be placed on C-130s.
LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Group A Contracts	13.123	22.393	9.561	19.127
(U)	Nex Gen MWS Contracts	16.929	4.734		
(U)	Guardian Laser Turret Assembly (GLTA) Program	13.394	3.292		
(U)	Test	0.422			
(U)	PMA	4.161	5.350	4.365	0.200

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE 4942 Large Aircraft Infrared Counter Measures (LAIRCM)

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) OGC	1.922	4.694	5.398	7.042
(U) Total Cost	49.951	40.463	19.324	26.369

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 54343F - C-130 (AFR) Procurement (BP1100)		3.956	35.500	55.691	1.065	1.057	1.078	1.100		99.447
(U) PE 41134F, C-17 Procurement (BP1100)	83.340	137.348	105.571	154.592	240.563	47.745	31.464	181.181		981.804
(U) PE 41134F, C-130 Procurement (BP1100)	7.236	15.475	38.216	4.439	1.385					66.751
(U) PE 41134F, C-5B Procurement (BP1100)		28.844	48.749	46.107	34.753	5.315	5.407	5.500		174.675
(U) PE 41134F, C-130J Procurement (BP1100)					39.637	15.195	8.699	8.872		72.403

(U) D. Acquisition Strategy

Integration of the LAIRCM subsystems is accomplished by Northrop Grumman (Group B developer) and Group A integrators. The LAIRCM contract was awarded on 28 Sep 01 as a CPAF contract. Boeing Aerospace was awarded the C-17 LAIRCM integration contract on 18 Jan 02 as the Group A integrator working with Northrop Grumman. The C-130 LAIRCM integration contract was awarded to Northrop Grumman as a modification to the current contract on 7 Jun 02. The C-5B contraact was awarded to Lockheed Martin, Feb 2006. The LAIRCM integration contract for C-130J will be awarded in FY07.

The Next Generation Missile Warning System (Nex Gen MWS) contracts for a System Design and Development (SDD) competition were awarded to Northrop Grumman and Lockheed Martin in Jun 04. Both contractors have developed NexGen MWS prototypes during the SDD competition. A NexGen MWS production contractor will be selected during a competitive selection in mid FY07 with production buys following milestone C. Integration of the NexGen MWS will be accomplished with the NexGen MWS production contractor and the platform Group A integrator for the various LAIRCM equipped platforms.

The GLTA is a Phase II development effort which delivers a smaller, more reliable, and cheaper replacement to the SLTA. The GLTA SDD contract was awarded to Northrop Grumman in Feb 05 as a sole source contract. GLTA goes into production in FY07 and will be integrated on designated platforms by the Group A integrator with Northrop Grumman integration support.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**

PROJECT NUMBER AND TITLE: **4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Congressional Add	CPFF	AC-130 Integration, rolling Meadows, IL		3.700	Mar-07	5.700							9.400	TBD
Northrop Grumman/2093	CPAF/FFP	NexGen Integration, Rolling Meadows, IL		4.702		0.834							5.536	
Northrop Grumman	CPFF	NexGen MWS Development, Rolling Meadows, IL		6.794		3.368							10.162	TBD
Lockheed Martin	CPFF	NexGen MWS Development, Orlando, FL		5.433		0.532							5.965	TBD
Northrop	CPFF	Mini-turret Development, Rolling Meadows, IL		13.394		3.292							16.686	TBD
Lockheed	CPFF	C-5B Development & Integration		9.423		13.506							22.929	TBD
TBD	TBD	C-130J Development & Integration		0.000		3.187	May-07	9.561		19.127			31.875	TBD
Subtotal Product Development			0.000	43.446		30.419		9.561		19.127		0.000	102.553	TBD
Remarks:														
(U) Support														
654 AESS				4.161		5.350		4.365		0.200		0.800	14.876	TBD
OGC				1.922		4.694		5.398		7.042		27.384	46.440	TBD
Subtotal Support			0.000	6.083		10.044		9.763		7.242		28.184	61.316	TBD
Remarks:														
(U) Test & Evaluation														
Various Gov't Test Organizations	Various			0.422								0.000	0.422	TBD
Subtotal Test & Evaluation			0.000	0.422		0.000		0.000		0.000		0.000	0.422	TBD

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE: 4942 Large Aircraft Infrared Counter Measures (LAIRCM)	

Remarks:

(U) Total System Cost									
(U) Total Cost	0.000	49.951	40.463	19.324	26.369	28.184	164.291	TBD	

Remarks:

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE 4942 Large Aircraft Infrared Counter Measures (LAIRCM)

LAIRCM

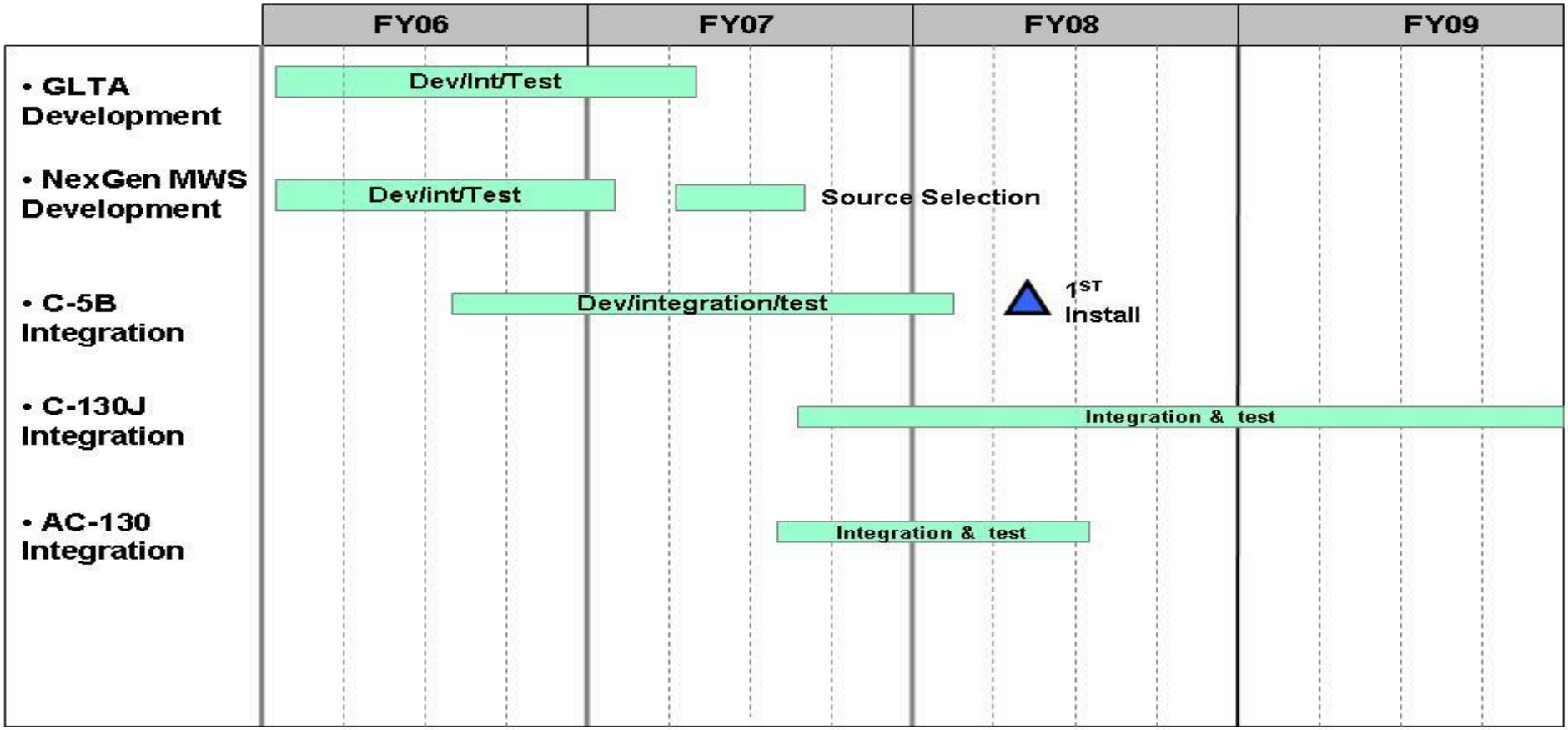

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE: 4942 Large Aircraft Infrared Counter Measures (LAIRCM)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) GLTA Development	1-4Q	1-2Q		
(U) Next Generation Missile Warning System Development	1-4Q	1Q		
(U) C-5B Integration	3-4Q	1-4Q	1Q	
(U) C-130J Integration		3-4Q	1-4Q	1-4Q
(U) AC-130 Integration		3-4Q	1-3Q	

PE NUMBER: 0401218F
PE TITLE: KC-135s

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	1.456	1.122	8.766	7.192	0.000	0.000	0.000	0.000	Continuing	TBD
4494	KC-135 Aging Aircraft Program	1.456	1.122	1.236	1.170	0.000	0.000	0.000	0.000	Continuing	TBD
5261	KC-135 Upgrades	0.000	0.000	7.530	6.022	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

KC-135 Aging Aircraft Program (674494).

This program supports projects that will help to keep the KC-135 viable in to the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

KC-135 Upgrades (675261).

Block 45 program - Supports a modification program performing analysis, testing, software development, prototyping, documenting source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), Real Time in Cockpit (RTIC) and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS) - Replaces the current APX-100 radio with the APX-119 radio. Efforts allow integration of new equipment into exiting KC-135 systems.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational System Development.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.498	1.102	1.115	1.117
(U)	Current PBR/President's Budget	1.456	1.122	8.766	7.192
(U)	Total Adjustments	-0.042			
(U)	Congressional Program Reductions	-0.021			
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.021			
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

PROJECT NUMBER AND TITLE: 4494 KC-135 Aging Aircraft Program

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4494	KC-135 Aging Aircraft Program	1.456	1.122	1.236	1.170	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program supports projects that will help to keep the KC-135 viable in to the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Corrosion/crack growth rate and fatigue determination and testing	0.373	0.121	0.000	0.000
(U) Functional Systems Integrity Program (FSIP)	0.750	0.698	0.963	0.899
(U) Mission support/contractor support	0.333	0.303	0.273	0.271
(U) Total Cost	1.456	1.122	1.236	1.170

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None										

(U) D. Acquisition Strategy

The acquisition strategy consists primarily of separate task orders (with separate statements of work) ranging from fixed price to cost plus contracts. These task orders address a myriad of aging aircraft activities against existing contract vehicles, such as the SPO-managed KC-135 Fleet Support Contract and Design Engineering Program contracts managed through the Air Logistics Centers.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401218F KC-135s**

PROJECT NUMBER AND TITLE: **4494 KC-135 Aging Aircraft Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
None													0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Support														
Aging Aircraft Studies	C/FP	ARINC, Oklahoma City and other support ctrs.		0.373	Jan-06							Continuing	TBD	
Subtotal Support			0.000	0.373		0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
Corrosion & Fatigue Testing/Functional Systems Integrity Program	Fleet Support, T&M/FFP	Boeing, Wichita KS		0.750	Nov-05	1.050	Dec-06	0.963		0.899		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.750		1.050		0.963		0.899		Continuing	TBD	0.000
Remarks:														
(U) Management														
				0.333		0.072		0.273		0.271		Continuing	TBD	
Subtotal Management			0.000	0.333		0.072		0.273		0.271		Continuing	TBD	0.000
Remarks:														
(U) Total Cost			0.000	1.456		1.122		1.236		1.170		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401218F KC-135s	PROJECT NUMBER AND TITLE 4494 KC-135 Aging Aircraft Program

KC-135 R-4 Schedule Profile

Fiscal Year	FY06				FY07				FY08				FY09			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Corrosion & Fatigue Testing												▲				
FSIP (see note 1)																
FSIP will continue to examine additional a/c systems as required while monitoring those that have previously been examined (note 1).																
Contractor/Management Support																

☆ Major Event or Milestone

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ Completed Event

△ Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401218F KC-135s	PROJECT NUMBER AND TITLE: 4494 KC-135 Aging Aircraft Program	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Corrosion & Fatigue Testing	1-4Q	1-4Q	1-4Q	
(U) FSIP	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

PROJECT NUMBER AND TITLE: 5261 KC-135 Upgrades

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5261 KC-135 Upgrades	0.000	0.000	7.530	6.022	0.000	0.000	0.000	0.000	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Block 45 program

Supports a modification program performing analysis, testing and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), Real Time in Cockpit (RTIC) and Night Vision Imaging System (NVIS).

Mode S Enhanced Surveillance (EHS),

Replaces the current APX-100 radio with the APX-119 radio. Efforts allow integration of new equipment into exiting KC-135 systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 45 - Non-Recurring Engineering efforts/tasks for all Block 45 sub programs			5.348	5.553
(U) Block 45 - Mission/Program Support			0.617	0.469
(U) EHS - Non-Recurring Engineering efforts/tasks for EHS			1.565	
(U) Total Cost	0.000	0.000	7.530	6.022

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Block 45 Mod # 8653 3010 BP11 C135 0401218F				1.749	4.628	15.469	36.914	45.275		
(U) EHS Mod # 8653 3010 BP11 C135 0401218F			4.541	5.277	4.003	8.950	4.019			26.790

(U) D. Acquisition Strategy

Block 45 - The strategy is to have a contracted integrator accomplish the task of performing analysis, testing, software development, prototype, documentation of source data, and incorporating a new Digital Flight Director (DFD), Radio Altimeter (RA), Aeromedical Evacuation upgrade (AE), Real Time in Cockpit (RTIC) and Night Vision Imaging System (NVIS). The contractor will be responsible for acquiring the necessary information and personnel to incorporate each item stated above. An RFP will be sent out requesting a contacted integrator as the focal point to integrate Block 45 onto the KC-135. The contractor will be responsible for developing, subcontracting, or a combination of the two for the development of the components DFD, RA, AE, RTIC, and NVIS.

EHS - strategy is to have a single contractor do NRE. Kits will be purchased and installed as a Field Level Modification

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401218F KC-135s**

PROJECT NUMBER AND TITLE: **5261 KC-135 Upgrades**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Block 45 - NRE, engineering, development, and prototype	TBD	TBD						5.348		5.553			10.901	
EHS - NRE and development	TBD	TBD						1.565					1.565	
Subtotal Product Development			0.000	0.000		0.000		6.913		5.553		0.000	12.466	0.000
Remarks:														
(U) Support														
		TBD						0.617		0.469			1.086	
Subtotal Support			0.000	0.000		0.000		0.617		0.469		0.000	1.086	0.000
Remarks:														
(U) Test & Evaluation														
		TBD											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
		TBD											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		7.530		6.022		0.000	13.552	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401218F KC-135s**	PROJECT NUMBER AND TITLE **5261 KC-135 Upgrades**

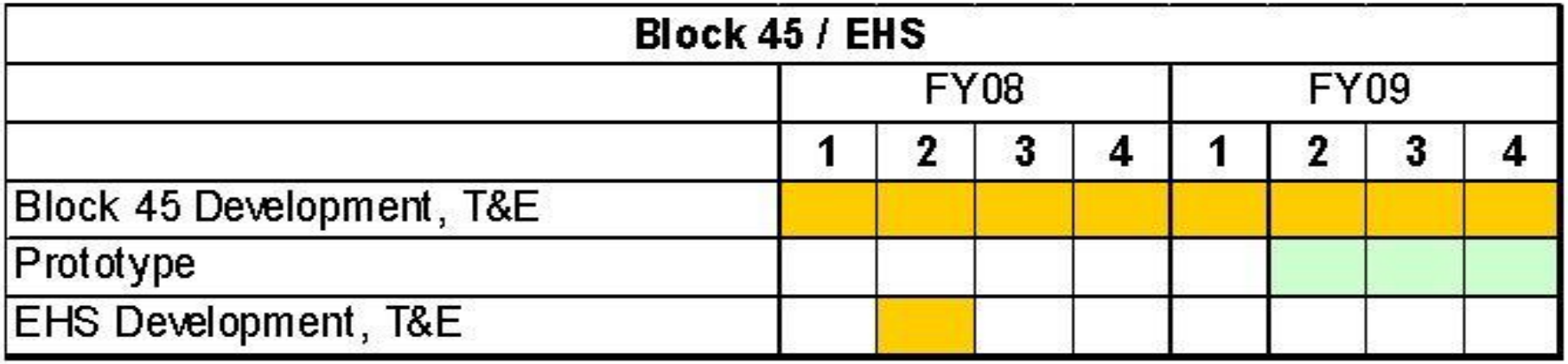

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401218F KC-135s**	PROJECT NUMBER AND TITLE **5261 KC-135 Upgrades**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Block 45 - NRE Effort			1-4Q	1-4Q
(U) EHS - NRE Effort			2Q	

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PE NUMBER: 0401219F
PE TITLE: KC-10S

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401219F KC-10S

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	12.907	4.763	36.790	73.591	110.340	86.959	0.000	0.000	Continuing	TBD
5195	Aircraft Modernization Program (AMP)	12.907	4.763	36.790	73.591	110.340	86.959	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) is the first major modification to the KC-10A Extender and includes required Communication/Navigation/Surveillance (CNS) upgrades, increased survivability, net-centric operational capabilities and reliability enhancements. Specifically, AMP provides mandatory CNS functionality for continued use of global airspace, a robust, integrated, on-board digital aircraft network enabling global net-centric operations, Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit, growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real-time threat information in the cockpit (RTIC). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include datalink capability to augment/replace voice communications and adding secure capability for both voice and data. Navigation capabilities include a fully integrated GPS and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic). AMP will address reliability, maintainability and obsolescence issues, to include replacing inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments and displays, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. AMP will automate aircrew tasks to reduce the crew's current workload, allow the crew to perform additional missions and manage the increased complexity, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded. Concept Refinement Studies will address potential technical approaches, spiral development, cockpit commonality, affordability, etc. and will precede award of development contract.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational Systems Development.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401219F KC-10S

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	13.280	4.781	41.475	72.610
(U)	Current PBR/President's Budget	12.907	4.763	36.790	73.591
(U)	Total Adjustments	-0.373	-0.018		
(U)	Congressional Program Reductions				
	Congressional Rescissions		-0.018		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.373			
(U)	Significant Program Changes:				

FY08 and FY09 were realigned to match current program acquisition strategy.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401219F KC-10S**

PROJECT NUMBER AND TITLE: **5195 Aircraft Modernization Program (AMP)**

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5195	Aircraft Modernization Program (AMP)	12.907	4.763	36.790	73.591	110.340	86.959	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	1	1	2	0	0		

(U) A. Mission Description and Budget Item Justification

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) is the first major modification to the KC-10A Extender and includes required Communication/Navigation/Surveillance (CNS) upgrades, increased survivability, net-centric operational capabilities and reliability enhancements. Specifically, AMP provides mandatory CNS functionality for continued use of global airspace, a robust, integrated, on-board digital aircraft network enabling global net-centric operations, Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit, growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real-time threat information in the cockpit (RTIC). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include datalink capability to augment/replace voice communications and adding secure capability for both voice and data. Navigation capabilities include a fully integrated GPS and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic). AMP will address reliability, maintainability and obsolescence issues, to include replacing inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments and displays, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. AMP will automate aircrew tasks to reduce the crew's current workload, allow the crew to perform additional missions and manage the increased complexity, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded. Concept Refinement Studies will address potential technical approaches, spiral development, cockpit commonality, affordability, etc. and will precede award of development contract.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational Systems Development.

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401219F KC-10S	PROJECT NUMBER AND TITLE 5195 Aircraft Modernization Program (AMP)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Prime Contract			20.830	53.528
(U)	Studies and Analysis	10.572	2.394	2.533	2.609
(U)	Government Furnished Equipment			4.333	3.167
(U)	Government Test and Evaluation			2.505	7.369
(U)	Mission Support	2.335	2.369	6.589	6.918
(U)					
(U)					
(U)					
(U)					
(U)					
(U)	Total Cost	12.907	4.763	36.790	73.591

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other APPN	0.000	0.200	0.000	0.000	0.000	0.000	48.721	46.467	Continuing	TBD

PE # 41219F / KC-10, Aircraft procurement, BP-11, Aircraft Modernization Program

(U) D. Acquisition Strategy

Concept Refinement Studies in FY06 will foster competition, mitigate identified acquisition risks, and support System Development and Demonstration (SDD) Request for Proposal (RFP). FY07 will consist of RFP prep, solicitation and source selection. The SDD contract will be a competitively awarded, best value contract, commencing in FY08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401219F KC-10S**

PROJECT NUMBER AND TITLE: **5195 Aircraft Modernization Program (AMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Studies and Analysis	C/CPFF			10.572	Jul-06	2.394		2.533		2.609		Continuing	TBD	
Prime Contract (SDD)	C/tbd							20.830	Mar-08	53.528		Continuing	TBD	
GFE	N/A							4.333		3.167		Continuing	TBD	
Subtotal Product Development			0.000	10.572		2.394		27.696		59.304		Continuing	TBD	0.000
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Gov Test and Evaluation								2.505		7.369		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.000		0.000		2.505		7.369		Continuing	TBD	0.000
Remarks:														
(U) Management														
Mission Support		Wright Patterson AFB, OH		2.335		2.369		6.589		6.918		Continuing	TBD	
													0.000	
													0.000	
													0.000	
													0.000	
													0.000	
Subtotal Management			0.000	2.335		2.369		6.589		6.918		Continuing	TBD	0.000
Remarks:														
(U) Total Cost			0.000	12.907		4.763		36.790		73.591		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401219F KC-10S	PROJECT NUMBER AND TITLE: 5195 Aircraft Modernization Program (AMP)

Exhibit R-4, RDT&E Schedule Profile
07 Operational Systems Development

Fiscal Year	FY06	FY06	FY06	FY06	FY07	FY07	FY07	FY07	FY08	FY08	FY08	FY08
Quarter	1	2	3	4	1	2	3	4	1	2	3	4
CDD JROC Approved			*									
Concept Refinement Studies				■	■	■						
Draft SDD RFP							*					
SDD RFP								*				
Source Selection								■	■	■		
SDD Contract Award/Milestone B										*		

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401219F KC-10S**	PROJECT NUMBER AND TITLE **5195 Aircraft Modernization Program (AMP)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) CDD approved by JROC	3Q			
(U) Concept Refinement Studies	4Q	2Q		
(U) Draft System Development & Demonstration (SDD) Request for Proposal (RFP) released		3Q		
(U) SDD RFP released		4Q		
(U) Source Selection		4Q	2Q	
(U) SDD Contract Award / Milestone B			2Q	

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PE NUMBER: 0401221F
PE TITLE: KC-135 Replacement Tanker

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	24.095	69.632	314.454	1,046.700	454.460	64.440	0.000	0.000	Continuing	TBD
4927 KC-135 Replacement Tanker	24.095	69.632	314.454	1,046.700	454.460	64.440	0.000	0.000	Continuing	TBD

FY05 Congressional add of $100M in Tanker Replacement Transfer Fund. $10.2M was requested in FY05 and received in May 05, currently $89.8M remaining.

(U) A. Mission Description and Budget Item Justification

The Air Force considered data in the Analysis of Alternatives (AoA) for KC-135 Recapitalization, industry responses to a Request for Information and two draft Request for Proposals, and is pursuing a strategy of full and open competition to select a commercial derivative replacement tanker aircraft. The Air Force needs to replace its aging KC-135 tankers (average age 45 years). This initial increment, known as KC-X, will replace roughly one-third of the current capability. The KC-X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and replyment of U.S. joint, allied and coalition forces. The KC-X will have navigation and communication equipment for world-wide operations; will have the capability for performing missions in chemical and biological environments; and will have the capability to operate in low to medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities and necessary battle space awareness to mitigate threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. In part due to the 7-month pause, the Air Force restructured the KC-X program to procure up to four RDT&E aircraft that will accelerate testing and certification.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	94.898	203.932	238.125	113.361
(U)	Current PBR/President's Budget	24.095	69.632	314.454	1,046.700
(U)	Total Adjustments	-70.803			
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings	-70.803			
	SBIR/STTR Transfer				

(U) Significant Program Changes:

In part due to the 7-month pause, the Air Force restructured the KC-X program to procure up to four RDT&E aircraft that will accelerate testing and certification. As of January 2007, the KC-X program has received $19.7M of FY2006 funds. FY07 actual Appropriation was $70M vs. original request of $203.932M.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker

PROJECT NUMBER AND TITLE: 4927 KC-135 Replacement Tanker

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4927 KC-135 Replacement Tanker	24.095	69.632	314.454	1,046.700	454.460	64.440	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

FY05 Congressional add of $100M in Tanker Replacement Transfer Fund. $10.2M requested in FY05 and received in May 05. Currently, $89.8M remaining.

(U) A. Mission Description and Budget Item Justification

The Air Force considered data in the Analysis of Alternatives (AoA) for KC-135 Recapitalization, industry responses to a Request for Information and two draft Request for Proposals, and is pursuing a strategy of full and open competition to select a commercial derivative replacement tanker aircraft. The Air Force needs to replace its aging KC-135 tankers (average age 45 years). This initial increment, known as KC-X, will replace roughly one-third of the current capability. The KC-X will be able to provide fuel to joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger and medical evacuation capabilities.

The KC-X will be able to operate in day/night and adverse weather conditions to enable deployment, employment, sustainment and reployment of U.S. joint, allied and coalition forces. The KC-X will have navigation and communication equipment for world-wide operations; will have the capability for performing missions in chemical and biological environments; and will have the capability to operate in low to medium threat areas and near-high threat areas with self-defense/protection (both active and passive) capabilities and necessary battle space awareness to mitigate threats.

The KC-X development effort will also procure the necessary ground and flight test assets to support developmental/operational test. In part due to the 7-month pause, the Air Force restructured the KC-X program to procure up to four RDT&E aircraft that will accelerate testing and certification.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Non-recurring engineering, RDT&E tanker aircraft and support	8.150	50.000	299.224	1,023.350
(U) Test	0.100	2.000	3.130	10.590
(U) Studies	4.000	2.000	2.100	2.100
(U) Program office	7.455	9.002	10.000	10.660
(U) Omnibus, Other Sources	4.390	6.630		
(U) Total Cost	24.095	69.632	314.454	1,046.700

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement		0.000	0.000	61.660	2065.314	3049.994	3212.777	3059.906		
(U) MILCON				0.000	95.476	94.676	44.676	0.000		
(U) O&M		0.067	0.122	1.068	2.511	70.227	100.029	191.894		

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401221F KC-135 Replacement Tanker**	PROJECT NUMBER AND TITLE **4927 KC-135 Replacement Tanker**

(U) C. Other Program Funding Summary ($ in Millions)

APPN=PE#0401221F/KC-135 Replacement Aircraft

(U) D. Acquisition Strategy

The KC-X program is pursuing an acquisition strategy of a full and open competition to select a commercial derivative replacement tanker aircraft. The final strategy is pending until release of the final Request for Proposal.

As the initial phase of a comprehensive aerial refueling re-capitalization strategy, the KC-X program will replace approximately one third of the war-fighting capability provided by the current aerial refueling fleet. The KC-X program will procure approximately 179 aircraft. SDD contract award is anticipated in 1st Qtr FY08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401221F KC-135 Replacement Tanker**

PROJECT NUMBER AND TITLE: **4927 KC-135 Replacement Tanker**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Non-recurring, RDT&E tanker aircraft and support	TBD	Aerospace manufacturer TBD		8.150		50.000		299.224	Oct-07	1,023.350			1,380.724	
Subtotal Product Development			0.000	8.150		50.000		299.224		1,023.350		0.000	1,380.724	0.000
Remarks:														
(U) Support														
Studies and Analysis		Proposed ASC/EN/XR, AFVB, Edwards, AFMSS, RAND, Eglin, trainers, support contractors		4.000		2.000		2.100		2.100			10.200	
Subtotal Support			0.000	4.000		2.000		2.100		2.100		0.000	10.200	0.000
Remarks:														
(U) Test & Evaluation														
Test and Planning	TBD	AFFTC, AFOTEC, Edwards AFB, Surviac, Live Fire		0.100		2.000		3.130		10.590			15.820	
Subtotal Test & Evaluation			0.000	0.100		2.000		3.130		10.590		0.000	15.820	0.000
Remarks:														
(U) Management														
653d Aeronautical Systems Squadron	n/a	653 AESS, Wright Patterson AFB		7.455		9.002		10.000		10.660			37.117	
Subtotal Management			0.000	7.455		9.002		10.000		10.660		0.000	37.117	0.000
Remarks:														
(U) AF WH, Omnibus, Other Sources														
Air Force withhold, Omnibus, Other Sources	na			4.390		6.630							11.020	
Subtotal AF WH, Omnibus, Other Sources			0.000	4.390		6.630		0.000		0.000		0.000	11.020	0.000

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker	PROJECT NUMBER AND TITLE: 4927 KC-135 Replacement Tanker	

Remarks:									
(U) Total Cost	0.000	24.095	69.632	314.454	1,046.700	0.000	1,454.881	0.000	

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker	PROJECT NUMBER AND TITLE: 4927 KC-135 Replacement Tanker

KC-X Program Notional Schedule

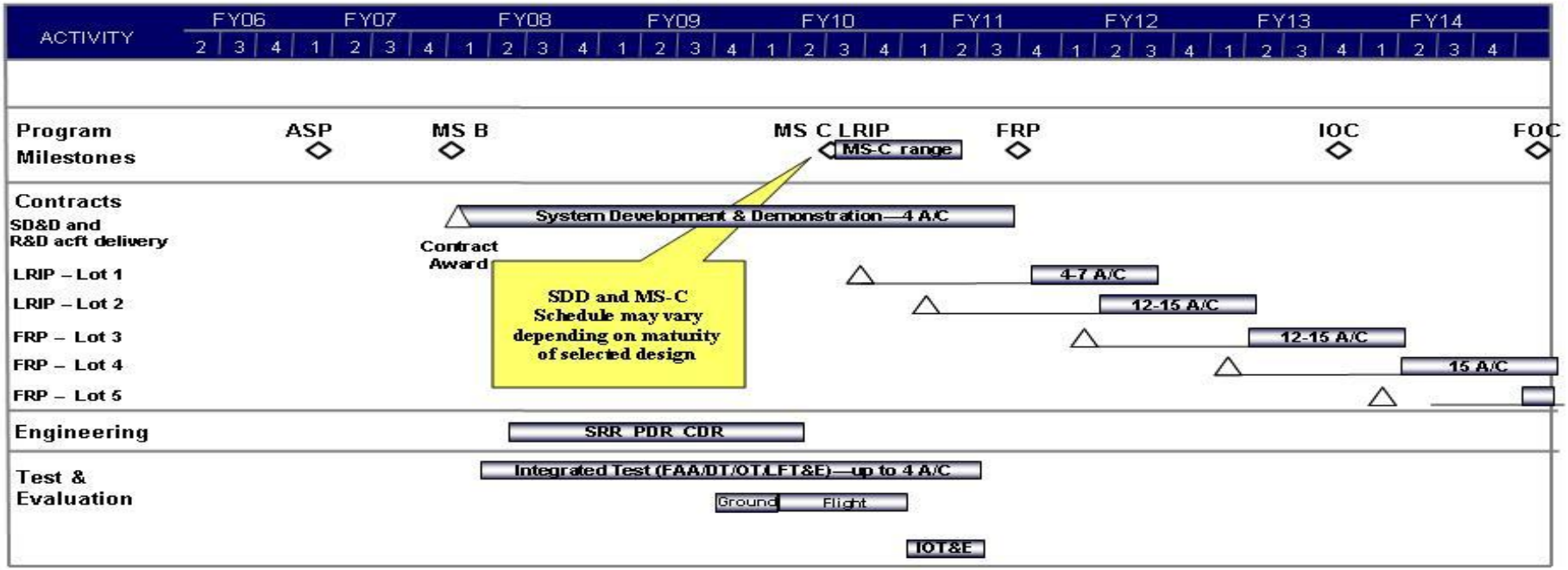

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker	PROJECT NUMBER AND TITLE: 4927 KC-135 Replacement Tanker

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Non-recurring engineering, RDT&E tanker aircraft and support			1-4Q	1-4Q
(U) Test	4Q	1-4Q	1-4Q	1-4Q
(U) Studies	1-4Q	1-4Q	1-4Q	1-4Q
(U) Program office	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0401314F
PE TITLE: OPERATIONAL SUPPORT AIRLIFT

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401314F OPERATIONAL SUPPORT AIRLIFT

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	4.868	0.000	0.000	0.000	28.877	0.037	0.000	140.178
5233 C-32 Airlift	0.000	0.000	4.868	0.000	0.000	0.000	28.877	0.037	0.000	140.178

(U) A. Mission Description and Budget Item Justification

Cancelled C-32 executive support aircraft program reduced program line to $4.868M. The $4.868M is to transfer residual efforts to the VC-25A Airborne Information Management System (AIMS) upgrade. The VC-25A is the military variant of the Boeing 747-200 that supports the President of the United States. Residual efforts include providing the President with survivable, enduring, worldwide national command and control capabilities that operate throughout the threat spectrum. The RDT&E effort funds engineering design, integration, test and evaluation, and product improvements for modifying two VC-25A aircraft. This is a new start request.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	0.000	0.000	0.000	0.000
(U) Current PBR/President's Budget	0.000	0.000	4.868	0.000
(U) Total Adjustments	0.000	0.000		
(U) Congressional Program Reductions				
Congressional Rescissions				
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer				

(U) Significant Program Changes:

None

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401314F OPERATIONAL SUPPORT AIRLIFT

PROJECT NUMBER AND TITLE: 5233 C-32 Airlift

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5233 C-32 Airlift	0.000	0.000	4.868	0.000	0.000	0.000	28.877	0.037	0.000	140.178
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Cancelled C-32 executive support aircraft program reduced program line to $4.868M. The $4.868M is to transfer residual efforts to the VC-25A Airborne Information Management System (AIMS) upgrade. The VC-25A is the military variant of the Boeing 747-200 that supports the President of the United States. Residual efforts include providing the President with survivable, enduring, worldwide national command and control capabilities that operate throughout the threat spectrum. The RDT&E effort funds engineering design, integration, test and evaluation, and product improvements for modifying two VC-25A aircraft. This is a new start request.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Engineering design, integration, test and evaluation of AIM System modification on two VC-25A Presidential aircraft.			4.868	
(U) Total Cost	0.000	0.000	4.868	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) None										

(U) D. Acquisition Strategy

Modify two VC-25A presidential aircraft with Airborne Information Management Systems. Contract type and competition to be determined.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401314F OPERATIONAL SUPPORT AIRLIFT**

PROJECT NUMBER AND TITLE: **5233 C-32 Airlift**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
	TBD	TBD						3.700	Jan-08				3.700	3.700
Subtotal Product Development			0.000	0.000		0.000		3.700		0.000		0.000	3.700	3.700
Remarks:														
(U) Support														
	TBD	TBD						0.100					0.100	0.100
Subtotal Support			0.000	0.000		0.000		0.100		0.000		0.000	0.100	0.100
Remarks:														
(U) Test & Evaluation														
	TBD	TBD						0.968					0.968	0.968
Subtotal Test & Evaluation			0.000	0.000		0.000		0.968		0.000		0.000	0.968	0.968
Remarks:														
(U) Management														
	TBD	TBD						0.100					0.100	0.100
Subtotal Management			0.000	0.000		0.000		0.100		0.000		0.000	0.100	0.100
Remarks:														
(U) Total Cost			0.000	0.000		0.000		4.868		0.000		0.000	4.868	4.868

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401314F OPERATIONAL SUPPORT AIRLIFT	PROJECT NUMBER AND TITLE 5233 C-32 Airlift

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401314F OPERATIONAL SUPPORT AIRLIFT**	PROJECT NUMBER AND TITLE **5233 C-32 Airlift**

(U) Schedule Profile

	FY 2006	FY 2007	FY 2008	FY 2009
(U) This is a new start request. Schedule TBD.			2Q	

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PE NUMBER: 0401839F
PE TITLE: Airlift/Other Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016
5040	Airlift/Other Tactical Data Link	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This development effort adds Line of Sight (LOS) and Beyond Line of Sight (BLOS) TDL capability to the Air Mobility and Special Operations Forces (SOF) Fleets. LOS/BLOS Integration includes, but is not limited to, the following aircraft: KC-135, C-5, C-17, C-130, KC-10 and other Airlift, Refueling, and SOF aircraft. TDLs provide a secure, jam-resistant, digital-data-transfer-network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data, target, and threat information. TDL efforts include, but are not limited to: changes and additions to the TDL message standard (MIL-STD-6016C) and other data link interoperability standards including necessary Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades and federated networking components and applications; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) and Air Force Special Operations Command (AFSOC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401839F Airlift/Other Tactical Data Link

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.000	32.099	0.000	0.000
(U)	Current PBR/President's Budget	0.000	22.000	0.000	0.000
(U)	Total Adjustments	0.000			
(U)	Congressional Program Reductions		-10.000		
	Congressional Rescissions		-0.084		
	Congressional Increases				
	Reprogrammings		-0.015		
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				
	FY07 Congressional Reduction of $10.0M				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link	PROJECT NUMBER AND TITLE: 5040 Airlift/Other Tactical Data Link

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5040 Airlift/Other Tactical Data Link	0.000	22.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	22.016
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF), Integrated Broadcast Service (IBS), and Tactical Targeting Network Technology (TTNT).

This development effort adds Line of Sight (LOS) and Beyond Line of Sight (BLOS) TDL capability to the Air Mobility and Special Operations Forces (SOF) Fleets. LOS/BLOS Integration includes, but is not limited to, the following aircraft: KC-135, C-5, C-17, C-130, KC-10 and other Airlift, Refueling, and SOF aircraft. TDLs provide a secure, jam-resistant, digital-data-transfer-network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data, target, and threat information. TDL efforts include, but are not limited to: changes and additions to the TDL message standard (MIL-STD-6016C) and other data link interoperability standards including necessary Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades and federated networking components and applications; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) and Air Force Special Operations Command (AFSOC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Data Link Integration (DLI) processor development and demonstration	0.000	12.000		
(U) Data Link Integration (DLI) Group A development	0.000	10.000		
(U) Total Cost	0.000	22.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) RDT&E (3600)										
(U) 0207434F (Link 16 Sup &	156.851	173.216	199.363	207.268	166.987	184.448	201.611	193.745	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link	PROJECT NUMBER AND TITLE: 5040 Airlift/Other Tactical Data Link	

(U) C. Other Program Funding Summary ($ in Millions)

	Sus)									
(U)	0207445F (Fighter TDL)	115.818	112.755	39.545	74.312	91.577	0.000	0.000	0.000	434.007
(U)	0207446F (Bomber TDL)	133.836	100.744	37.130	0.000	0.000	0.000	0.000	0.000	271.710
(U)	0207448F (C2ISR TDL)	14.219	4.322	1.809	1.741	1.711	1.643	1.675	1.709	Continuing TBD
(U)	Procurement (3010)									
(U)	0207434F (Link 16 Sup & Sus)	2.996	2.773	0.001	9.708	46.296	99.938	104.173	75.826	Continuing TBD
(U)	0207445F (Fighter TDL)	89.222	61.399	35.676	5.865	9.879	0.785	0.783	0.000	203.609
(U)	0207446F (Bomber TDL)	21.940	11.775	4.518	0.000	0.000	0.000	0.000	0.000	38.233
(U)	0401839F (Airlift TDL)	24.118	11.497	14.818	12.744	26.521	26.853	27.384	27.929	Continuing TBD
(U)	Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	41.362	36.886	21.933	28.301	41.932	43.948	56.337	39.173	Continuing TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	8.341	9.895	13.203	4.760	13.054	14.986	17.550	18.923	Continuing TBD
(U)	0207445F (Fighter RD)	0.000	0.000	0.289	0.287	0.286	0.283	0.288	0.293	
(U)	0401839F (Airlift TDL)	3.220	5.445	5.726	6.603	17.381	17.460	17.815	18.177	Continuing TBD

(U) D. Acquisition Strategy

The 640th Electronic Systems Squadron (ELSS), formerly the Air Force Tactical Data Links System Program Office (SPO), provides for common development of integration and interoperability across all Air Force platforms and ensures that TDLs are procured and maintained as joint, end-to-end, command-and-control systems. Platform acquisition strategies vary by program, but the majority of development and integration is normally accomplished by the weapon system prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401839F Airlift/Other Tactical Data Link**

PROJECT NUMBER AND TITLE: **5040 Airlift/Other Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Data Link Processor and Group A Development	Various	Various				21.098	Aug-07					0.000	21.098	TBD
Subtotal Product Development			0.000	0.000		21.098		0.000		0.000		0.000	21.098	TBD
Remarks:														
(U) Support													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
	Air Force Form 616	46th Test Squadron, Eglin AFB, FL				0.200	Jan-07						0.200	TBD
Subtotal Test & Evaluation			0.000	0.000		0.200		0.000		0.000		0.000	0.200	TBD
Remarks:														
(U) Management														
Program Office and Contractor			0.000	0.000		0.000		0.000		0.000		0.000	0.000	TBD
Support	C/FFP	Various				0.702	Jan-07						0.702	TBD
Subtotal Management			0.000	0.000		0.702		0.000		0.000		0.000	0.702	TBD
Remarks:														
(U) Total Cost			0.000	0.000		22.000		0.000		0.000		0.000	22.000	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401839F Airlift/Other Tactical Data Link**	PROJECT NUMBER AND TITLE **5040 Airlift/Other Tactical Data Link**

Mobility Air Force (MAF) Data Link Integration (DLI) Long-Term Schedule (as of 5 January 2007)

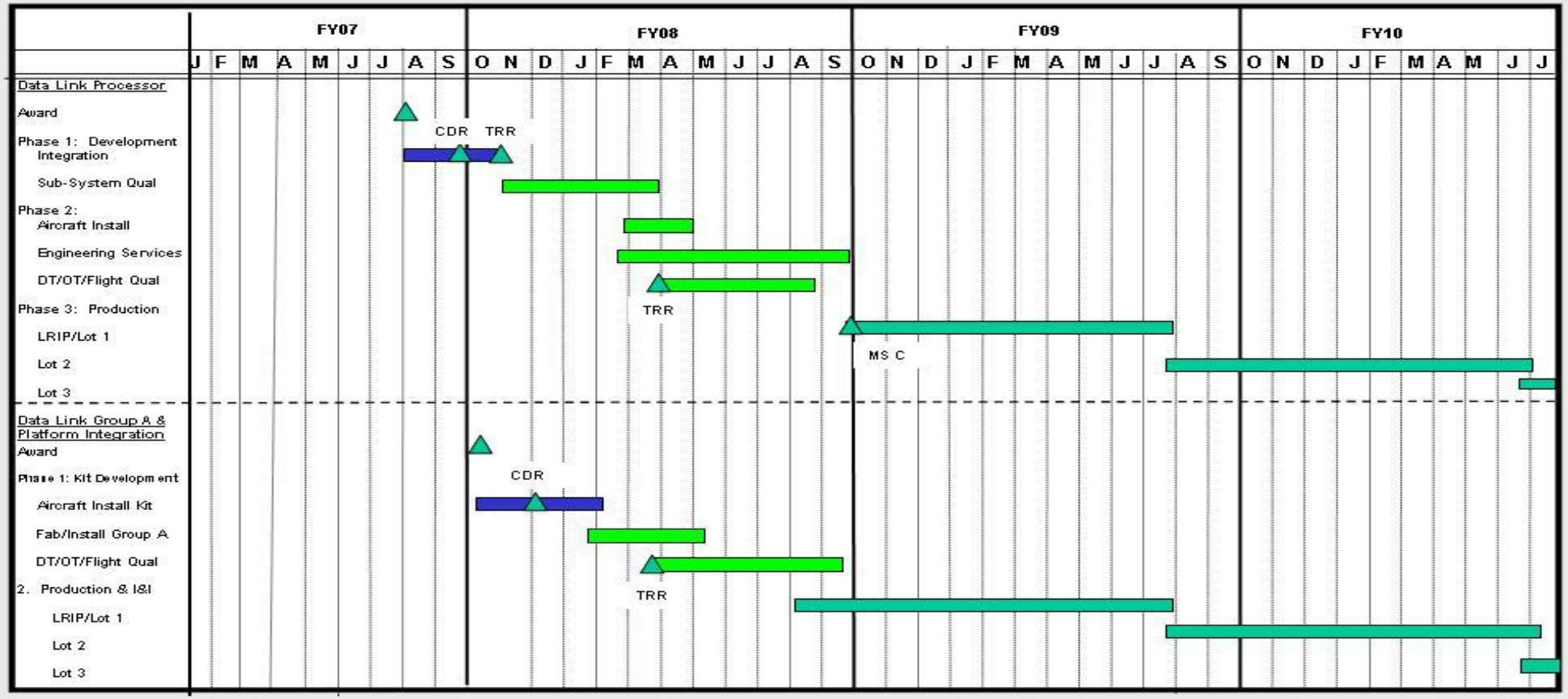

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link	PROJECT NUMBER AND TITLE: 5040 Airlift/Other Tactical Data Link

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Data Link Processor development and qualification		4Q	1-2Q	
(U) Data Link Group A development		4Q	1-4Q	

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PE NUMBER: 0408011F
PE TITLE: SPECIAL TACTICS/COMBAT CONTROL

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.065	2.013	5.225	5.776	8.443	7.619	7.765	7.925	Continuing	TBD
5138 ST System Development	2.065	2.013	5.225	5.776	8.443	7.619	7.765	7.925	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battlefield Air Operations (BAO) Kit is a program within the overarching Battlefield Airmen Modernization (BA-Mod) Program. BAO Kit will develop a Family of Systems (FoS) that provides a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) suite for AFSOC's Battlefield Airmen. BAO Kit will enhance the three core capabilities of Line of Sight (LOS) targeting, Beyond Line of Sight (BLOS) targeting, and Battlefield Air Operations Human Machine Interface (BAO HMI) while reducing the risk of fratricide and substantially reducing the weight carried. This program will develop and enhance technologies for Battlefield Airmen Combat Controllers (CCT) to recognize, identify, range, nominate and designate targets during both day and night. BAO Kit will also significantly reduce the time required to find, fix, track, target and engage the enemy by providing highly accurate target grid coordinates in three dimensions, generating target imagery both pre and post-strike, and transmitting target data to Command and Control centers. All BAO Kit systems are light, compact and portable for use by dismounted Battlefield Airmen. The significant improvements in operational capability, coupled with dramatic weight reduction, will provide increased mission effectiveness across the conflict spectrum.

This program is in Budget Activity 4, Advanced Component Development & Prototypes (ACD&P) because the effort demonstrates technology, component and subsystem maturity, and provides risk reduction.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	2.124	1.024	5.174	5.705
(U) Current PBR/President's Budget	2.065	2.013	5.225	5.776
(U) Total Adjustments	-0.059			
(U) Congressional Program Reductions		-0.011		
Congressional Rescissions				
Congressional Increases				
Reprogrammings	0.000			
SBIR/STTR Transfer	-0.059	-0.051		
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL	PROJECT NUMBER AND TITLE: 5138 ST System Development	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5138 ST System Development	2.065	2.013	5.225	5.776	8.443	7.619	7.765	7.925	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battlefield Air Operations (BAO) Kit is a program within the overarching Battlefield Airmen Modernization (BA-Mod) Program. BAO Kit will develop a Family of Systems (FoS) that provides a state-of-the-art Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) suite for AFSOC's Battlefield Airmen. BAO Kit will enhance the three core capabilities of Line of Sight (LOS) targeting, Beyond Line of Sight (BLOS) targeting, and Battlefield Air Operations Human Machine Interface (BAO HMI) while reducing the risk of fratricide and substantially reducing the weight carried. This program will develop and enhance technologies for Battlefield Airmen Combat Controllers (CCT) to recognize, identify, range, nominate and designate targets during both day and night. BAO Kit will also significantly reduce the time required to find, fix, track, target and engage the enemy by providing highly accurate target grid coordinates in three dimensions, generating target imagery both pre and post-strike, and transmitting target data to Command and Control centers. All BAO Kit systems are light, compact and portable for use by dismounted Battlefield Airmen. The significant improvements in operational capability, coupled with dramatic weight reduction, will provide increased mission effectiveness across the conflict spectrum.

This program is in Budget Activity 4, Advanced Component Development & Prototypes (ACD&P) because the effort demonstrates technology, component and subsystem maturity, and provides risk reduction.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue BAO Kit system and equipment development.	1.144	0.824	3.342	2.854
(U) Coninue BAO Kit software development	0.737	0.989	0.801	1.790
(U) Continue system test and evaluation efforts	0.000	0.100	0.280	0.350
(U) Continue program office operations effort	0.184	0.100	0.802	0.782
(U) Total Cost	2.065	2.013	5.225	5.776

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Tactical C-E Equipment Other Procurement, AF PE 0408011F	5.388	4.200	6.197	10.050	13.305	14.952	15.296	15.635	Continuing	TBD

(U) D. Acquisition Strategy

The evolutionary acquisition strategy will focus on meeting immediate requirements with current technology while pursuing future increments for improved

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

accuracy, increased vertical and horizontal integration, and reduced weight. Future spirals will be incorporated as funding and technology allow.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0408011F SPECIAL TACTICS/COMBAT CONTROL**

PROJECT NUMBER AND TITLE: **5138 ST System Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Human Machine Interface (HMI)	C/Various	Various		0.653	Apr-06	0.700	Jul-07	2.391	Jun-08	4.184	Jun-09	Continuing	TBD	
Lightweight Renewable Energy System	Various	Various		0.191	Dec-05							Continuing	TBD	TBD
Machine-To-Machine C4ISR System	C/CPFF	Systems Research & Applications Corp, Dayton, Ohio		0.737	May-06							Continuing	TBD	TBD
Beyond Line of Sight Targeting System	C/CPFF	Aerovironment, Monrovia, CA		0.300	Dec-06	0.499	Dec-06	1.719	Jun-08	0.460	Jun-09	Continuing	TBD	
Subtotal Product Development			0.000	1.881		1.199		4.110		4.644		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Test Agency Support	MIPR	46TS, Eglin AFB FL	0.224			0.114	Dec-06	0.313	Dec-07	0.427	Dec-08	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.224	0.000		0.114		0.313		0.427		Continuing	TBD	TBD
Remarks:														
(U) Management														
Program Office Support	Various	Various	0.803	0.184	Oct-05	0.700	Oct-06	0.802	Oct-07	0.705	Oct-08	Continuing	TBD	TBD
Subtotal Management			0.803	0.184		0.700		0.802		0.705		Continuing	TBD	TBD
Remarks:														
(U)														
													0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			1.027	2.065		2.013		5.225		5.776		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

BAO Kit Program Schedules

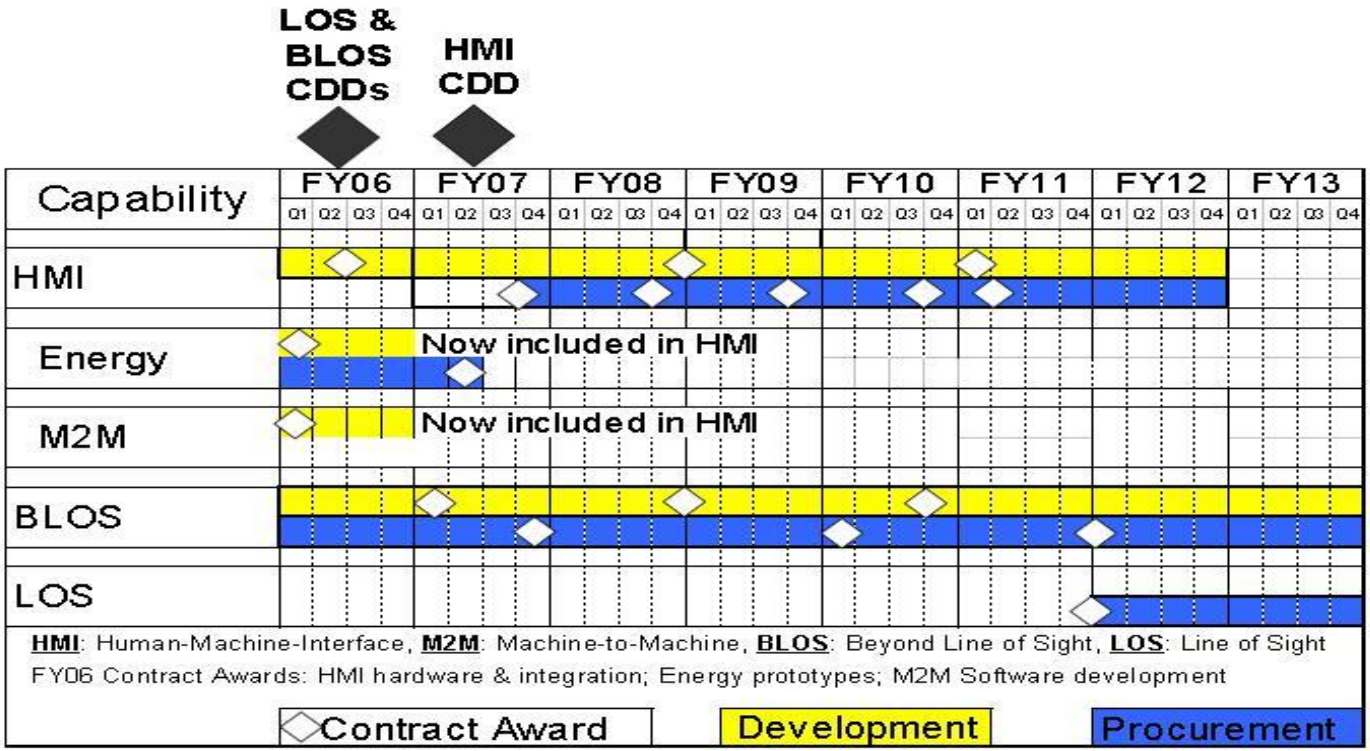

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL	PROJECT NUMBER AND TITLE: 5138 ST System Development

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) HMI Reserach & Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) HMI Contract Award		3Q	3Q	3Q
(U) Energy Development	1-4Q			
(U) Energy Contract Award		2Q		
(U) Machine-To-Machine Development	1-4Q			
(U) Beyond LOS Development	1-4Q	1-4Q	1-4Q	1-4Q
(U) Beyond LOS Contract Award		4Q		

PE NUMBER: 0702207F
PE TITLE: Depot Maintenance (Non-IF)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	1.349	1.452	1.510	1.544	1.577	1.598	1.629	1.662	Continuing	TBD
3326	Precision Measurement & Calibration	1.349	1.452	1.510	1.544	1.577	1.598	1.629	1.662	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	1.408	1.457	1.494	1.523
(U)	Current PBR/President's Budget	1.349	1.452	1.510	1.544
(U)	Total Adjustments	-0.059	-0.005		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.020	-0.005		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.039			
(U)	Significant Program Changes:				
	None				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)	PROJECT NUMBER AND TITLE: 3326 Precision Measurement & Calibration	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3326	Precision Measurement & Calibration	1.349	1.452	1.510	1.544	1.577	1.598	1.629	1.662	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.	0.563	0.590	0.577	0.565
(U) Continue development of standards for electrical measurements to support high accuracy electronic test equipment.	0.131	0.220	0.235	0.225
(U) Continue development of standards for radar support, RF communication systems, and radar cross section range measurements.	0.223	0.225	0.260	0.275
(U) Continue the development of improved calibration standards to support physical, mechanical and electro-mechanical support equipment.	0.247	0.215	0.220	0.235
(U) Continue the development of national standards for calibration of ionizing radiation hazard instrumenation.	0.033	0.037	0.038	0.038
(U) Continue development of improved standards and procedures to support chemical/biological measurements	0.097	0.095	0.100	0.103

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)	PROJECT NUMBER AND TITLE: 3326 Precision Measurement & Calibration

(U) B. Accomplishments/Planned Program ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue development of standards and procedures to support analytical metrology applications	0.055	0.070	0.080	0.103
(U) Total Cost	1.349	1.452	1.510	1.544

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDTE										0.000

(U) D. Acquisition Strategy

Primarily accomplish through intergovernmental transfer between the Department of Defense and other Federal Departments.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0702207F Depot Maintenance (Non-IF)**

PROJECT NUMBER AND TITLE: **3326 Precision Measurement & Calibration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
National Institute of Standards & Technology	MIPR (DD FORM 448)			1.216		1.333		1.385		1.313		Continuing	TBD	
Department of Energy	MIPR (DD FORM 448)			0.105		0.090		0.095		0.100		Continuing	TBD	
GSA Contract	In House			0.000		0.000		0.000		0.100		Continuing	TBD	
AFMC				0.028		0.029		0.030		0.031			0.118	
Subtotal Product Development			0.000	1.349		1.452		1.510		1.544		Continuing	TBD	0.000
Remarks:														
(U) Support													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	1.349		1.452		1.510		1.544		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2007**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0702207F Depot Maintenance (Non-IF)**	PROJECT NUMBER AND TITLE **3326 Precision Measurement & Calibration**

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0702207F Depot Maintenance (Non-IF)**	PROJECT NUMBER AND TITLE **3326 Precision Measurement & Calibration**

(U) Schedule Profile

FY 2006	FY 2007	FY 2008	FY 2009

(U) A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.

PE NUMBER: 0708011F
PE TITLE: Industrial Preparedness

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708011F Industrial Preparedness

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	56.683	66.122	39.906	40.173	40.982	41.384	42.183	43.042	Continuing	TBD
2865	Manufacturing Technology	56.683	66.122	39.906	40.173	40.982	41.384	42.183	43.042	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/ Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2007, Congress added $29.7 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($3.0 million), Nanomaterial Manufacturing and Military Application ($4.6 million), Aerial Multi-Axis Platform ($2.2 million), Rapid Manufacturing and Repair Composites for High Temp Applications Program ($1.3 million), Reactive Plastics CO2 Absorbent Production Capacity Program ($2.0 million), Supply Chain Optimization Universal Tool Kit (SCOUT) Program ($2.0 million), Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative ($5.0 million), Improving MANPADS Survivability Coatings Program ($1.2 million), Laser Peening Fatigue Life Extension Technology for Military Aircraft Landing Gear ($1.4 million), F-35 Joint Strike Fighter Composite Engine Case Program ($4.0 million), EFG Sapphire Sheets for Large Aperture EO/IR Windows Program ($2.0 million) and Ceramic Ballistic Armor for Soldier and Vehicle Protection Program ($1.0 million). ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	55.137	36.673	27.559	27.667
(U)	Current PBR/President's Budget	56.683	66.122	39.906	40.173
(U)	Total Adjustments	1.546			
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.002	-0.251		
	Congressional Increases		29.700		
	Reprogrammings	2.787			
	SBIR/STTR Transfer	-1.239			

(U) Significant Program Changes:

Not Applicable.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
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Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
2865 Manufacturing Technology	56.683	66.122	39.906	40.173	40.982	41.384	42.183	43.042	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/ Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2007, Congress added $29.7 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($3.0 million), Nanomaterial Manufacturing and Military Application ($4.6 million), Aerial Multi-Axis Platform ($2.2 million), Rapid Manufacturing and Repair Composites for High Temp Applications Program ($1.3 million), Reactive Plastics CO2 Absorbent Production Capacity Program ($2.0 million), Supply Chain Optimization Universal Tool Kit (SCOUT) Program ($2.0 million), Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative ($5.0 million), Improving MANPADS Survivability Coatings Program ($1.2 million), Laser Peening Fatigue Life Extension Technology for Military Aircraft Landing Gear ($1.4 million), F-35 Joint Strike Fighter Composite Engine Case Program ($4.0 million), EFG Sapphire Sheets for Large Aperture EO/IR Windows Program ($2.0 million) and Ceramic Ballistic Armor for Soldier and Vehicle Protection Program ($1.0 million). ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) MAJOR THRUST: Pursues affordable and efficient manufacturing investigations for critical, high quality, reliable structural, propulsion, stealth, and electronic components and assemblies required for existing and next generation aircraft.	5.835	6.317	4.268	5.658

(U) In FY 2006: Continued high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continued development of manufacturing capabilities for more affordable low-observable structures. Continued rapid response productivity improvement efforts with selected high value programs.

(U) In FY 2007: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
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(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
of manufacturing capabilities for more affordable low-observable structures. Continue rapid response productivity improvement efforts with selected high value programs.				
(U) In FY 2008: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development of manufacturing capabilities for more affordable low-observable structures. Develop manufacturing capabilities for advanced propulsion technologies. Continue rapid response productivity improvement efforts with selected high value programs. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U) In FY 2009: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development of manufacturing capabilities for more affordable low-observable structures. Develop manufacturing capabilities for advanced propulsion technologies. Continue rapid response productivity improvement efforts with selected high value programs. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U)				
(U) MAJOR THRUST: Pursues cost-effective repair and manufacturing technologies for affordable sustainment components.	3.038	4.619	7.200	7.500
(U) In FY 2006: Continued cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continued ERLE Spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continued rapid response productivity improvement efforts with selected high value programs.				
(U) In FY 2007: Continue cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continue ERLE spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continue rapid response productivity improvement efforts with selected high value programs.				
(U) In FY 2008: Continue cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continue ERLE spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Begin assessments and manufacturing technology development to reduce costs and lead times for hi-value supply chain commodities. Continue rapid response productivity improvement efforts				

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(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
with selected high value programs.				
(U) In FY 2009: Continue cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continue ERLE spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continue assessments and manufacturing technology development to reduce costs and lead times for hi-value supply chain commodities. Continue rapid response productivity improvement efforts with selected high value programs.				
(U)				
(U) MAJOR THRUST: Develops efficient and cost-effective manufacturing methods for high performance, high reliability components and materials for advanced tactical missiles, aircraft missile sensors, and directed energy systems.	4.900	6.785	3.169	3.758
(U) In FY 2006: Continued to pursue cost-effective manufacturing methods for high performance, reliable components for next generation miniaturized munitions. Continued PGM Components effort, transitioning into a Phase 1 ManTech program for advanced guidance and seekers.				
(U) In FY 2007: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation miniaturized munitions. Continue Phase 1 PGM Components effort for advanced guidance and seekers and directed energy systems.				
(U) In FY 2008: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation munitions. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U) In FY 2009: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation munitions. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U)				
(U) MAJOR THRUST: Addresses critical manufacturing issues for various Command, Control, Intelligence, Surveillence and Reconnaissance (C2ISR) and space platforms.	24.181	18.813	25.269	23.257
(U) In FY 2006: Continued efforts to address critical manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continued effort on Active Electronically Scanned Arrays (AESA) to enable improved manufacturing processes, reduced integration and test, and reduce production costs for armament, aeronautical, C2ISR, and space users of AESA systems. Initiated major multi-year and cross sector effort on Affordable Datalink Components to enable improved manufacturing processes, insert lower level test practices prior to subsystem				

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	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
	integration, and increase production throughput for high value, high demand Intelligence Surveillance and Reconnaissance (ISR) datalinks. Investigated affordability and producibility of key space system components through improved manufacturing processes, technology transition, and/or supplier base improvements. Continued rapid response productivity improvement efforts with selected high value programs.				
(U)	In FY 2007: Continue efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continue effort on AESA to enable improved manufacturing processes, reduce integration and test, and reduce production costs for armament, aeronautical, C2ISR, and space users of AESA systems. Continue major multi-year and cross sector effort on Affordable Datalink components to enable improved manufacturing processes, insert lower level test practices prior to subsystem integration, and increase production throughput for high value, high demand ISR datalinks. Continue effort to reduce manufacturing cost of weapon datalink through investments in reduction of touch labor and insertion of automated test processes in addition to subsystem integration efforts at board level. Insertion of power device technologies to achieve unique size, weight, and power requirements necessary for munition applications.				
(U)	In FY 2008: Continue efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continue effort on AESA to enable improved manufacturing processes, for reduced costs and cycle times and greater production capacity. Continue efforts on Affordable Datalink components to enable improved manufacturing processes for reduced costs and cycle times and increased production throughput. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U)	In FY 2009: Continue efforts to address critical electronics manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continue efforts on AESA radar to enable improved manufacturing processes for reduced costs and cycle times and greater production capacity. Continue efforts on affordable datalink components to enable improved manufacturing processes for reduced costs and cycle times and increased production throughput. Conduct manufacturing readiness assessments on critical technologies in lab and acquisition programs to ensure affordable, producible technology transition.				
(U)					
(U)	CONGRESSIONAL ADD: Electronic Industry-Wide Network for Characteristics and Specifications (e-LINCS).	0.986	0.000	0.000	0.000

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	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	In FY 2006: Provided mechanism for flow of specification data. Demonstrated regional pilots involving small producers.				
(U)	In FY 2007: Not Applicable.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Nanomaterials Manufacturing and Military Application.	2.760	0.000	0.000	0.000
(U)	In FY 2006: Designed reaction and purification process optimized for yield improvements. Applied in situ measurement and control process parameters to reduce product variation.				
(U)	In FY 2007: Not Applicable.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Affordable Multi-Junction Solar Cells.	0.986	0.000	0.000	0.000
(U)	In FY 2006: Improved germanium wafer production yield and packaging processes.				
(U)	In FY 2007: Not Applicable.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Rapid Qualification/Certification/Inspection Parts.	0.986	0.000	0.000	0.000
(U)	In FY 2006: Established capability to provide tailored testing services; specializing in design verification testing, product performance, failure analysis, production testing, environmental stress screening and a total quality controlled system with on-line interface.				
(U)	In FY 2007: Not Applicable.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Technical Insertion Demonstration and Evaluation (TIDE) Program.	3.943	2.989	0.000	0.000
(U)	In FY 2006: Studied current state of Original Equipment Managers (OEM) - Refined capabilities and improved Subject Matter Experts collaboration. Further developed the supply chain assessment tool for government and OEM program managers. Continued to deploy commercial collaboration processes/tools into the weapons supply chain to accelerate production.				

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
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	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	In FY 2007: Complete development of a suite of commercial collaboration supply chain assessment processes/tools for Government and OEM program managers. Deploy into the weapon system supply chain and demonstrate accelerated development/production processes, reduced cycle times and corresponding costs.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Aerial Multi-Axis Platform.	2.661	2.192	0.000	0.000
(U)	In FY 2006: Demonstrated operator controlled de-paint manipulator performing abrasive blasting. Demonstrated hazmat friendly and ergonomically friendly operator interface.				
(U)	In FY 2007: Continue demonstration and development of operator controlled de-paint manipulator performing abrasive blasting and hazmat friendly and ergonomically friendly operator interface.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Supply Chain Optimization Universal Tool Kit (SCOUT).	1.380	1.992	0.000	0.000
(U)	In FY 2006: Continued efforts to utilize radio frequency identification technology, lean six sigma practices, and e-commerce to effect improvements in DoD value chain.				
(U)	In FY 2007: Continue efforts to utilize radio frequency identification technology, lean six sigma practices, and e-commerce to effect improvements in DoD value chain.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Wright Brothers Institute (WBI) - Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative.	5.027	4.981	0.000	0.000
(U)	In FY 2006: Development and application of RFID for stand-off monitoring inventory and shipment of cargo and parts. Develop an electronically coordinated lean manufacturing toolkit and methodical adoption process for using RFID technology by small and medium enterprise (SME) suppliers.				
(U)	In FY 2007: Continue development and application of RFID for stand-off monitoring inventory and shipment of cargo and parts. Develop an electronically coordinated lean manufacturing toolkit and methodical adoption process for using RFID technology by small and medium enterprise (SME) suppliers.				

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(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Ceramic Ballistic Armor for Soldier and Vehicle Protection	0.000	0.996	0.000	0.000
(U) In FY 2006: Not Applicable.				
(U) In FY 2007: Demonstrate manufacturing capability for contoured ceramic armor for vehicle and body armor applications, to include new conformal body armor and appendage armor designs. Demonstrate manufacturability/process control to consistently produce ballistic ceramic to meet DoD requirements.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: EFG Sapphire Sheets for Large Aperture EO/IR Windows	0.000	1.992	0.000	0.000
(U) In FY 2006: Not Applicable.				
(U) In FY 2007: Identify/prioritize manufacturing, cost and technology drivers and their associated risks that limit the ability to manufacture large EGF Sapphire Sheets for use as an EO/IR window. Implement solutions to drivers/risks based on resources available and impact to success of large sheet production.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: F-35 Joint Strike Fighter Composite Engine Case	0.000	3.985	0.000	0.000
(U) In FY 2006: Not Applicable.				
(U) In FY 2007: Conduct efforts to reduce the total cycle time for producing an F135 OMC engine duct and reduce the cost of the prepreg used in making an F135 OMC engine duct.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				
(U)				
(U) CONGRESSIONAL ADD: Improving MANPADS Survivability Coatings	0.000	1.195	0.000	0.000
(U) In FY 2006: Not Applicable.				
(U) In FY 2007: Begin development of advanced manufacturing technologies for improving MANPADS survivability coatings.				
(U) In FY 2008: Not Applicable.				
(U) In FY 2009: Not Applicable.				

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	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)					
(U)	CONGRESSIONAL ADD: Laser Penning Fatigue Life Extension Technology for Military Aircraft Landing Gear	0.000	1.395	0.000	0.000
(U)	In FY 2006: Not Applicable.				
(U)	In FY 2007: Begin development of application of laser peening fatigue life extension technology for military aircraft landing gear.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Rapid Manufacturing and Repair of Composites for High Temp Applications.	0.000	1.295	0.000	0.000
(U)	In FY 2006: Not Applicable.				
(U)	In FY 2007: Begin development of advanced manufacturing technologies for rapid manufacturing and repair of composites for high temperature applications.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Reactive Plastic CO2 Absorbent Production Capacity.	0.000	1.992	0.000	0.000
(U)	In FY 2006: Not Applicable.				
(U)	In FY 2007: Begin development of advanced manufacturing technologies for reactive plastic CO2 absorbent production capacity.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	CONGRESSIONAL ADD: Nanomaterial Advanced Prototyping	0.000	4.584	0.000	0.000
(U)	In FY 2006: Not Applicable.				
(U)	In FY 2007: Develop prototype process for optimized nanomaterial yield and reduced product variation.				
(U)	In FY 2008: Not Applicable.				
(U)	In FY 2009: Not Applicable.				
(U)					
(U)	Total Cost	56.683	66.122	39.906	40.173

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
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(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E										
(U) Other APPN										

Not Applicable.

(U) D. Acquisition Strategy

All major contracts in this Program Element were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708011F Industrial Preparedness

PROJECT NUMBER AND TITLE: 2865 Manufacturing Technology

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Anteon	Various			1.084		0.470						0.000	1.554	
Argonne	Various			0.147									0.147	
Bell				0.140									0.140	
Boeing	Various			0.241								0.000	0.241	
Booz-Allen				0.150		0.600							0.750	
Doyle Center for MTech, PA	Various			3.606									3.606	
GE	Coop Agmt			1.024		1.047						0.000	2.071	
H.N. Burns				1.327									1.327	
Harris				0.234		2.050							2.284	
Honeywell	Various			0.500		1.200						0.000	1.700	
Infoscribe	Various			0.140		0.231							0.371	
Killdeer Mountain Manufacturing Inc.				1.236									1.236	
L3 Communications				2.800		1.800							4.600	
Lockheed Martin	Various											0.000	0.000	
Luna Technologies				2.531									2.531	
NASA Glenn				0.964									0.964	
Northrop Grumman	Various			4.144		4.173						0.000	8.317	
Pratt & Whitney	Tech Int Agr			1.027		1.430						0.000	2.457	
Raytheon	Coop Agmt			3.310		4.431						0.000	7.741	
Renaissance Service Inc.				0.879									0.879	
Rockwell				0.150		1.550							1.700	
Rolls Royce				0.168		0.160							0.328	
Surmet	Various												0.000	
Tiburon				0.190		0.200							0.390	
Univ Dayton Res Inst	Cost Plus			0.461		0.851						0.000	1.312	
US Technology	Various			2.417									2.417	
UTC	Various			0.705		0.700						0.000	1.405	
Wright Brothers Institute				4.607		4.981							9.588	
Wyle				0.235		0.433							0.668	
Various	Various			22.266	Sep-06	39.815	Sep-07	39.906		40.173		Continuing	TBD	
Subtotal Product Development			0.000	56.683		66.122		39.906		40.173		Continuing	TBD	0.000
Remarks:														
(U) Support														
In house support													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708011F Industrial Preparedness**	**2865 Manufacturing Technology**

(U)	Test & Evaluation								
								0.000	
	Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Management								
								0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)									
								0.000	
	Subtotal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)									
								0.000	
	Subtotal	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Total Cost	0.000	56.683	66.122	39.906	40.173	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE: 2865 Manufacturing Technology

ManTech Schedule Summary

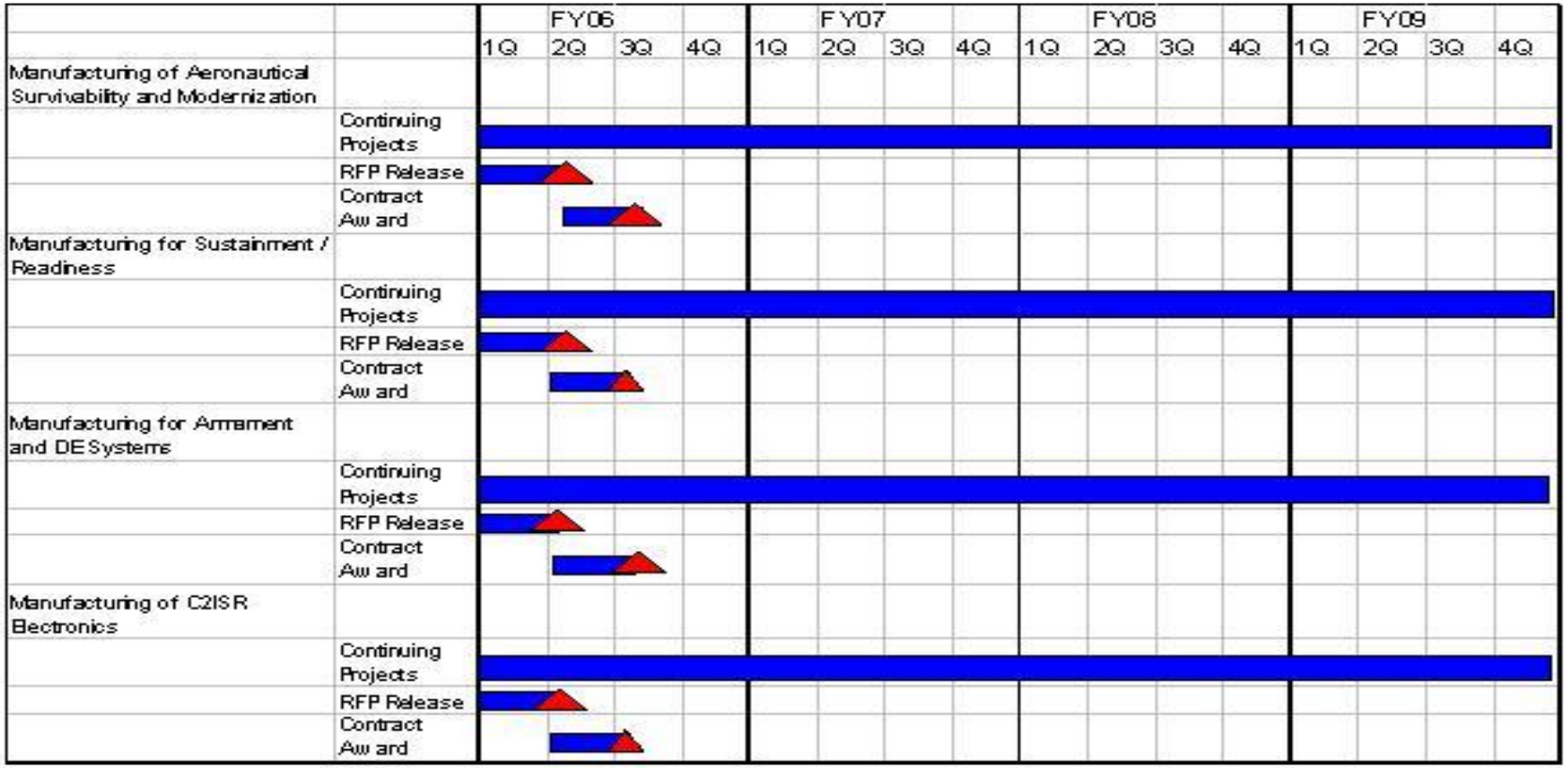

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708011F Industrial Preparedness**	PROJECT NUMBER AND TITLE **2865 Manufacturing Technology**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Manufacturing Technology for Aeronautical Survivability and Modernization.	1-4Q	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	2Q	2Q	2Q	2Q
(U) Contract Awards	3Q	3Q	3Q	3Q
(U) Manufacturing Technology for Sustainment / Readiness	1-4Q	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q	2Q
(U) Manufacturing for Armament and Directed Energy Systems.	1-4Q	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q	2Q
(U) Manufacturing for command, control, intelligence, surveillance, and reconnaissance (C2ISR) electronics	1-4Q	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q	2Q

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PE NUMBER: 0708012F
PE TITLE: Logistic Support Activities

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708012F Logistic Support Activities

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.682	1.295	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5054 CAM Modernization	2.682	1.295	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003. The FY 2005 and 2006 funds are Congressional adds for the Reliability and Maintainability Information System (REMIS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force. The Logistics Operations Support Congressional Add will provide a Common Configuration Environment (CCE) which will allow the use of pre-defined Commerical-Off-The-Shelf (COTS) products that may be used to replace/augument Air Force legacy systems in the future. Logistics Process Integration will analyze the legacy data to determine currency, accuracy, and relevance prior to being transported/migrated into a new environment.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	2.760	0.000	0.000	0.000
(U) Current PBR/President's Budget	2.682	1.295	0.000	0.000
(U) Total Adjustments	-0.078	-0.005		
(U) Congressional Program Reductions				
Congressional Rescissions	0.000	-0.005		
Congressional Increases	0.000	1.300		
Reprogrammings				
SBIR/STTR Transfer	-0.078			

(U) Significant Program Changes:

In FY2007 Congress added $1.3M RDT&E funds to PE0708012F Logistic Support Activities for REMIS.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE: 5054 CAM Modernization	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5054 CAM Modernization	2.682	1.295	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003. The FY 2005 and 2006 funds are Congressional adds for the Reliability and Maintainability Information System (REMIS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force. The Logistics Operations Support Congressional Add will provide a Common Configuration Environment (CCE) which will allow the use of pre-defined Commerical-Off-The-Shelf (COTS) products that may be used to replace/augument Air Force legacy systems in the future. Logistics Process Integration will analyze the legacy data to determine currency, accuracy, and relevance prior to being transported/migrated into a new environment.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) REMIS GCSS-AF migration/Modernization	1.341	1.295	0.000	0.000
(U) Logistics Operations Support	1.341	0.000	0.000	0.000
(U) Total Cost	2.682	1.295	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable										

(U) D. Acquisition Strategy

REMIS is executing an incremental code conversion and migration approach of its current functionality from a stand alone mainframe HP/TANDEM environment to the GCSS-AF framework. Code conversion and migration efforts will be obtained under a directed award (sole source), Time and Material with Award Fee

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708012F Logistic Support Activities**	PROJECT NUMBER AND TITLE **5054 CAM Modernization**

Incentives contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708012F Logistic Support Activities**

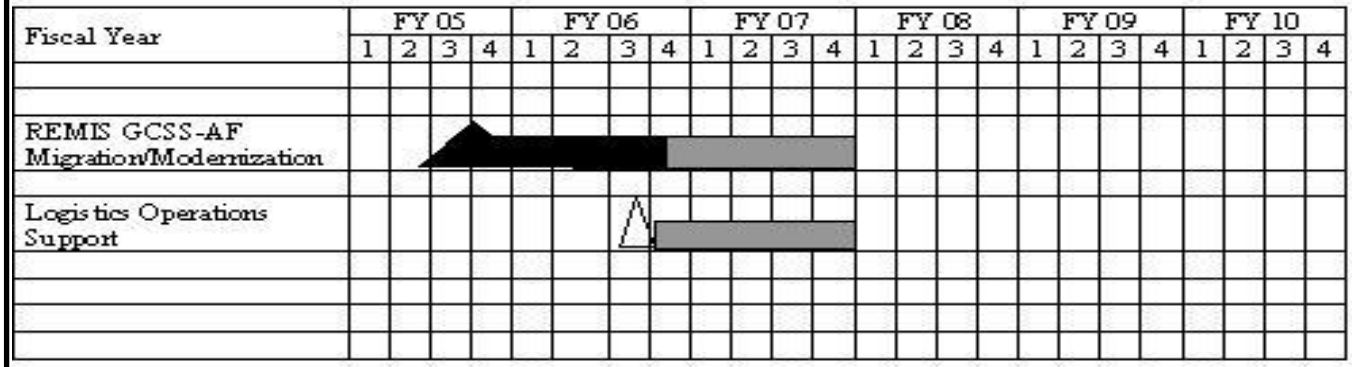
PROJECT NUMBER AND TITLE: **5054 CAM Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
REMIS GCSS-AF Migration/Modernization	C & CPAF	Northrop Grumman Information Technology, Wright Patterson AFB, OH		1.341	Aug-06	1.295	Jun-07					0.000	2.636	1.341
Logistics Operations Support	T&M	Oasis Systems Inc, Wright-Patterson AFB, OH		1.341	Aug-06	0.000						0.000	1.341	1.341
Subtotal Product Development			0.000	2.682		1.295		0.000		0.000		0.000	3.977	2.682
Remarks:														
(U) Support														
												0.000	0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U)														
													0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	2.682		1.295		0.000		0.000		0.000	3.977	2.682

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE 5054 CAM Modernization

Exhibit R-4: REMIS & Logistics Operations Support Battle Lab Congressional Adds

9 Aug 06



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE: 5054 CAM Modernization	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) REMIS GCSS-AF Migration/Modernization	1-4Q	1-4Q		
(U) Logistics Operations Support	3-4Q	1-4Q		

PE NUMBER: 0708610F
PE TITLE: Logistics Information Technology (LOGIT)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	32.837	120.851	114.176	137.012	40.949	41.455	42.257	43.115	Continuing	TBD
5208	Expeditionary Combat Support System (ECSS)	32.837	120.851	114.176	137.012	40.949	41.455	42.257	43.115	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

ECSS will be composed of a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application and other potential COTS solutions replacing 400+ wholesale and retail legacy logistics and procurement Information Technology (IT) systems. Use of ERP/COTS products will provide the warfighter, and AF enterprise in general, with DoD and industry best business practices and capabilities, at all AF enterprise echelons in areas of product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, maintenance, repair and overhaul. ECSS will be compliant with the Joint Technical Architecture (JTA) and Business Enterprise Architecture (BEA), will meet Chief Financial Officer (CFO) Act and Joint Financial Management Improvement Program (JFMIP) requirements, and will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF).

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	43.384	166.338	124.106	116.673
(U)	Current PBR/President's Budget	32.837	120.851	114.176	137.012
(U)	Total Adjustments	-10.547	-45.487		
(U)	Congressional Program Reductions		-45.029		
	Congressional Rescissions		-0.458		
	Congressional Increases				
	Reprogrammings	-9.314			
	SBIR/STTR Transfer	-1.233			

(U) Significant Program Changes:

FY08 reduction is for higher Air Force needs

FY09 increase represents reprogramming required as a result of changing development funding from working capital to RDT&E

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)	PROJECT NUMBER AND TITLE: 5208 Expeditionary Combat Support System (ECSS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5208	Expeditionary Combat Support System (ECSS)	32.837	120.851	114.176	137.012	40.949	41.455	42.257	43.115	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

ECSS will be composed of a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application and other potential COTS solutions replacing 400+ wholesale and retail legacy logistics and procurement Information Technology (IT) systems. Use of ERP/COTS products will provide the warfighter, and AF enterprise in general, with DoD and industry best business practices and capabilities, at all AF enterprise echelons in areas of product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, maintenance, repair and overhaul. ECSS will be compliant with the Joint Technical Architecture (JTA) and Business Enterprise Architecture (BEA), will meet Chief Financial Officer (CFO) Act and Joint Financial Management Improvement Program (JFMIP) requirements, and will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF).

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	ERP System Integration	32.837	120.851	114.176	137.012
(U)	Total Cost	32.837	120.851	114.176	137.012

(U) C. Other Program Funding Summary ($ in Millions)

		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement AF, ECSS (PE 0708610F)	2.501	9.560	10.564	12.907	2.832	2.872	2.928	2.986	Continuing	TBD
(U)	Operations & Maintenance AF, ECSS (PE 0708610F)	25.063	34.611	36.160	37.282	91.953	56.344	57.127	58.016	Continuing	TBD

(U) D. Acquisition Strategy

Acquisition strategy is two fold. First is the award of a COTS solution, followed by the selection of a System Integrator. ECSS System will be awarded using GSA schedule and/or Enterprise Software Agreement (ESA) and the Blanket Purchase Agreement (BPA) under the Enterprise Software Initiative (ESI).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708610F Logistics Information Technology (LOGIT)**

PROJECT NUMBER AND TITLE: **5208 Expeditionary Combat Support System (ECSS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ERP/COTS System Integration	C/FFP	AFMC/554th ELSG/EC, Wright Patterson AFB, OH	0.000	10.162	Sep-06	97.938	Jan-07	90.870	Jan-08	113.342	Jan-09	Continuing	TBD	TBD
OEM Technical Support (COTS Product)	MIPR	AFMC/554th ELSG/EC, Numerous Locations	0.000	0.000		7.070	May-07	4.800	May-08	4.240	May-09	Continuing	TBD	TBD
Product Lifecycle Management/Bill of Materials (PLM/BOM) (Teamcenter product integration w/GCSS-AF)	MIPR	754th ELSG, Maxwell AFB - Gunter Annex, AL	1.356	1.900	Aug-06	0.000		0.000		0.000		0.000	3.256	3.256
Advanced Planning and Scheduling (APS) Pathfinder	C/FFP	Bearing Point, Tinker AFB OK	0.000	5.181	Feb-06	1.500	Oct-06	0.000		0.000		0.000	6.681	10.362
Training Business Area (TBA) and Enhanced Maintenance Operations Center (EMOC)	MIPR	754th ELSG, Maxwell AFB - Gunter Annex, AL	0.000	3.600	May-06	0.000		0.000		0.000		0.000	3.600	3.600
Subtotal Product Development			1.356	20.843		106.508		95.670		117.582		Continuing	TBD	TBD
Remarks: System Integration contract scheduled for 4th qtr FY06 award														
(U) Support Costs														
Contractor Support	C/LOE	MCR, Oasis, Sumaria, Morgan Consulting, Wright Patterson AFB, OH	0.992	5.811	Dec-05	7.702	Dec-06	8.087	Dec-07	8.490	Dec-08	Continuing	TBD	TBD
Engineering Support	C/LOE	Oasis, Wright Patterson AFB, OH	0.000	2.999	Mar-06	2.999	Oct-06	6.300	Oct-07	6.615	Oct-08	Continuing	TBD	TBD
Subtotal Support Costs			0.992	8.810		10.701		14.387		15.105		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

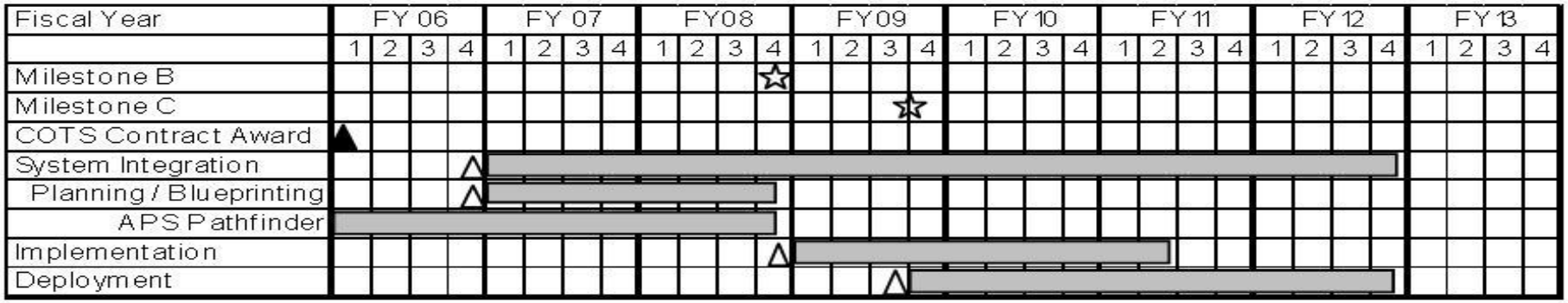
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708610F Logistics Information Technology (LOGIT)**	**5208 Expeditionary Combat Support System (ECSS)**

Remarks:														
(U) Management Services														
Program Office Operations	Allotment	AFMC/554th ELSG/EC, Wright Patterson AFB, OH	0.652	2.635	Oct-05	2.983	Oct-06	3.427	Oct-07	3.598	Oct-08	Continuing	TBD	TBD
FFRDC - MITRE Engineering Support	C/FFP	MITRE, Wright Patterson AFB, OH		0.549	Oct-05	0.659	Oct-06	0.692	Oct-07	0.727	Oct-08	Continuing	TBD	TBD
Subtotal Management Services			0.652	3.184		3.642		4.119		4.325		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			3.000	32.837		120.851		114.176		137.012		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708610F Logistics Information Technology (LOGIT)	PROJECT NUMBER AND TITLE 5208 Expeditionary Combat Support System (ECSS)

U.S. AIR FORCE

ECSS SCHEDULE



As of 9 Jan 07

☆ *Major Event or Milestone*
Planned Ongoing Activity
Ongoing Activity that is Complete
▲ *Completed Event*
△ *Planned Task(s)*

Integrity - Service - Excellence

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708610F Logistics Information Technology (LOGIT)**	PROJECT NUMBER AND TITLE **5208 Expeditionary Combat Support System (ECSS)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Milestone B			4Q	
(U) Milestone C				4Q
(U) COTS Contract Award	1Q			
(U) System Integration Contract Award	4Q			
(U) Integration		1-4Q	1-4Q	1-4Q
(U) Planning / Blueprinting		3-4Q	1-4Q	1-2Q
(U) APS Pathfinder	1-4Q	1-4Q	1-4Q	
(U) Implementation			3Q	1-4Q
(U) Deployment - Start				3Q

PE NUMBER: 0708611F
PE TITLE: Support Systems Development

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708611F Support Systems Development

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	23.063	32.755	11.076	11.294	11.515	11.721	11.949	12.195	Continuing	TBD
3318	Product Data Systems Modernization (PDSM)	3.205	3.306	3.511	3.580	3.683	3.731	3.804	3.882	Continuing	TBD
4654	Integrated Maintenance Data System (IMDS)	11.527	0.000	0.000	0.000	0.051	0.022	0.022	0.023	Continuing	TBD
4926	Reengineering and Enabling Technologies	1.724	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5042	Log Application Logisitics Integration (LALI)	6.607	29.449	7.565	7.714	7.781	7.968	8.123	8.290	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element supports five separate programs. PDSM (project 3318) upgrades Air Force digital data standards to commercial industry standards supporting the Joint Computer-Aided Acquisition Logistic Support (JCALS) System which is being phased out of the inventory. JCALS will be replaced by the modernization program Enhanced Technical Information Management System (ETIMS). IMDS (project 4654) develops and fields an Air Force standard maintenance information system to integrate information systems supporting Air Force maintenance activities into a single open architecture, modern decision support system that is compatible with the Global Combat Support System - Air Force (GCSS-AF) architecture. This enhanced decision support system will increase operational production capability and support system efficiency, while decreasing mobility infrastructure requirements and cost of operations. Reengineering and Enabling Technologies (RET) (project 4926) provides for continuing analytical research and studies in reengineering and enabling technologies. LALI, (project 5042), is the effort to migrate existing Installations and Logistics (IL) legacy systems to the common GCSS-AF Integration Framework (IF)

This program is a Budget Activity 7, Operational System Development, because projects are being engineered to support already operational weapon systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	26.590	10.596	10.957	11.143
(U)	Current PBR/President's Budget	23.063	32.755	11.076	11.294
(U)	Total Adjustments	-3.527	22.159		
(U)	Congressional Program Reductions		-0.016		
	Congressional Rescissions	-0.001	-0.125		
	Congressional Increases		22.300		
	Reprogrammings	-2.859			
	SBIR/STTR Transfer	-0.667			

(U) Significant Program Changes:

In FY 2006 and out, IMDS and LAILS-S funds moved to PE 0708610F to support Expeditionary Combat Support System (ECSS) which will subsume IMDS and LAILS-S requirements.

In FY2007, Congress added $22.3M for special projects that were placed in project 5042 but were for non LALI activities. The AF is working to identify and transfer these funds to the correct program office for execution.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
3318	Product Data Systems Modernization (PDSM)	3.205	3.306	3.511	3.580	3.683	3.731	3.804	3.882	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project implements the Air Force Technical Order (TO) functionality and the final phase out of the Joint Computer-Aided Acquisition Logistics Support (JCALS) system. The Enhanced Technical Information Management System (ETIMS) is the first step towards achieving the Air Force (AF) TO Vision. It will provide user friendly, technically accurate, and up-to-date digital technical data at the point of use that is acquired, sustained, distributed and available in digital format from a single point of access for all technical data users. ETIMS will develop new software and integrate existing TO databases.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Manage and support AF technical data activities	0.680	1.037	2.643	2.697
(U) Technical Data Integrator/Developer Support	1.884	1.660	0.000	0.000
(U) Systems Program Office (SPO) Operations	0.641	0.609	0.868	0.883
(U) Total Cost	3.205	3.306	3.511	3.580

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable										

(U) D. Acquisition Strategy

ETIMS will incrementally develop a user friendly, technically accurate, and current digital TO management solution at the point of use. The acquisition will execute a Cost Plus Award Fee contract competitively awarded utilizing the ETIA vehicle.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

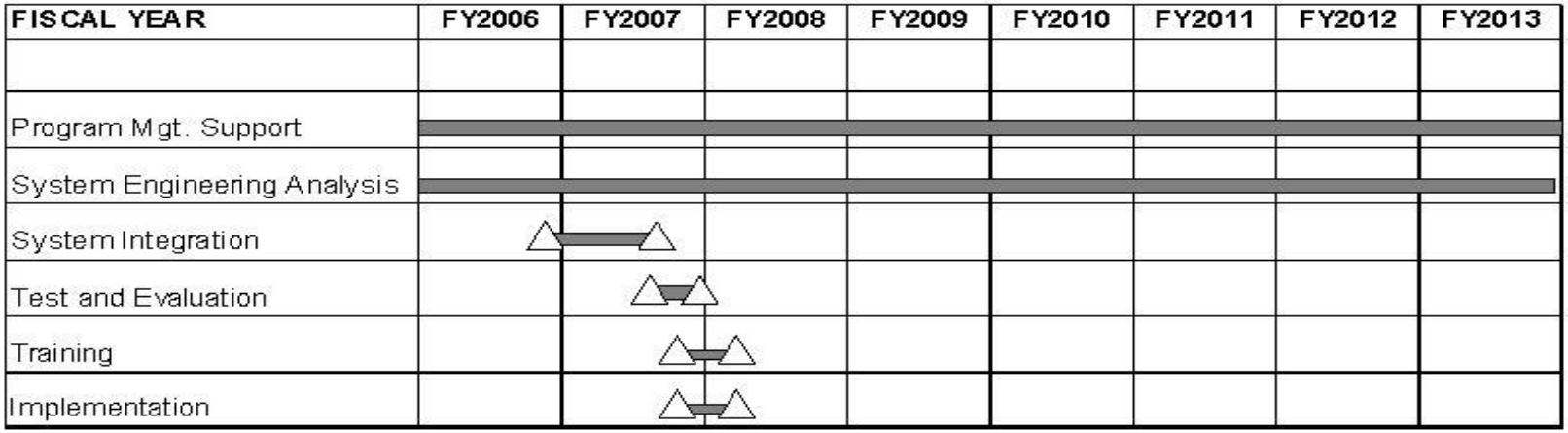
PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **3318 Product Data Systems Modernization (PDSM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development													0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Support														
Manage and Support Technical Data activies	C/FP	ITSP Vehicle, 754 ELSG/ILMT, Wright Patterson AFB, OH		0.680	Sep-06	1.037	Jul-07	2.643	Feb-08	2.697	Feb-09	Continuing	TBD	TBD
Technical Data Integrator/Developer Support	C/CP	SAIC, 754 ELSG/ILMT, Wright Patterson AFB, OH		1.884	Aug-06	1.660	Aug-07	0.000		0.000		Continuing	TBD	TBD
Subtotal Support			0.000	2.564		2.697		2.643		2.697		Continuing	TBD	TBD
Remarks:														
(U) Management														
System Program Office (SPO) Operations	MIPR	754 ELSG/ILMT, Wright Patterson AFB, OH		0.641	Oct-05	0.609	Oct-06	0.868	Jun-08	0.883	Jun-09	Continuing	TBD	TBD
Subtotal Management			0.000	0.641		0.609		0.868		0.883		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	3.205		3.306		3.511		3.580		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

Exhibit R-4 BA 07 PEC 78611F Project 3318 PDSM



As of 9 Jan 07

Planned Ongoing Activity △ Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Program Mgt Support	1-4Q	1-4Q	1-4Q	1-4Q
(U) System Engineering Analysis	1-4Q	1-4Q	1-4Q	1-4Q
(U) System Integration	4Q	1-3Q		
(U) Test and Evaluation		3-4Q		
(U) Training		4Q	1Q	
(U) Implementation		4Q	1Q	

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 4654 Integrated Maintenance Data System (IMDS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4654	Integrated Maintenance Data System (IMDS)	11.527	0.000	0.000	0.000	0.051	0.022	0.022	0.023	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Integrated Maintenance Data System (IMDS) is an information technology program which provides Joint Command and Air Force warfighters with global maintenance visibility of aircraft, space, missile, communications, and related support environments. It will develop new software and integrate existing databases. IMDS provides the capability to plan and accomplish combat operations anywhere in the world. IMDS includes sustainment of AF standard base level legacy maintenance systems ensuring operational maintenance capabilities continue to support the operational Air Force. Thus, IMDS enables the Air Force to increase its combat sortie production capability while also decreasing its mobility footprint and cost of operations.

Future IMDS development has been transferred to Expeditionary Combat Support System funded in PE 0708610F Logistics Information Technology. The small amount of funds remaining for project 4654 (FY 2010, 2011, 2012 and 2013) will be realigned during the next budget cycle. No IMDS FY 2008 funds are requested.

Activities in this Project also include FY2006 Congressional Adds for non IMDS work.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Continue ECSS/ERP support	0.029	0.000	0.000	0.000
(U) Center for Aircraft Support/System Infrastructure Congressional Add	0.958	0.000	0.000	0.000
(U) C-17 Aging Aircraft Logistics Management Program Congressional Add	2.395	0.000	0.000	0.000
(U) Teleoperated Semi-autonomous Robot for Aging Aircraft Maintenance Congressional Add	0.958	0.000	0.000	0.000
(U) Fuel Cell Power Non-Tactical Vehicle Congressional Add	0.958	0.000	0.000	0.000
(U) Heavy Duty Hybrid Electric Congressional Add	2.395	0.000	0.000	0.000
(U) Warner Robins Aging Aircraft Congressional Add	3.834	0.000	0.000	0.000
(U) Total Cost	11.527	0.000	0.000	0.000

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not Applicable										

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4654 Integrated Maintenance Data System (IMDS)**

(U) D. Acquisition Strategy

RDT&E funding for this IMDS project has been moved to support PE 0708610F Logistics Information Technology after FY06. All IMDS functional requirements will be subsumed by PE 0708610F for management and tracking.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

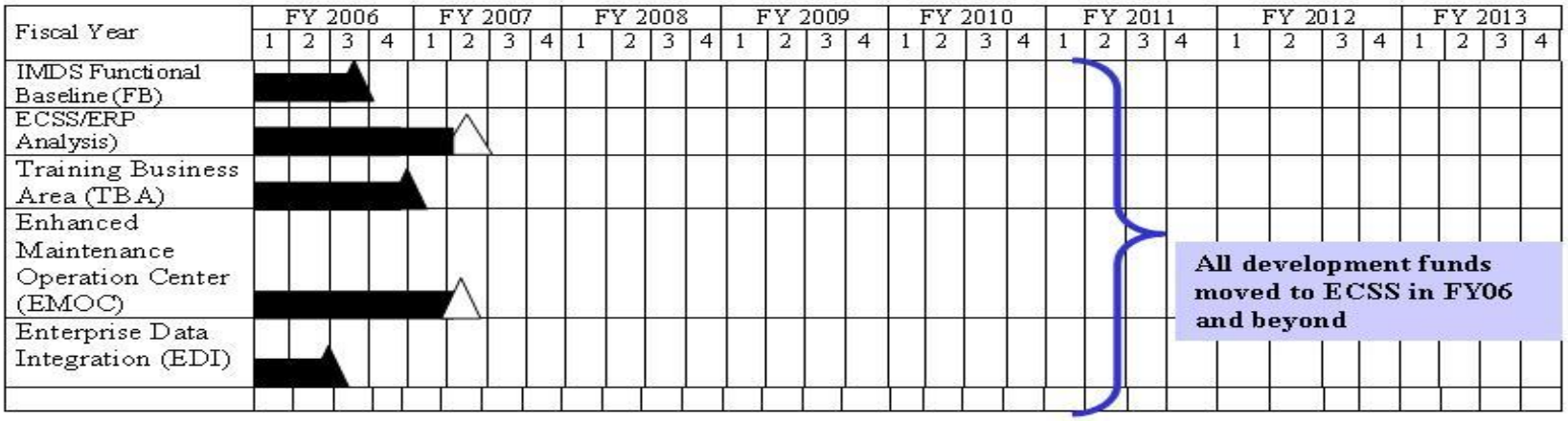
PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **4654 Integrated Maintenance Data System (IMDS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
ECSS/ERP Support	MIPR	SSD, Maxwell AFB, Gunter Annex		0.029	Jun-06	0.000		0.000		0.000		0.000	0.029	TBD
Center for Aircraft Support/System Infrastructure Congressional Add	SS/FP	TMI/CACI, OK		0.958	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
C-17 Aging Aircraft Logistics Management Program Congressional Add	C/FFP	Intergraph Corp. , Huntsville AL.		2.395	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Teleoperated Semi-autonomous Robot for Aging Aircraft Maintenance Congressional Add	SS/CPFF	Battelle, Columbus OH		0.958	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Fuel Cell Power Non-Tactical Vehicle Congressional Add	C/FP	FCTEC, Johnstown PA		0.958	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Heavy Duty Hybrid Electric Congressional Add	C/CP	Mack Truck, Hagerstown, MD		2.395	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Warner Robins Aging Aircraft Congressional Add	TBD	TBD		3.834	Sep-06	0.000		0.000		0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	11.527		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	11.527		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4654 Integrated Maintenance Data System (IMDS)**

Exhibit R-4 : IMDS Schedule Profile



As of 9 Jan 07

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4654 Integrated Maintenance Data System (IMDS)**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) IMDS Functional Baseline (FB)	1-3Q			
(U) ECSS/ERP Analysis	1-4Q	1-2Q		
(U) Training Business Area	1-4Q			
(U) Enhanced Maintenance Operation Center (EMOC)	1-4Q	1-2Q		
(U) Enterprise Data Integration (EDI) Formally Data Management	1-2Q			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 4926 Reengineering and Enabling Technologies	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4926	Reengineering and Enabling Technologies	1.724	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program provides for continuing analytical research and studies in reengineering and enabling technologies. It provides quick response assistance for senior Air Force officials and others in the Business Process Reengineering (BPR) and change management arenas. Using reengineering processes and enabling technologies, existing processes and their associated activities can be analyzed to identify work that is value added, non-value added, and wasted. It will assist senior leaders with removing duplication of effort, unnecessary product generation delays and non-productive activities and provide significant improvements in product quality.

This program funds research and development projects that will increase the reliability and readiness of weapons systems and platforms and provide future savings in total ownership costs. The objective of the program is to optimize the return-on-investments that reduce the operating and support costs for aging systems. Current Air Force Reduction of Total Ownership Cost (RTOC) efforts are demonstrating that cost reductions can be achieved by a variety of best practices. They include replacing high cost and low reliability components, enhancing supply chain efficiency, using smart decision support tools with logistics support arrangements, leveraging commercial-of-the-shelf components, and initiating public-private partnerships. The program seeks to reduce the cost of products and processes used to acquire, operated, and sustain weapon systems as well as infrastructure costs. The aim is to realize significant cost reductions in order to free up budgetary Total Obligation Authority to help fund urgent modernization priorities. The primary objectives are to capture and arrest cost growth, reduce the costs and capture the savings, and then reinvest the savings in future cost savings in future cost saving initiatives.

The Air Force acquisition community is pursuing excellence through business process redesign and the associated enabling technologies. This program provides for developing a center of excellence in BPR and for mentoring Headquarters Air Force (HAF) leaders in the proper application of BPR principles for their initiatives. It will maintain information on the state of the art in BPR paradigms and tailor their application for the HAF and SAF/AQ environment. It will also capture lessons learned and other feedback from BPR applications for change management and process improvement strategies.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Information Assurance for Reengineering and Enabling Technologies Congressional Add	1.724	0.000	0.000	0.000
(U) Total Cost	1.724	0.000	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development	PROJECT NUMBER AND TITLE 4926 Reengineering and Enabling Technologies

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not Applicable

(U) D. Acquisition Strategy

All major contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

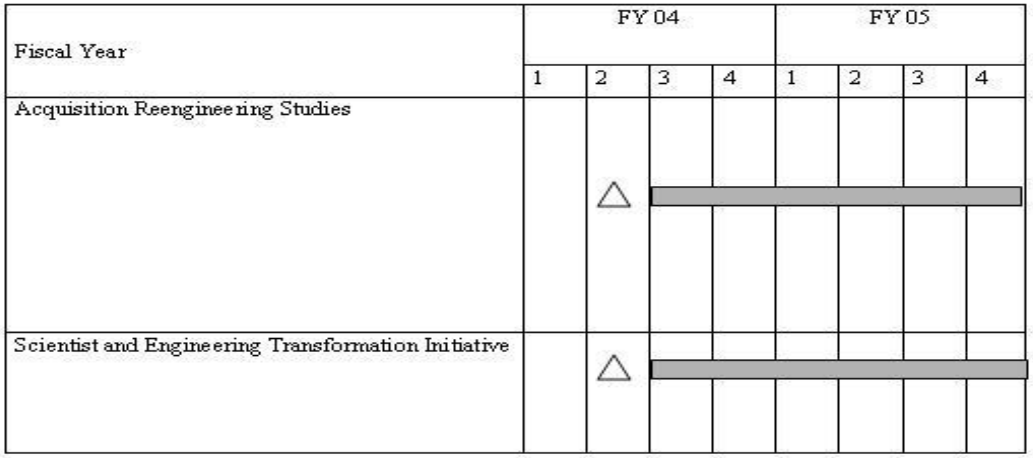
PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **4926 Reengineering and Enabling Technologies**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Information Assurance for Enabling Technologies Congressional Add				1.724		0.000		0.000		0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	1.724		0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	1.724		0.000		0.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development	PROJECT NUMBER AND TITLE 4926 Reengineering and Enabling Technologies

Exhibit R-4:Reengineering and Enabling Technologies Schedule Profile



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4926 Reengineering and Enabling Technologies**

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Acquisition Reengineering Studies	2Q			
(U) Scientist and Engineers Transformation Initiative	2Q			
(U) Information Assurance for Reengineering and Enabling Technologies Congressional Add	1-4Q			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 5042 Log Application Logisitics Integration (LALI)	

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5042	Log Application Logisitics Integration (LALI)	6.607	29.449	7.565	7.714	7.781	7.968	8.123	8.290	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Log Application Logistics Integration is the effort to migrate existing Logistics Installations and Mission Support (LIMS) legacy systems to the common GCSS-AF Integration Framework and provide integration support to assist this effort. The target is a suite of software components that are continuously updated or refined to embrace emerging best practices and commercial information technology innovations. The strategic plan is the creation of a logistics enterprise system using common software and hardware products requiring a smaller number of interfacing transactions.

LALI integration funding will support the Expeditionary Combat Support System (ECSS).

Activities in this Project also include $22.3M FY2007 Congressional Adds for non LALI work. The AF is working to identify and transfer these funds to the correct program office for execution. These projects include: Heavy Duty Hybrid Electric Vehicle ($3.0M), Air Force Advanced Power and Energy Initiative ($2.9M), Production of Alternative Energy for Defense from Alaskan Raw Materials ($1.0M), Composite Occupation Health and Operation Risk Tracking System ($3.0M), Air Force Medical Service Personnel Health Record ($1.1M), Fuel Cell Power - Non Tactical Vehicle ($1.0M), WR-ALC C-5 Maintenance Transformation ($2.6M), Advanced Modular Lithium-Ion Energy Storage ($1.1M), Defense Assured Fuels Initiative ($2.0M), WR-ALC Aircraft Sustainment Wing Aircraft Availability ($1.4M), and RFID inventory Management and Patient ID ($3.2M).

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapons systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Continue Program Management Office (PMO) Support	0.542	0.092	0.095	0.096
(U) Continue LALI PMO Tasks (Supporting Integration and Development)	1.462	1.707	1.761	1.789
(U) Provide LALI Systems Engineering Base Support & Test Development Range	0.040	0.050	0.052	0.053
(U) Continue LALI Systems Engineering Contractor Support (Product Development)	4.540	5.285	5.526	5.642
(U) Continue LALI Integration Task Contracts	0.023	0.100	0.131	0.134
(U) Heavy Duty Hybrid Electric Vehicle Congressional Add	0.000	2.915	0.000	0.000
(U) Air Force Advanced Power and Energy Initiative Congressional Add	0.000	2.900	0.000	0.000
(U) Production of Alternative Energy for Defense from Alaskan Raw Materials Congressional Add	0.000	1.000	0.000	0.000
(U) Composite Occupation Health and Operation Risk Tracking System Congressional Add	0.000	3.000	0.000	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development	PROJECT NUMBER AND TITLE 5042 Log Application Logisitics Integration (LALI)

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Air Force Medical Service Personnel Health Record Congressional Add	0.000	1.100	0.000	0.000
(U) Fuel Cell Power - Non Tactical Vehical Congressional Add	0.000	1.000	0.000	0.000
(U) WR-ALC C-5 Maintenance Transformation Congressional Add	0.000	2.600	0.000	0.000
(U) Advanced Modular Lithium-Ion Energy Storage Congressional Add	0.000	1.100	0.000	0.000
(U) Defense Assured Fuels Initiative Congressional Add	0.000	2.000	0.000	0.000
(U) WR-ALC Aircraft Sustainment Wing Aircraft Availability Congressional Add	0.000	1.400	0.000	0.000
(U) RFID inventory Management and Patient ID Congressional Add	0.000	3.200	0.000	0.000
(U) Total Cost	6.607	29.449	7.565	7.714

(U) C. Other Program Funding Summary ($ in Millions)

FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost

(U) Not Applicable

(U) D. Acquisition Strategy

Engineering & Integration Systems (EIS) is the Operations and Sustainment Engineering Flight of the 643rd Electronic Systems Squadron (ELSS) which manages logistics systems engineering and integration issues for the Air Force. EIS performs a set of activities required by the ELSS to deliver world-class capabilities to our customers. This includes enterprise architecture, engineering technical and functional support of services for the development, integration, maintenance and installation of modernized Logistics Information Systems. The focus is on facilitating the improvement of the systems efficiency through integration and technology insertion."

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **5042 Log Application Logisitics Integration (LALI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
LALI Support Contractor (Portfolio Management, Architecture, & Data Management)	C/FP	BTAS, Inc Montgomery, Alabama		0.501	Mar-06	0.877	Mar-07	0.985	Mar-08	1.023	Mar-09	Continuing	TBD	TBD
LALI Support Contractor (Data Management, Enterprise Architecture, & System Modernization support)	C/FP	Smartronix, Inc Maxwell AFB-Gunter Annex, AL		1.100	May-06	1.296	Mar-07	1.335	Mar-08	1.358	Mar-09	Continuing	TBD	TBD
LALI Support Contractor (Data Migration/Warehousing)	MIPR	AFKS PMO, WPAFB, Ohio		2.057	Aug-06	2.057	Aug-07	2.119	Aug-08	2.155	Aug-09	Continuing	TBD	TBD
LALI Support Contractor (Data Management)	C/FP	LOGTEC, Inc Montgomery, Alabama		0.882	Feb-06	1.055	Jan-07	1.087	Jan-08	1.106	Jan-09	Continuing	TBD	TBD
Heavy Duty Hybrid Electric Vehicle Congressional Add	TBD	TBD		0.000		2.915	Jun-07	0.000		0.000		Continuing	TBD	TBD
Air Force Advanced Power and Energy Initiative Congressional Add	TBD	TBD		0.000		2.900	Jun-07	0.000		0.000		Continuing	TBD	TBD
Production of Alternative Energy for Defense from Alaskan Raw Materials Congressional Add	TBD	TBD		0.000		1.000	Jun-07	0.000		0.000		Continuing	TBD	TBD
Composite Occupation Health and Operation Risk Tracking System Congressional Add	TBD	TBD		0.000		3.000	Jun-07	0.000		0.000		Continuing	TBD	TBD
Air Force Medical Service Personnel Health Record Congressional Add	TBD	TBD		0.000		1.100	Jun-07	0.000		0.000		Continuing	TBD	TBD
Fuel Cell Power - Non Tactical Vehical Congressional Add	TBD	TBD		0.000		1.000	Jun-07	0.000		0.000		Continuing	TBD	TBD
WR-ALC C-5 Maintenance Transformation Congressional Add	TBD	TBD		0.000		2.600	Jun-07	0.000		0.000		Continuing	TBD	TBD
Advanced Modular Lithium-Ion Energy Storage Congressional Add	TBD	TBD		0.000		1.100	Jun-07	0.000		0.000		Continuing	TBD	TBD
Defense Assured Fuels Initiative Congressional Add	TBD	TBD		0.000		2.000	Jun-07	0.000		0.000		Continuing	TBD	TBD
WR-ALC Aircraft Sustainment Wing Aircraft Availability Congressional Add	TBD	TBD		0.000		1.400	Jun-07	0.000		0.000		Continuing	TBD	TBD
RFID inventory Management and Patient ID Congressional Add	TBD	TBD		0.000		3.200	Jun-07	0.000		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

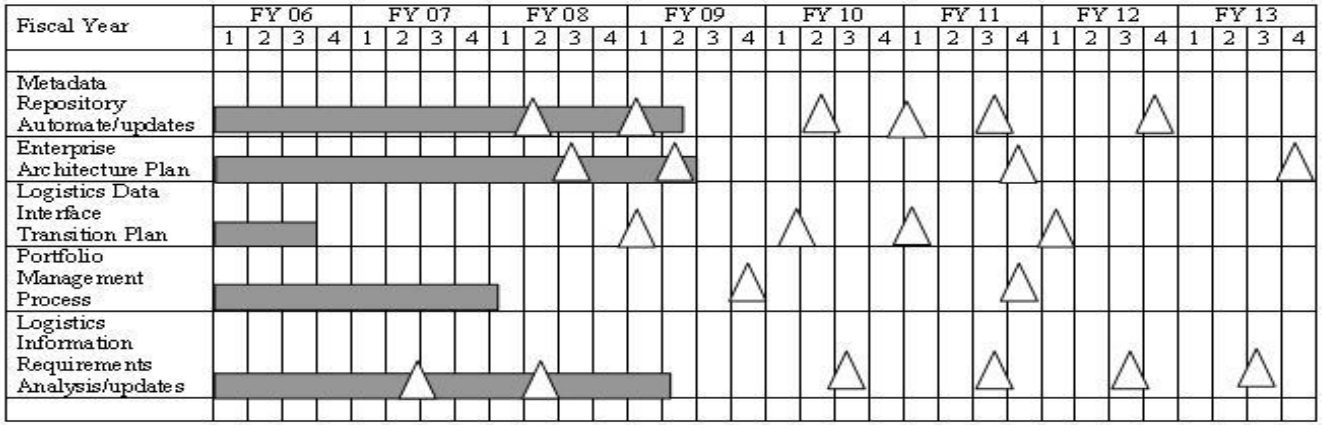
PE NUMBER AND TITLE: 0708611F Support Systems Development

PROJECT NUMBER AND TITLE: 5042 Log Application Logisitics Integration (LALI)

Subtotal Product Development			0.000	4.540		27.500		5.526		5.642		Continuing	TBD	TBD
Remarks:															
(U) Support															
PMO Tasks (supporting Integration & Development)	C/FP	DSD, Maxwell AFB-Gunter Annex, AL		1.462	Feb-06	1.707	Jan-07	1.761	Jan-08	1.789	Jan-09	Continuing	TBD	TBD
Portal/Systems Engineering Support (Integration Task)	C/FP	Various, Maxwell AFB-Gunter Annex, AL		0.023	Feb-06	0.100	Feb-07	0.131	Feb-08	0.134	Feb-09	Continuing	TBD	TBD
Subtotal Support			0.000	1.485		1.807		1.892		1.923		Continuing	TBD	TBD
Remarks:															
(U) Test & Evaluation															
Support Contractor (Test Development Range)	C/FP	Various, Maxwell AFB-Gunter Annex, AL		0.040	Jan-06	0.050	Jan-07	0.052	Jan-08	0.053	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.040		0.050		0.052		0.053		Continuing	TBD	TBD
Remarks:															
(U) Management															
PMO Support (System Program Office management and operations)	N/A	643rd ELSS, Maxwell AFB-Gunter Annex, AL		0.092	Oct-05	0.092	Dec-06	0.095	Dec-07	0.096	Dec-08	Continuing	TBD	TBD
PMO Support - AIT	C/FP	Smartronix, Inc Maxwell AFB-Gunter Annex, AL		0.250	Apr-06	0.000	Apr-07	0.000	Apr-08	0.000	Apr-09	Continuing	TBD	TBD
PMO Support - Analysis	C/FP	Optimization Technology INC, Maxwell AFB-Gunter Annex, AL		0.200	Jun-06	0.000		0.000		0.000		Continuing	TBD	TBD
Subtotal Management			0.000	0.542		0.092		0.095		0.096		Continuing	TBD	TBD
Remarks:															
(U) Total Cost			0.000	6.607		29.449		7.565		7.714		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development	PROJECT NUMBER AND TITLE 5042 Log Application Logisitics Integration (LALI)

Exhibit R-4: Logistics Integration Schedule Profile



As of 9 Jan 07

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 5042 Log Application Logisitics Integration (LALI)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Metadata Repository (Automate/Updates)	1-4Q	1-4Q	1-4Q	1-2Q
(U) Architecture Plan Integrated Data Warehouse (IDW) Preliminary Architecture	1-4Q	1-4Q	1-4Q	1-2Q
(U) Logistics Data Interface Transition Plan	1-3Q			1Q
(U) Portfolio Management Process Updates	1-4Q	1-4Q		4Q
(U) Logistics Information Requirements Analysis/Updates	1-4Q	1-4Q	1-4Q	1Q

PE NUMBER: 0804757F
PE TITLE: JOINT NATIONAL TRAINING CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.801	3.050	3.128	3.240	3.321	3.373	3.438	3.508	0.000	0.000
5124 Training Transformation	2.801	3.050	3.128	3.240	3.321	3.373	3.438	3.508	0.000	0.000

NOTE: Until FY 06 PE 0804757F was a BA 3 effort. The FY 05 PE 0804757F data provided in this document was originally reported in a BA 3 document.

(U) A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint National Training Capability (JNTC). Develops capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, researches new technologies and methods that provide a crucial technology-based foundation supporting all JNTC operations.

This program is in budget activity 7- Operational Systems Development because it supports rapid transformation of Department of Defense training into a Joint National Training Capability.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	2.924	3.073	3.098	3.200
(U)	Current PBR/President's Budget	2.801	3.050	3.128	3.240
(U)	Total Adjustments	-0.123	-0.023		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.042	0.023		
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer	-0.081			

(U) Significant Program Changes:

FY 06
- Decreased by Congressional General Reductions and SBIR Contribution

FY 07
- Decreased by SBIR Contribution

FY 08
- Increased by inflation rate change

FY 09
Increased by inflation rate change

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER

PROJECT NUMBER AND TITLE: 5124 Training Transformation

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5124 Training Transformation	2.801	3.050	3.128	3.240	3.321	3.373	3.438	3.508	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

FY 04 and FY 05 efforts are in BA03 PE0804757F

(U) A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint National Training Capability (JNTC). Develops capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, researches new technologies and methods that provide a crucial technology-based foundation supporting all JNTC operations.

This program is in budget activity 7- Operational Systems Development because it supports rapid transformation of Department of Defense training into a Joint National Training Capability.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue Air Force Modeling and Simulations Tool Kit (AFMSTT) Air Warfare Simulation (AWSIM) Upgrades	0.847	0.644	0.933	1.043
(U) Continue basic operations support, systems acquisition, engineering and development studies/efforts	0.804	1.263	1.000	1.000
(U) Begin/Continue Multi-level security (Radiant Mercury) for Distributed Mission Operations Center (DMOC)	0.156	0.533	0.195	0.197
(U) Begin/Continue Concept of Operations for Space DMOC into JNTC Live -Virtual-Constructive events	0.994	0.440	1.000	1.000
(U) Begin Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) replay tool development; Terrain/visual/IR/SAR database to support CONUS and OCONUS	0.000	0.170	0.000	0.000
(U) Total Cost	2.801	3.050	3.128	3.240

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) PE 0804757, Joint National Training Center, APAF	2.915	2.770	0.057	0.075	0.000	0.000	0.013	0.051	Continuing	TBD
(U) PE 0804757, Joint National Training Center, OPAF	28.149	21.707	12.810	13.240	13.675	13.708	13.918	14.357	Continuing	TBD
(U) PE 0804757, Joint National Training Center, O&M	16.101	16.919	17.964	18.163	18.526	18.894	19.310	19.734	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0804757F JOINT NATIONAL TRAINING CENTER**	PROJECT NUMBER AND TITLE **5124 Training Transformation**

(U) D. Acquisition Strategy

The acquisition strategy will be competitive, with cost plus fixed fee and firm fixed price contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0804757F JOINT NATIONAL TRAINING CENTER**

PROJECT NUMBER AND TITLE: **5124 Training Transformation**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
AFMSTT		L3, Mesa , AZ												
		Northrop Grumman, McLean, VA	1.715	0.731	Jan-06	0.516	Jan-07	0.933	Jan-08	1.043	Jan-09	Continuing	TBD	
DMOC-S		SPARTA, Schriever AFB, CO	0.000	0.994	Jan-06	0.533	Jan-07	1.000	Jan-08	1.000	Jan-09	Continuing	TBD	
Ops Support, System Acq, Engineering & Development Studies		Various	0.243	0.804		1.263		1.000		1.000		Continuing	TBD	
DMOC (DTNG)		Lockheed Martin Corp, Kirtland AFB, NM	0.000	0.156	Mar-06	0.440	Mar-07	0.195	Mar-08	0.197	Mar-09	Continuing	TBD	
C2ISR Replay tool development		Lockheed Martin Corp Kirtland AFB, NM												
		Scientific Research Corp Kirtland AFB, NM	0.000	0.000		0.170	Nov-06	0.000		0.000			0.170	
Subtotal Product Development			1.958	2.685		2.922		3.128		3.240		Continuing	TBD	0.000
Remarks: FY 04 and FY 05 efforts in BA03 PE0804757F														
(U) Support														
AFMSTT		Northrop Grumman, McLean, VA	0.000	0.116	Mar-06	0.128	Mar-07					Continuing	TBD	
DMOC-S		Northrop Grumman, McLean, VA	0.000	0.000									0.000	
Subtotal Support			0.000	0.116		0.128		0.000		0.000		Continuing	TBD	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER	PROJECT NUMBER AND TITLE: 5124 Training Transformation	

Remarks:									
(U) Management									
								0.000	
Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	
Remarks:									
(U) Total Cost	1.958	2.801	3.050	3.128	3.240	Continuing	TBD	0.000	

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0804757F JOINT NATIONAL TRAINING CENTER	PROJECT NUMBER AND TITLE 5124 Training Transformation

Joint National Training Capability

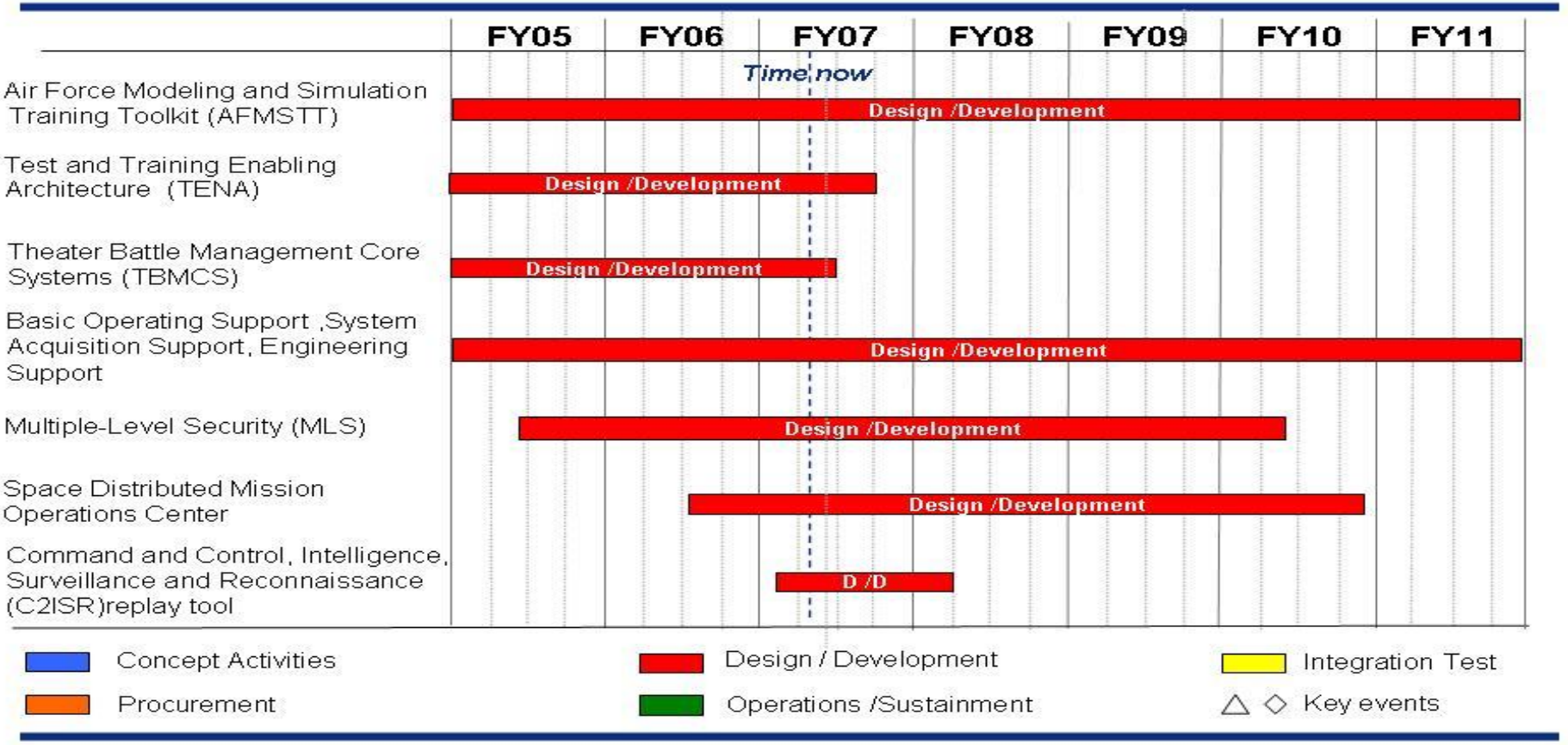


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER	PROJECT NUMBER AND TITLE: 5124 Training Transformation

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AFMSTT	2Q	2Q	2Q	2Q
(U) Basic Operating Support, System Acquisition, Engineering Support	1Q	1Q	1Q	1Q
(U) Multi-Level Security	2Q	2Q	2Q	2Q
(U) Concept of Operations for Space DMOC-S	3Q	3Q	3Q	3Q
(U) C2ISR replay tool development		1Q		

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PE NUMBER: 0808716F
PE TITLE: OTHER PERSONNEL ACTIVITIES

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.106	0.113	0.115	0.117	0.119	0.121	0.123	0.125	0.000	0.000
4236 Engineering Analysis	0.106	0.113	0.115	0.117	0.119	0.121	0.123	0.125	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Defense Equal Opportunity Management Institute (DEOMI) provides grants to the civilian academic community to conduct research on military and civilian equal opportunity issues using standard social science methodology. The research methodology includes developing a literature review proposing hypotheses and methods of research. The grantee will then gather appropriate data, draw conclusions and present discussions, recommendations and reports based on their funding.

Previously the US Air Force provided Operations & Maintenance (O&M) funding to DEOMI as their contribution. However, beginning with 2005, it was determined that Research, Development, Test & Evaluation (RDT&E) funding would be more proper.

This program is in Budget Activity 7 as it provides support to operational forces.

(U) B. Program Change Summary ($ in Millions)

	FY 2006	FY 2007	FY 2008	FY 2009
(U) Previous President's Budget	0.110	0.113	0.114	0.115
(U) Current PBR/President's Budget	0.106	0.113	0.115	0.117
(U) Total Adjustments	-0.004			
(U) Congressional Program Reductions				
Congressional Rescissions	-0.004			
Congressional Increases				
Reprogrammings				
SBIR/STTR Transfer		-0.003		
(U) Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES

PROJECT NUMBER AND TITLE: 4236 Engineering Analysis

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4236 Engineering Analysis	0.106	0.113	0.115	0.117	0.119	0.121	0.123	0.125	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Equal Opportunity Management Institute (DEOMI) provides grants to the civilian academic community to conduct research on military and civilian equal opportunity issues using standard social science methodology. The research methodology includes developing a literature review proposing hypotheses and methods of research. The grantee will then gather appropriate data, draw conclusions and present discussions, recommendations and reports based on their funding.

Previously the US Air Force provided Operations & Maintenance (O&M) funding to DEOMI as their contribution. However, beginning with 2005, it was determined that Research, Development, Test & Evaluation (RDT&E) funding would be more proper.

This program is in Budget Activity 7 as it provides support to operational forces.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Conduct engineering analysis on military and civilian equal opportunity issues.	0.106	0.113	0.115	0.117
(U) Total Cost	0.106	0.113	0.115	0.117

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

Grants will be awarded competitively.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0808716F OTHER PERSONNEL ACTIVITIES**

PROJECT NUMBER AND TITLE: **4236 Engineering Analysis**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Eng Analysis	Grant	Various		0.106	Apr-06	0.113	Apr-07	0.115	Apr-08	0.117	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.106		0.113		0.115		0.117		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.106		0.113		0.115		0.117		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0808716F OTHER PERSONNEL ACTIVITIES**	PROJECT NUMBER AND TITLE **4236 Engineering Analysis**

Engineering Analysis

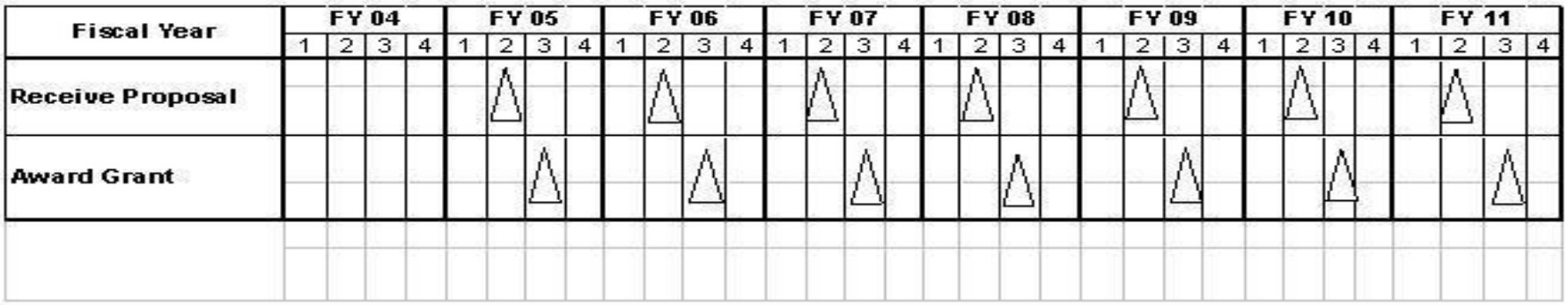

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES	PROJECT NUMBER AND TITLE: 4236 Engineering Analysis

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Receive grants	2Q	2Q	2Q	2Q
(U) Award grants	3Q	3Q	3Q	3Q

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PE NUMBER: 0901202F
PE TITLE: JOINT PERSONNEL RECOVERY AGENCY (JPRA)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.931	0.988	5.377	5.816	6.662	6.569	6.575	6.591	0.000	0.000
691X	EO/IR Warning & Countermeasures Tech	0.931	0.988	5.377	5.816	6.662	6.569	6.575	6.591	0.000	0.000

In FY06, this is a new PE.

(U) A. Mission Description and Budget Item Justification

Joint Personnel Recovery Agency (JPRA) to execute tasks related to Commander, USJFCOM responsibilities as DoD Executive Agent (less policy) for Personnel Recovery. Provides separate PE to execute AF task to "fund JPRA" in DODD 2310.2. Includes funding for research and development (R&D), support equipment, contract services, and all associated costs specifically identified to support the JPRA headquarters at Ft. Belvoir, VA and other JPRA operating locations and project sites.

Funding provides USJFCOM capability to conduct Personnel Recovery advanced concept testing and development, identify, research, and exploit technologies to provide COCOM and Service Personnel Recovery capabilities.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	0.932	0.992	1.019	1.038
(U)	Current PBR/President's Budget	0.931	0.988	5.377	5.816
(U)	Total Adjustments	-0.001			
(U)	Congressional Program Reductions	-0.001			
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)	PROJECT NUMBER AND TITLE: 691X EO/IR Warning & Countermeasures Tech

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
691X	EO/IR Warning & Countermeasures Tech	0.931	0.988	5.377	5.816	6.662	6.569	6.575	6.591	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Joint Personnel Recovery Agency (JPRA) to execute tasks related to Commander, USJFCOM responsibilities as DoD Executive Agent (less policy) for Personnel Recovery. Provides separate PE to execute AF task to "fund JPRA" in DODD 2310.2. Includes funding for research and development (R&D), support equipment, contract services, and all associated costs specifically identified to support the JPRA headquarters at Ft. Belvoir, VA and other JPRA operating locations and project sites.

Funding provides USJFCOM capability to conduct Personnel Recovery advanced concept testing and development, identify, research, and exploit technologies to provide COCOM and Service Personnel Recovery capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Personnel Recovery Mission Software Development (PRMS)	0.383	0.426	1.827	1.900
(U) Personnel Recovery Extraction using Smart Sensors (PRESS)	0.118	0.132	1.120	0.200
(U) Technology Assessment	0.430	0.430	2.430	3.716
(U) Total Cost	0.931	0.988	5.377	5.816

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

Contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)**

PROJECT NUMBER AND TITLE: **691X EO/IR Warning & Countermeasures Tech**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Personnel Recovery Mission Software Development (PRMS)	TBD	TBD		0.416	Mar-06	0.430	Mar-07	0.500	Mar-08	0.600	Apr-09	Continuing	TBD	TBD
Personnel Recovery Extraction using Smart Sensors (PRESS)	TBD	TBD		0.118	May-06	0.132	May-07	0.140	May-08	0.200	May-09	Continuing	TBD	TBD
Tech Assessment				0.397	Mar-06	0.426	Mar-07	4.737	Mar-08	5.016	Apr-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.931		0.988		5.377		5.816		Continuing	TBD	TBD
Remarks:														
(U) Support														
													0.000	0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
													0.000	0.108
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.108
Remarks:														
(U) Management														
													0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.931		0.988		5.377		5.816		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)	PROJECT NUMBER AND TITLE 691X EO/IR Warning & Countermeasures Tech

JPRA

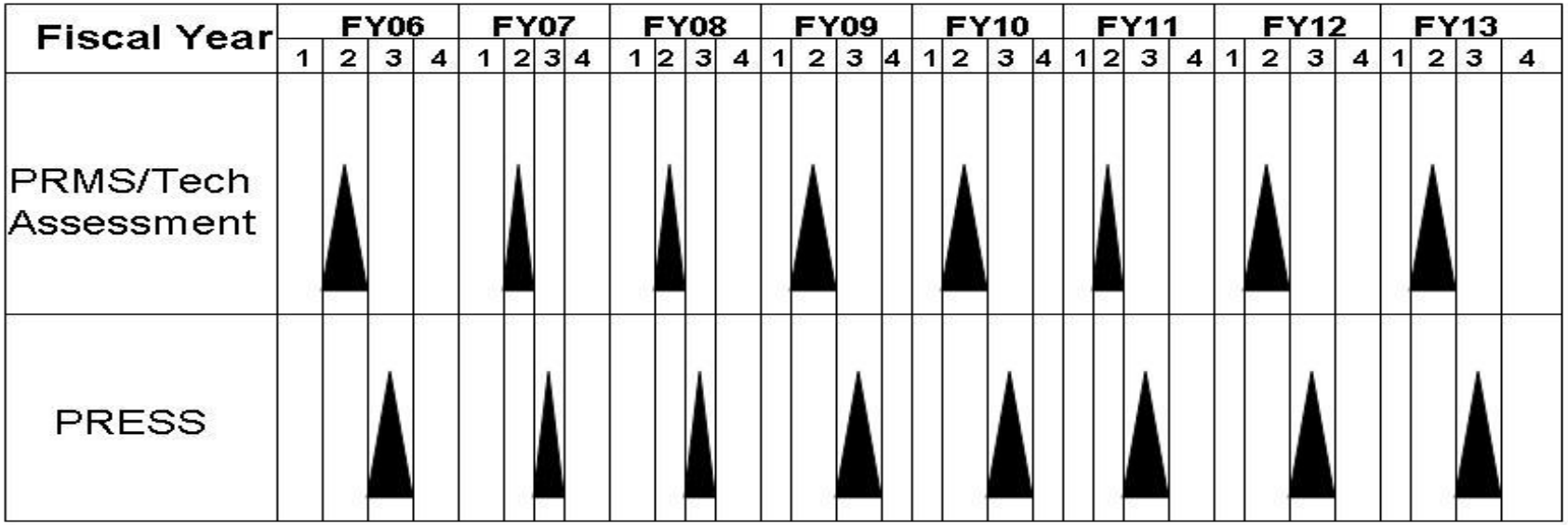

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)	PROJECT NUMBER AND TITLE: 691X EO/IR Warning & Countermeasures Tech

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) PRMS	2Q	2Q	2Q	2Q
(U) PRESS	3Q	3Q	3Q	3Q
(U) Technology Assessment	2Q	2Q	2Q	2Q

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PE NUMBER: 0901212F
PE TITLE: SERVICE-WIDE SUPPORT

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901212F SERVICE-WIDE SUPPORT

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	6.495	3.041	0.000	0.000	0.000	0.000	0.000	0.000
5256 Military Flight Operations Quality A	0.000	0.000	6.495	3.041	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

Following direction from the Office of the Secretary of Defense provided through PBD 705, Mishap Reduction Initiatives, 4 Dec 2004, and the OSD Military Flight Operations Quality Assurance (MFOQA) Program Implementation memo of 11 Oct 2005, the Air Force has initiated development of MFOQA processes for various aircraft across the mission spectrum.

MFOQA is the analysis and trending of aircraft system and flight performance data to proactively enhance combat readiness through improvements in operations, maintenance, training and safety functions. Analysis of recorded data identifies and quantifies both normal and hazardous flight environments and, where applicable, enables the monitoring of control measure effectiveness. Benefits are derived through a variety of analysis processes, including the operational trending of aggregate data and post-mission playback features for both aircrew flight operations training and maintenance diagnostics.

MFOQA provides tools for commanders to: establish a baseline for normal operations; identify, mitigate, and monitor operational risks while detecting precursors to aviation mishaps; and identify operational inefficiencies. MFOQA gives capabilities to multiple levels and functional areas to improve and enhance mission-effectiveness through awareness of abnormal trends, continuous knowledge of aircraft systems performance, and insight into the effectiveness of procedures, policy, and aircrew training on actual mission accomplishment.

MFOQA programs realize the following goals:
Mishap Reduction - Reduces the statistical rate of aviation mishaps by identifying risks, implementing effective control measures, and enabling continuous monitoring of risk mitigation.
Operational Efficiency - improves aircrew training effectiveness, reduces aircraft downtime, and modifies operations to reduce consumption and increase system component life cycles.
Operational Readiness - Enhances war-fighting capabilities by preserving resources available for operational requirements and improving mission performance.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget			6.425	3.000
(U)	Current PBR/President's Budget	0.000		6.425	3.000
(U)	Total Adjustments	0.000			
(U)	Congressional Program Reductions				
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings				
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				

Exhibit R-2a, RDT&E Project Justification		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE: 5256 Military Flight Operations Quality A

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5256	Military Flight Operations Quality A	0.000	0.000	6.495	3.041	0.000	0.000	0.000	0.000	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Following direction from the Office of the Secretary of Defense provided through PBD 705, Mishap Reduction Initiatives, 4 Dec 2004, and the OSD Military Flight Operations Quality Assurance (MFOQA) Program Implementation memo of 11 Oct 2005, the Air Force has initiated development of MFOQA processes for various aircraft across the mission spectrum.

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Mishap Reduction - Reduces the statistical rate of aviation mishaps by identifying risks, implementing effective control measures, and enabling continuous monitoring of risk mitigation.
Operational Efficiency - improves aircrew training effectiveness, reduces aircraft downtime, and modifies operations to reduce consumption and increase system component life cycles.
Operational Readiness - Enhances war-fighting capabilities by preserving resources available for operational requirements and improving mission performance.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Develop flight data collection modifications on strategic airlift aircraft, providing insight into world-wide transportation operations. These upgrades provide information generated inflight for routine analysis to identify deviations from expected procedures and parameters.			6.495	3.041
(U)	Total Cost	0.000	0.000	6.495	3.041

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE 5256 Military Flight Operations Quality A

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) 91212F-3010 BP 10		0.627	7.483	10.692	4.024					
(U) 41130F-3010 BP 11			0.470	0.470						
(U) 84740F-3010 BP 11		2.803	0.613							
(U) 91212F-3400		2.990	2.586	3.996	5.031	5.598				

(U) D. Acquisition Strategy

The Lead Operating MAJCOMs (as defined by AFPD 10-9, Lead Operating Command Weapons System Management), in conjunction with the Air Force Safety Center and the Aeronautical System Center will determine the feasibility of each aircraft platform for MFOQA process implementation. Analysis software development and process implementation will occur on a staggered schedule, approximately 2 aircraft fleets per year.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901212F SERVICE-WIDE SUPPORT**

PROJECT NUMBER AND TITLE: **5256 Military Flight Operations Quality A**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
IT Solutions (GSA)	TM	Cherry Hill, NJ						3.000	Dec-08	2.000	Dec-09	Continuing	TBD	TBD
Encore (Northrop Grumman)	TM	Cherry Hill, NJ						3.495	Dec-08	1.041	Dec-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		6.495		3.041		Continuing	TBD	TBD
Remarks:														
(U) Support													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Total Cost			0.000	0.000		0.000		6.495		3.041		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE 5256 Military Flight Operations Quality A

Military Flight Operations Quality Assurance (MFOQA)

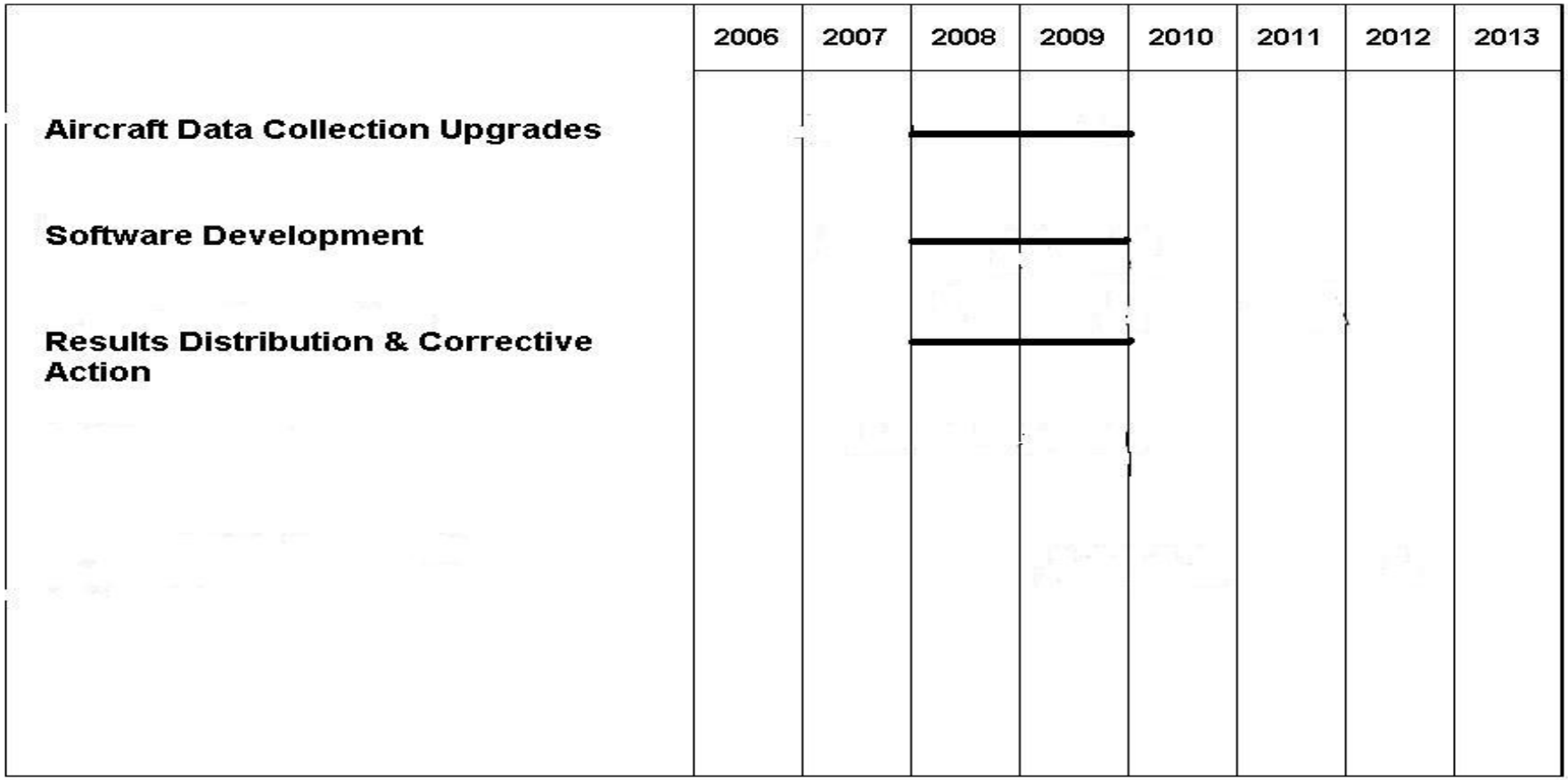

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901212F SERVICE-WIDE SUPPORT	PROJECT NUMBER AND TITLE: 5256 Military Flight Operations Quality A

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Aircraft Data Collection Upgrades			1-4Q	1-4Q
(U) Aircraft Data Collection Upgrades			1-4Q	1-4Q
(U) Aircraft Fleet MFOQA Analysis Software Development			1-4Q	1-4Q
(U) T-6 IDARS Upgrade			1Q	
(U) C-17 Data Recorder Upgrade			1Q	1Q

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PE NUMBER: 0901218F
PE TITLE: Civilian Compensation Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901218F Civilian Compensation Program

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	13.759	7.750	8.070	8.191	8.393	8.524	8.690	8.867	Continuing	TBD
4139 Civilian Compensation Program	13.759	7.750	8.070	8.191	8.393	8.524	8.690	8.867	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element provides for payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81. The Department of Labor (DOL) administers this program and charges the Department of the Air Force for its employee costs; therefore, this is a MUST PAY bill for Air Force. The PE excludes manpower authorizations and costs.

This Program Element (PE) is in Budget Activity 7 in support of payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	7.339	7.779	7.984	8.082
(U)	Current PBR/President's Budget	13.759	7.750	8.070	8.191
(U)	Total Adjustments	6.420			
(U)	Congressional Program Reductions		-0.029		
	Congressional Rescissions				
	Congressional Increases				
	Reprogrammings	6.420			
	SBIR/STTR Transfer				
(U)	Significant Program Changes:				
	N/A				

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901218F Civilian Compensation Program	PROJECT NUMBER AND TITLE: 4139 Civilian Compensation Program	

Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
4139 Civilian Compensation Program	13.759	7.750	8.070	8.191	8.393	8.524	8.690	8.867	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program element provides for payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81. The Department of Labor (DOL) administers this program and charges the Department of the Air Force for its employee costs; therefore, this is a MUST PAY bill for Air Force. The PE excludes manpower authorizations and costs.

This Program Element (PE) is in Budget Activity 7 in support of payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Accomplishments/Planned Program				
(U) Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.	13.759	7.750	8.070	8.191
(U) Total Cost	13.759	7.750	8.070	8.191

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Not applicable										

(U) D. Acquisition Strategy

Not Applicable.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901218F Civilian Compensation Program**

PROJECT NUMBER AND TITLE: **4139 Civilian Compensation Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Continue development of compensation plan				13.759	Aug-06	7.750	Aug-07	8.070	Aug-08	8.191	Aug-09	Continuing	TBD	TBD
Subtotal Product Development			0.000	13.759		7.750		8.070		8.191		Continuing	TBD	TBD
Remarks:														
(U) Support														
Not Applicable													0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Test & Evaluation														
Not Applicable													0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) Management														
Not Applicable													0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000		0.000	0.000	0.000
Remarks:														
(U) NA														
Not Applicable													0.000	
(U) Total Cost			0.000	13.759		7.750		8.070		8.191		Continuing	TBD	TBD
Remarks:														

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2007**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901218F Civilian Compensation Program**	PROJECT NUMBER AND TITLE **4139 Civilian Compensation Program**

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901218F Civilian Compensation Program	PROJECT NUMBER AND TITLE: 4139 Civilian Compensation Program

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Continue development of compensation program	1-4Q	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0901220F
PE TITLE: PERSONNEL ADMINISTRATION

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	15.078	18.193	16.832	18.781	10.774	12.190	12.427	12.679	Continuing	TBD
5194	Force Development Transformation	15.078	18.193	16.832	18.781	10.774	12.190	12.427	12.679	Continuing	TBD

In FY06, PE 0901220F, Personnel Administration, includes new start RDT&E efforts.

(U) A. Mission Description and Budget Item Justification

The Force Development Transformation (FDT) project under the Personnel Administration program funds operational developments necessary to acquire, field, and modify segments of an integrated Air Force Human Resource (HR) customer service delivery system that will effectively incorporate personnel, manpower, and pay services for the Total Force - Active Duty, Reserve, Guard, and Civilians. It supports the transition from the current AF personnel HR system enterprise (Military Personnel Data System (MilPDS) plus other AF unique applications to a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). FDT is supported through the AF architecture enterprise using Enterprise Resource Planning (ERP) Commercial Off The Shelf (COTS) products. FDT's most important enabler is the virtual Personnel Services Center (vPSC), which combines what was previously referred to as Personnel Services Delivery System (PSDS) and virtual Personnel Center (vPC). vPSC is an IT spiral development project that will provide the Air Force unique HR capabilities not delivered in DIMHRS, and will ensure MilPDS and other legacy systems are compatible with DIMHRS. vPSC will provide "one-stop shopping" to airmen in a seamless, integrated fashion through web-enabled self-service functionality. vPSC will support the migration of legacy applications (that will not be subsumed by DIMHRS) and other information technology support to FDT.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	16.150	18.262	12.221	16.442
(U)	Current PBR/President's Budget	15.078	18.193	16.832	18.781
(U)	Total Adjustments	-1.072	-0.069		
(U)	Congressional Program Reductions				
	Congressional Rescissions	-0.001	-0.069		
	Congressional Increases				
	Reprogrammings	-0.617			
	SBIR/STTR Transfer	-0.454			

(U) Significant Program Changes:

Funding increased $4.5M in FY2008 and $2.2M in FY2009 by OSD for Air Force integration with DIMHRS

Exhibit R-2a, RDT&E Project Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION

PROJECT NUMBER AND TITLE: 5194 Force Development Transformation

Cost ($ in Millions)		FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5194	Force Development Transformation	15.078	18.193	16.832	18.781	10.774	12.190	12.427	12.679	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Force Development Transformation (FDT) project under the Personnel Administration program funds operational developments necessary to acquire, field, and modify segments of an integrated Air Force Human Resource (HR) customer service delivery system that will effectively incorporate personnel, manpower, and pay services for the Total Force - Active Duty, Reserve, Guard, and Civilians. It supports the transition from the current AF personnel HR system enterprise (Military Personnel Data System (MilPDS) plus other AF unique applications to a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). FDT is supported through the AF architecture enterprise using Enterprise Resource Planning (ERP) Commercial Off The Shelf (COTS) products. FDT's most important enabler is the virtual Personnel Services Center (vPSC), which combines what was previously referred to as Personnel Services Delivery System (PSDS) and virtual Personnel Center (vPC). vPSC is an IT spiral development project that will provide the Air Force unique HR capabilities not delivered in DIMHRS, and will ensure MilPDS and other legacy systems are compatible with DIMHRS. vPSC will provide "one-stop shopping" to airmen in a seamless, integrated fashion through web-enabled self-service functionality. vPSC will support the migration of legacy applications (that will not be subsumed by DIMHRS) and other information technology support to FDT.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) Develop application modules for the Force Development Tool Kit (FDTK) and legacy system migration	7.765	13.554	7.279	10.528
(U) Integrate development hardware and software for vPSC.	4.186	0.748	1.753	3.353
(U) Develop a GCSS-AF compliant systems enterprise framework to transition from MilPDS to DIMHRS. This effort will integrate Air Force-unique, web-enabled, self-service capabilities with existing functionality.	0.737	1.400	0.800	0.000
(U) Program Management Support	2.390	2.491	2.500	2.700
(U) Air Force DIMHRS Integration			4.500	2.200
(U) Total Cost	15.078	18.193	16.832	18.781

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF WSC 834010 General Information	2.273	3.914	1.397	0.768	0.444	0.433	0.468	0.444	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE: 5194 Force Development Transformation	

(U) C. Other Program Funding Summary ($ in Millions)

(U) Technologies, Operations and Maintenance, AF	27.812	22.013	19.952	21.340	18.256	14.734	15.867	16.299	Continuing	TBD

(U) D. Acquisition Strategy

Force Development Transformation employs an evolutionary acquisition strategy with spiral development contracts that are awarded in a competitive environment.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901220F PERSONNEL ADMINISTRATION**

PROJECT NUMBER AND TITLE: **5194 Force Development Transformation**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
FDTK	IDIQ	CellExchange Federal, Inc. Framingham, MA	0.000	7.765	Mar-06	13.554	Oct-06	7.279	Oct-07	10.528	Oct-08	Continuing	TBD	TBD
Enterprise Framework	IDIQ	CellExchange, Federal, Inc. Framingham, MA	0.000	0.737	Mar-06	1.400	Dec-06	0.800	Dec-07	0.000		0.000	2.937	TBD
Air Force deployment of DIMHRS	TBD	TBD	0.000	0.000		0.000		4.500	Dec-07	2.200	Dec-08	Continuing	TBD	TBD
Subtotal Product Development			0.000	8.502		14.954		12.579		12.728		Continuing	TBD	TBD
Remarks:														
(U) Support														
Hardware, Software Integration	FFP	AFPC and CellExchange Federal, Inc. Framingham, MA	0.000	3.981	May-06	0.000		1.000	Mar-08	2.723	Mar-09	Continuing	TBD	TBD
Subtotal Support			0.000	3.981		0.000		1.000		2.723		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Hardware/Software Test & Evaluation	T&M	Diversified Technical Services Inc, Randolph AFB, TX	0.000	0.205	Dec-05	0.748	Oct-07	0.753	Jan-08	0.630	Jan-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.205		0.748		0.753		0.630		Continuing	TBD	TBD
Remarks:														
(U) Management														
Program Management Office Support	FFP/LOE	Dynamics Research Corp, San Antonio, TX	0.000	2.390	Mar-06	2.491	Mar-07	2.500	Mar-08	2.700	Mar-09	Continuing	TBD	TBD
Subtotal Management			0.000	2.390		2.491		2.500		2.700		Continuing	TBD	TBD
Remarks:														

Exhibit R-3, RDT&E Project Cost Analysis							DATE: February 2007		
BUDGET ACTIVITY: 07 Operational System Development			PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION			PROJECT NUMBER AND TITLE: 5194 Force Development Transformation			
(U) Total Cost	0.000	15.078	18.193	16.832	18.781	Continuing	TBD	TBD	

Exhibit R-4, RDT&E Schedule Profile		DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE 5194 Force Development Transformation

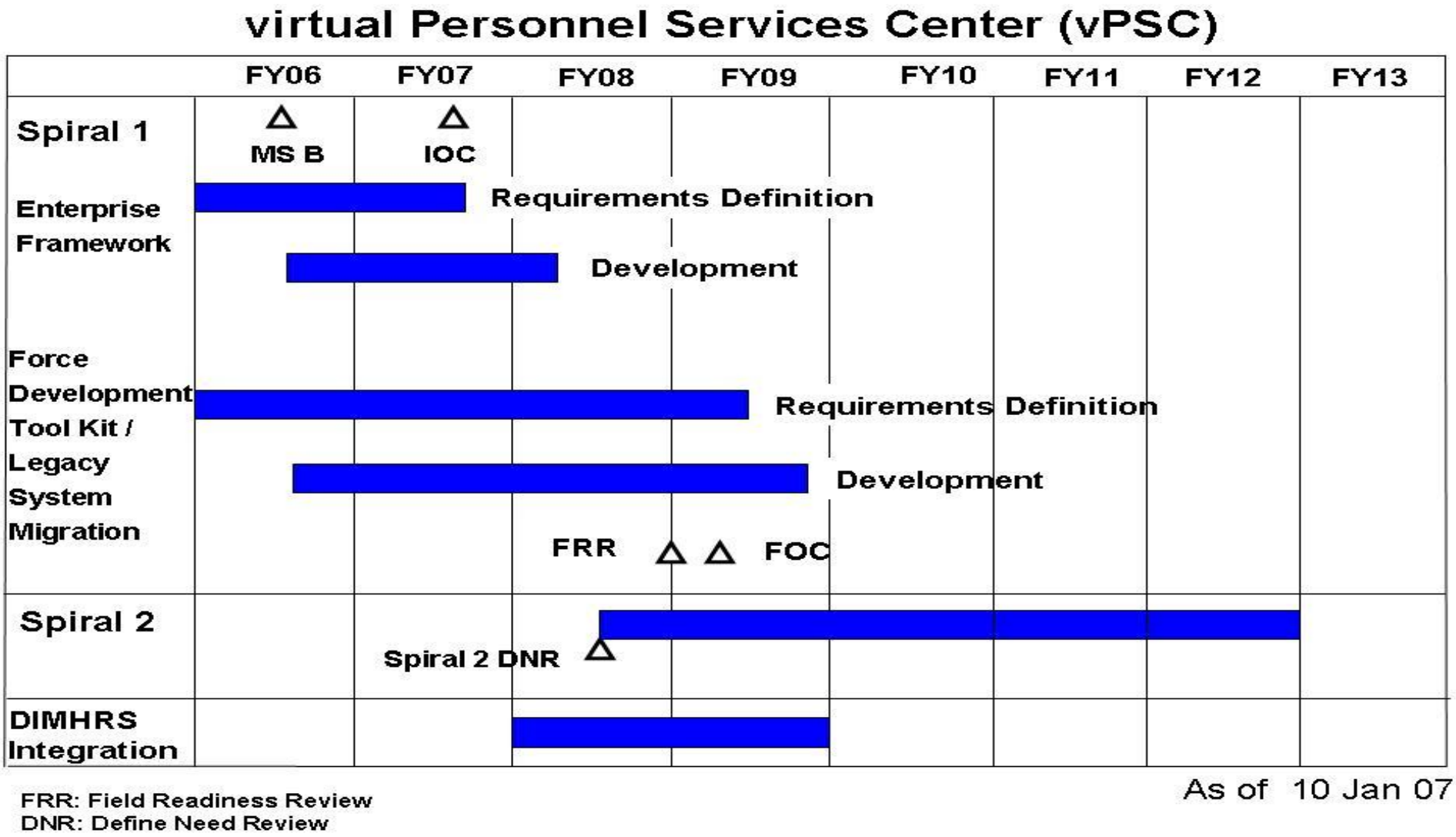

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE: 5194 Force Development Transformation

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) vPSC Spiral 1 Milestone B	2Q			
(U) Enterprise Framework Development	3Q	1-4Q	1Q	
(U) Force Development Toolkit Development	3Q	1-4Q	1-4Q	1-2Q
(U) vPSC Spiral 1 IOC		3Q		
(U) vPSC Spiral 2 DNR			3Q	
(U) vPSC Spiral 2 FRR				1Q
(U) vPSC Spiral 1 FOC				2Q
(U) DIMHRS Integration			1-4Q	1-4Q

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PE NUMBER: 0901538F
PE TITLE: Financial Management Information Systems (FMIS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	12.797	27.425	47.105	32.047	19.499	0.000	0.000	0.000	Continuing	TBD
5036	Financial Information Resource System (FIRST)	9.256	16.134	4.413	4.495	4.302	0.000	0.000	0.000	Continuing	TBD
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	3.541	11.291	42.692	27.552	15.197	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software effort that will provide an integrated, modern, seamless financial management system capability that enables authorized users (from Air Staff to base level) to plan, program, and formulate their budgets. FIRST is ultimately envisioned to be the foundation for the Air Force's (AF) planning, programming, and budgeting system. FIRST is being developed using the spiral development approach and maximizes use of commercial-off-the-shelf (COTS) products. The Budget Formulation increment capability supports programming, formulation of budget requirements and deliberation of budget options, budget justification processes, and documentation. It encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the AF budget. Additionally, the program will continue to incorporate legacy systems as required and establish a financial enterprise data warehouse capability for the Air Force. This capability is the Commanders Decision Support Services (CDSS).

The Defense Enterprise Accounting Management System (DEAMS) is a COTS-based software configuration effort that will provide a modern accounting and finance system. DEAMS will replace existing accounting and finance legacy systems to provide core funds execution management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. The AF increment will build on a USTRANSCOM technology demonstration to include AF investment funding, commitment accounting, and Air Force Working Capital Fund (AFWCF) management. DEAMS will support elimination of unnecessary duplicative systems. DEAMS provides the capability to be utilized by other services within the DoD. Additionally, DEAMS will continue to incorporate legacy systems as required and establish a financial enterprise data warehouse capability for the Air Force.

FIRST, DEAMS, and CDSS will comply with: the Clinger-Cohen Act; the Business Enterprise Architecture (BEA); Chief Financial Officer (CFO) Act; DoD Information Technology Standards Registry (DISR) guidelines, and; Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines. FIRST, DEAMS, and CDSS will be integrated into the GCSS-AF architecture.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2007
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901538F Financial Management Information Systems (FMIS)

(U) B. Program Change Summary ($ in Millions)

		FY 2006	FY 2007	FY 2008	FY 2009
(U)	Previous President's Budget	17.281	27.541	16.373	16.715
(U)	Current PBR/President's Budget	12.797	27.425	47.105	32.047
(U)	Total Adjustments	-4.484	-0.116		
(U)	Congressional Program Reductions		-0.012		
	Congressional Rescissions		-0.104		
	Congressional Increases				
	Reprogrammings	-3.999			
	SBIR/STTR Transfer	-0.485			

(U) Significant Program Changes:

FY08-FY10 funds were re-aligned from FIRST to DEAMS. DEAMS will provide the enterprise accounting capability previously programmed to be developed in FIRST.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5036	Financial Information Resource System (FIRST)	9.256	16.134	4.413	4.495	4.302	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software effort that will provide an integrated, modern, seamless financial management system that enables authorized users (from Air Staff to base level) to plan, program, and formulate their budgets. FIRST is ultimately envisioned to be the foundation for the Air Force's (AF) planning, programming, and budgeting system. FIRST is being developed using the spiral development approach and maximizes commercial-off-the-shelf (COTS) products. The Budget Formulation increment capability supports programming, formulation of budget requirements and deliberation of budget options, budget justification processes, and documentation. It encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the AF budget. Additionally, the program will continue to incorporate legacy systems as required and establish a financial enterprise data warehouse capability for the Air Force. This capability is the Commanders Decision Support Services (CDSS).

FIRST will comply with: the Clinger-Cohen Act; the Business Enterprise Architecture (BEA); Chief Financial Officer (CFO) Act; DoD Information Technology Standards Registry (DISR) guidelines, and; Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines. FIRST will be integrated into the GCSS-AF architecture.

The Budget Formulation increment includes three spirals as well as planned follow on capabilities. Spiral One is deployed and provides data query and reporting capability (to include trend and statistical analysis). Spiral Two (Pilot) is in development and will enable user operational assessment of key budget options and deliberation as well as selected force programming capabilities. Spiral Three will provide complete budget programming, budget requirement formulation, budget option deliberation, force programming, flying hour cost modeling, civilian personnel cost modeling and exhibits, interfaces to related systems, and electronic submission of budget to OSD. Follow on efforts include replacement of legacy budget justification capability, implementation of the Standard Financial Information Structure (SFIS), and military personnel cost modeling through the Future Evolution and Integration Increment.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U)	Application Development & Test for Budget Formulation (BF) Increment capability	6.190	11.997	2.913	0.000
(U)	Future Evolution & Integration (FE&I) Increment	0.000	0.000	0.500	3.277
(U)	Integration/Support/Analysis (Includes Program Management Spt, GCSS-AF Test & Integration, Government Independent Test & Assessment (JITC), Responsible Test Organization (RTO), and Commanders Decision Support Services (CDSS))	3.066	4.137	1.000	1.218
(U)	Total Cost	9.256	16.134	4.413	4.495

Exhibit R-2a, RDT&E Project Justification		DATE February 2007
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F Financial Management Information Systems (FMIS)**	PROJECT NUMBER AND TITLE **5036 Financial Information Resource System (FIRST)**

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF (PE 0901538F)	0.739	0.786	0.804	0.824	0.845	0.860	0.879	0.898	Continuing	TBD
(U) O&M, AF (PE 0308610F)	3.180	1.076	3.695	3.765	3.269	2.888	3.974	4.062	Continuing	TBD

(U) D. Acquisition Strategy

The FIRST program will execute an incremental delivery of COTS-based budget/financial management capability that subsumes and/or replaces legacy systems. FIRST is being developed using a Cost Plus Award Fee (CPAF) contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2007**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901538F Financial Management Information Systems (FMIS)**

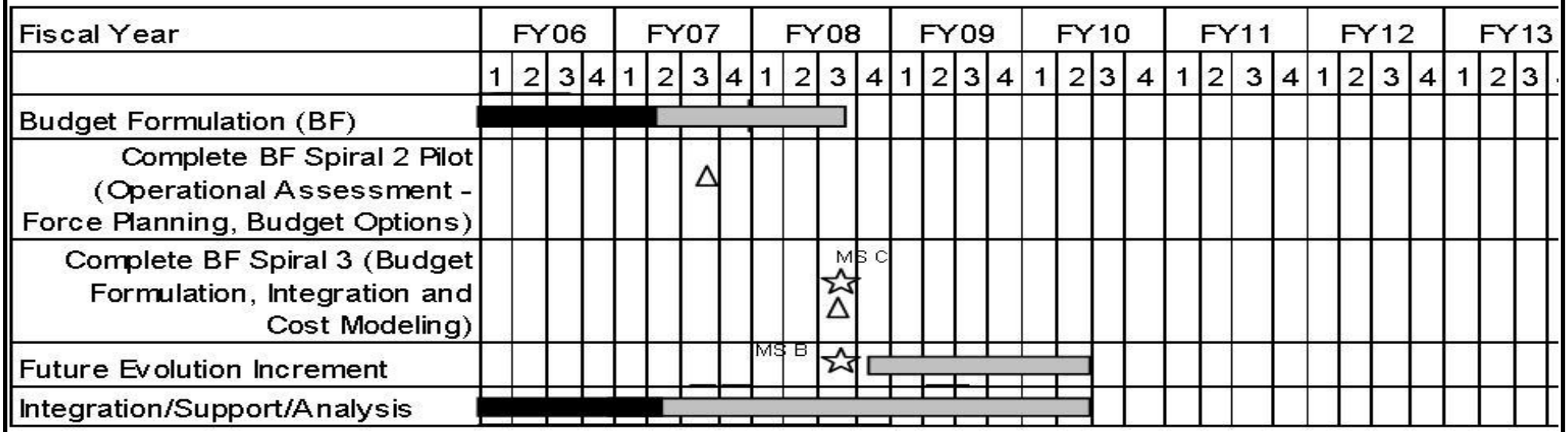
PROJECT NUMBER AND TITLE: **5036 Financial Information Resource System (FIRST)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
Application Development and Test for BF/FE&I Increments	C/CPAF	Accenture, Fairborn, Ohio		6.190	Apr-06	11.997	Jan-07	3.413	Nov-07	3.277	Nov-08	Continuing	TBD	83.171
Subtotal Product Development			0.000	6.190		11.997		3.413		3.277		Continuing	TBD	83.171
Remarks:														
(U) Test & Evaluation														
GCSS-AF Integration	C/CPAF	LM. Fairborn, Ohio		0.981	Dec-05	1.550	Jan-07	0.300	Dec-07	0.300	Dec-08	Continuing	TBD	TBD
Joint Interoperability Test Center (JITC)	MIPR	JITC, Fort Huachuca, Arizona		0.041	Oct-05	0.110	Jan-07	0.050	Oct-07	0.050	Oct-08	Continuing	TBD	TBD
Responsible Test Organization (RTO)	MIPR	643 ELSS/EIRT, Gunter AFB, Al		0.000		0.176	Jan-07	0.045	Jan-08	0.045	Jan-09	Continuing	TBD	TBD
Test Data Range (TDR)	MIPR	643 ELSS/EIRT, Gunter AFB, Al		0.070	Apr-06	0.100	Apr-07	0.050	Apr-08	0.050	Apr-09	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	1.092		1.936		0.445		0.445		Continuing	TBD	TBD
Remarks:														
(U) Program Management Activities														
A&AS Support	C/LOE	Titan Sencom		1.183	Aug-06	1.368	Jan-07	0.255	Jan-08	0.473	Jan-09	Continuing	TBD	TBD
Program Office Spt	Various	Various		0.791	Apr-06	0.833	Jan-07	0.300	Oct-07	0.300	Oct-08	Continuing	TBD	
Subtotal Program Management Activities			0.000	1.974		2.201		0.555		0.773		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	9.256		16.134		4.413		4.495		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)

U.S. AIR FORCE

FIRST SCHEDULE



☆ *Major Event or Milestone*
Planned Ongoing Activity
Ongoing Activity that is Complete
▲ *Completed Event*
△ *Planned Task(s)*

As of: Jan 9 2007

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Exhibit R-4a, RDT&E Schedule Detail			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)	

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) Complete Budget Formulation Spiral 2 Pilot		3Q		
(U) Complete Budget Formulation Spiral 3 (Milestone C)			3Q	
(U) Future Evolution & Integration Increment (Milestone B)			3Q	
(U) Integration/Support/Analysis	1-4Q	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)	

	Cost ($ in Millions)	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	3.541	11.291	42.692	27.552	15.197	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Defense Enterprise Accounting Management System (DEAMS) is a COTS-based software configuration effort that will provide a modern accounting and finance system. The system will replace existing accounting and finance legacy systems to provide core funds execution management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. The AF increment will build on a USTRANSCOM technology demonstration to include AF investment funding, commitment accounting, and Air Force Working Capital Fund (AFWCF) management. DEAMS will be compliant with the Clinger-Cohen Act, Business Enterprise Architecture (BEA), and integrate into Global Combat Support System-Air Force (GCSS-AF). The COTS product is Joint Financial Management Improvement Program (JFMIP) compliant. DEAMS will support elimination of unnecessary duplicative systems. DEAMS will also provide the capacity to expand to other services within the DoD.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2006	FY 2007	FY 2008	FY 2009
(U) DEAMS Application Development and Test for AF Increment Capability (includes GCSS/DISA hardware)	0.000	1.445	22.929	14.725
(U) Integration/Support/Analysis (Includes Program Management Spt, Independent Verification and Validation (IV&V), Responsible Test Organization (RTO), Test Data Range (TDR)).	3.541	9.846	19.763	12.827
(U) Total Cost	3.541	11.291	42.692	27.552

(U) C. Other Program Funding Summary ($ in Millions)

	FY 2006 Actual	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	Cost to Complete	Total Cost
(U) Transportation Working Capital Fund (TWCF)	29.084	21.009	34.107	13.000	6.200	6.200	6.200	6.200	15.360	150.435
(U) 3400 (PE 38610F)	10.452	14.517	5.500	8.130	7.690	28.760	20.700	15.610	122.960	254.673
(U) 3080 (PE 91538F)	0.000	0.000	0.038	1.500	15.466	17.355	17.737	18.127	0.000	70.223

(U) D. Acquisition Strategy

The DEAMS program will execute an incremental delivery of COTS-based accounting and financial management capabilities and subsume non-CFO compliant legacy functionality as capability is delivered. Contracts will be awarded using the fixed price provisions of the DoD Enterprise Software Initiative contracts for COTS applications and System Integration Services Blanket Purchase Agreement.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2007

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)

PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2006 Cost	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	FY 2008 Cost	FY 2008 Award Date	FY 2009 Cost	FY 2009 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development														
DEAMS Application Development and Test for AF Increment Capability	C/FPI	TBD	0.000	0.000		1.445	Mar-07	19.026	Aug-08	14.725	Aug-09	Continuing	TBD	TBD
GCSS/DISA Hardware	MIPR	754 ELSG, Gunter AFB, AL	0.000	0.000		0.000		3.903	Dec-07	0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		1.445		22.929		14.725		Continuing	TBD	TBD
Remarks:														
(U) Test & Evaluation														
Test Data Range	MIPR	754 ELSG, Gunter AFB, AL	0.000	0.000		0.432	Jan-07	0.329	Jan-08	0.340	Jan-09	Continuing	TBD	TBD
Responsible Test Organization	MIPR	754 ELSG, Gunter AFB, AL	0.000	0.000		0.317	Jan-07	0.328	Dec-07	0.339	Dec-08	Continuing	TBD	TBD
Joint Interoperability Test Center (JITC)	MIPR	JITC, Fort Huachuca, AZ	0.000	0.052	May-06	0.091	Jan-07	0.094	Dec-07	0.097	Dec-08	Continuing	TBD	TBD
Air Force Operational Test & Evaluation Center (AFOTEC)	MIPR	AFOTEC, Kirtland AFB, NM	0.000	0.006	Oct-05	0.110	Jan-07	0.114	Oct-07	0.118	Oct-08	Continuing	TBD	TBD
Independent Verification and Validation (IV&V)	C/T&M	CACI, Fairborn OH	0.000	0.855	Sep-06	3.138	Mar-07	0.545	Mar-08	0.000		Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.913		4.088		1.410		0.894		Continuing	TBD	TBD
Remarks:														
(U) Program Management Activities														
A&AS Support	C/LOE	Titan Sencom	0.000	1.915	Mar-06	4.632	Jan-07	5.194	Dec-07	5.375	Dec-08	Continuing	TBD	TBD
Program Office Support	Various	Various	0.000	0.242	Mar-06	0.799	Jan-07	12.822	Nov-07	6.221	Nov-08	Continuing	TBD	TBD
MITRE	MIPR	MITRE, FFRDC, Hanscom AFB, MA	0.000	0.471	Oct-05	0.327	Jan-07	0.337	Nov-07	0.337	Nov-08	Continuing	TBD	TBD
Subtotal Program Management Activities			0.000	2.628		5.758		18.353		11.933		Continuing	TBD	TBD
Remarks:														
(U) Total Cost			0.000	3.541		11.291		42.692		27.552		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

U.S. AIR FORCE

DEAMS AF Schedule

Fiscal Year	FY 06				FY 07				FY 08				FY 09				FY 10				FY 11 - FY13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
AF Inc MS A								*																
AF Inc System Integration Award										*														
AF Inc Blueprinting																								
AF Inc MS B												*												
Spiral 1 Commit Acct													△											
Spiral 2 General Funds															△									
Spiral 3 Air Force Working Capital Fund																		△						
FDDR																				*				
Integration/Support/Analysis																								

Legend:

- Completed Event
- Future Event
- * Key Event/Milestone
- △ Capability Delivery

As of 10 Jan 07

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2007
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F Financial Management Information Systems (FMIS)	PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

(U) Schedule Profile	FY 2006	FY 2007	FY 2008	FY 2009
(U) AF Inc 2 MS A		4Q		
(U) AF Inc 2 SI Award			2Q	
(U) AF Inc 2 Sys Dev Blueprinting			3-4Q	
(U) AF Inc 2 Sys Dev MS B			4Q	
(U) AF Inc 2 Sys Dev Spiral 1--Commitment Accounting (Cut-Over/Trans)				1Q
(U) AF Inc 2 Sys Dev Spiral 2--General Funds (Cut-Over/Trans)				3Q
(U) Integration/Support/Analysis	1-4Q	1-4Q	1-4Q	1-4Q