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**Department of Defense
Fiscal Year (FY) 2012 Budget Estimates**

February 2011



Air Force

Justification Book Volume 3

Research, Development, Test & Evaluation, Air Force

Volume III - Part 2

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Fiscal Year 2012 Program And Budget Estimates
 RDT&E Descriptive Summaries
 Budget Activities
 February 2011

INTRODUCTION AND EXPLANATION OF CONTENTS

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

*Budget Activity 07: Operational Systems Development
Appropriation 3600: Research, Development, Test & Evaluation, Air Force*

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***Budget Activity 07: Operational Systems Development
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***Budget Activity 07: Operational Systems Development
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National Security Space Office	0305924F	211	07.....	Volume 3 - 347
Network Centric Collaborative Targeting	0305221F	206	07.....	Volume 3 - 273
OPERATIONAL SUPPORT AIRLIFT	0401314F	223	07.....	Volume 3 - 495
OTHER FLIGHT TRAINING	0804743F	232	07.....	Volume 3 - 593
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**In the FY12 PB Justification Book Submission for RDTE Volume 3,
Exhibits in Budget Activity 7 have been split into two books,
Volume 3 - Part 1 and Volume 3 - Part 2.**

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Air Force • President's Budget FY 2012 • RDT&E Program

Exhibit R-1

(Listing by Budget Activity, then Program Element Number)

BA# 07: Operational Systems Development

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
107	07	0603423F	Global Positioning System III - Operational Control Segment	-	-	390.889	-	390.889
108	07	0604263F	CVLSP	3.847	-	5.365	-	5.365
109	07	0605018F	Air Force Integrated Personnel and Pay System (AF-IPPS)	20.405	43.300	91.866	-	91.866
110	07	0605024F	Anti-Tamper Technology Executive Agent	45.828	42.255	35.467	-	35.467
184	07	0305111F	WEATHER SERVICE	33.151	32.373	31.084	-	31.084
185	07	0305114F	Air Traffic Control/Approach/Landing System (ATCALs)	12.939	33.268	63.367	-	63.367
186	07	0305116F	AERIAL TARGETS	28.981	63.573	50.620	-	50.620
189	07	0305128F	Security And Investigative Activities	0.716	0.469	0.366	-	0.366
190	07	0305146F	Defense Joint Counter Intelligence Program	0.039	0.040	0.039	-	0.039
192	07	0305164F	NAVSTAR Global Positioning System User Equipment Space	131.564	165.936	133.601	-	133.601
193	07	0305165F	NAVSTAR GPS (Space)	50.527	34.471	17.893	-	17.893
195	07	0305173F	Space & Missile Test & Evaluation Center	3.578	4.572	196.254	-	196.254
196	07	0305174F	SPACE WARFARE CENTER	2.948	2.929	2.961	-	2.961
197	07	0305182F	Spacelift Range System	10.973	9.933	9.940	-	9.940
198	07	0305193F	INTEL SPT TO INFO OPS	2.231	1.254	1.271	-	1.271
200	07	0305205F	Endurance Unmanned Aerial Vehicles	48.533	-	52.425	73.000	125.425
201	07	0305206F	Airborne Reconnaissance Systems	169.206	168.963	106.877	-	106.877
202	07	0305207F	Manned Reconnaissance System	18.884	15.337	13.049	-	13.049

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Exhibit R-1

(Listing by Budget Activity, then Program Element Number)

BA# 07: Operational Systems Development

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
203	07	0305208F	Distributed Common Ground Systems	82.059	93.398	90.724	-	90.724
204	07	0305219F	PREDATOR DEVELOPMENT/FIELDING	23.661	28.913	14.112	-	14.112
205	07	0305220F	GLOBAL HAWK DEVELOPMENT/FIELDING	309.158	251.318	423.462	-	423.462
206	07	0305221F	Network Centric Collaborative Targeting	8.126	13.367	7.348	-	7.348
207	07	0305265F	GPS III Space Segment	410.469	828.171	463.081	-	463.081
208	07	0305614F	JSpOC Mission System	87.465	132.706	118.950	-	118.950
209	07	0305887F	Electronic Combat Intelligence Support	6.080	5.512	14.736	-	14.736
210	07	0305913F	NUDET Detection System (Space)	78.140	72.199	81.989	-	81.989
211	07	0305924F	National Security Space Office	-	10.630	-	-	-
212	07	0305940F	Space Situational Awareness Operations	47.823	43.838	31.956	-	31.956
213	07	0307141F	NASS, IO TECH INTEGRATION & TOOL DEV	34.025	21.912	23.931	-	23.931
214	07	0308699F	Shared Early Warning System	2.957	2.952	1.663	-	1.663
215	07	0401115F	C-130 AIRLIFT SQUADRONS	105.356	113.107	24.509	-	24.509
216	07	0401119F	C-5 Airlift Squadrons	82.339	58.990	24.941	-	24.941
217	07	0401130F	C-17 Aircraft	156.232	177.212	128.169	-	128.169
218	07	0401132F	C-130J PROGRAM	29.072	26.770	39.537	-	39.537
219	07	0401134F	Large Aircraft InfraRed Counter Measures (LAIRCM)	25.700	17.227	7.438	-	7.438
220	07	0401139F	LIGHT MOBILITY AIRCRAFT (LIMA)	-	-	1.308	-	1.308

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Exhibit R-1

(Listing by Budget Activity, then Program Element Number)

BA# 07: Operational Systems Development

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
221	07	0401218F	KC-135s	11.832	20.453	6.161	-	6.161
222	07	0401219F	KC-10S	35.325	56.669	30.868	-	30.868
223	07	0401314F	OPERATIONAL SUPPORT AIRLIFT	4.733	4.988	82.591	-	82.591
224	07	0401315F	C-STOL AIRCRAFT	-	1.283	-	-	-
225	07	0408011F	SPECIAL TACTICS/COMBAT CONTROL	9.693	17.670	7.118	-	7.118
226	07	0702207F	Depot Maintenance (Non-IF)	1.456	1.514	1.531	-	1.531
227	07	0702976F	Facilities Restoration & Modernization (Logistics)	35.523	-	-	-	-
228	07	0708012F	Logistic Support Activities	-	-	0.944	-	0.944
229	07	0708610F	Logistics Information Technology (LOGIT)	237.025	227.614	140.284	-	140.284
230	07	0708611F	Support Systems Development	14.230	6.141	10.990	-	10.990
232	07	0804743F	OTHER FLIGHT TRAINING	0.777	0.667	0.322	-	0.322
233	07	0804757F	JOINT NATIONAL TRAINING CENTER	3.108	0.009	0.011	-	0.011
234	07	0804772F	TRAINING DEVELOPMENTS	1.707	-	-	-	-
235	07	0808716F	OTHER PERSONNEL ACTIVITIES	0.113	0.116	0.113	-	0.113
236	07	0901202F	JOINT PERSONNEL RECOVERY AGENCY (JPRA)	11.123	6.107	2.483	-	2.483
237	07	0901218F	Civilian Compensation Program	8.140	7.811	1.508	-	1.508
238	07	0901220F	PERSONNEL ADMINISTRATION	10.123	11.179	8.041	-	8.041
239	07	0901226F	AF STUDIES AND ANALYSIS AGENCY	-	-	0.928	-	0.928

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Air Force • President's Budget FY 2012 • RDT&E Program
 Exhibit R-1
 (Listing by Budget Activity, then Program Element Number)

BA# 07: Operational Systems Development

Cost (\$ in Millions)

Line#	BA#	PE#	PE Title	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
240	07	0901279F	Facilities Operations - Administrative	-	-	12.118	-	12.118
241	07	0901538F	Financial Management Information Systems (FMIS)	53.972	49.816	101.317	-	101.317
242	07	0902998F	MANAGEMENT HQ - ADP SUPPORT (AF)	-	-	0.299	-	0.299
Total: Operational Systems Development				2,511.892	2,928.932	3,108.815	73.000	3,181.815

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

BUDGET ACTIVITY #1: BASIC RESEARCH (Volume 1)

0601102F

Defense Research Sciences

Remarks

In FY 2012, nine legacy Projects 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308 and 2311 were consolidated into three new Projects 3001, 3002, 3003 to more appropriately describe and align the changing focus of the scientific disciplines within the overall Basic Research Program. Also in FY 2012, External Research Programs - Project 4113 was renamed Education and Outreach- Project 3004 to more appropriately describe its mission.

BUDGET ACTIVITY #2: APPLIED RESEARCH (Volume 1)

0602204F

Aerospace Sensors

In FY 2012 the efforts in Project 624916 move from Hanscom AFB, MA to Wright Patterson AFB, OH due to the decisions of the Base Realignment and Closure Commission. The individual efforts from Project 624916 are merged into other existing Projects in this PE.

BUDGET ACTIVITY #3: ADVANCED TECHNOLOGY DEVELOPMENT (Volume 1)

0603216F

Aerospace Propulsion and Power Technology

In FY 2012, funding in this project is increased to complete scramjet engine flight demonstrations.

BUDGET ACTIVITY #4: ADVANCED COMPONENT DEVELOPMENT AND PROTOTYPE (Volume 2)

0305178F

National Polar-Orbiting Op Env Satellite

In FY2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$179.701M . Starting in the FY12 year of execution, DWSS funds will be transferred to a new PE (0305187F, Defense Weather Satellite System). Totals include funding for PRCP Program Number 239, NPOESS.

0603423F

Global Positioning System III - Operational Control Segment

In FY2012, totals include funding for PRCP Program Number, 292, GPS IIIA. The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$6.464M. FY12-16 funding has been transferred to this PE from PE 0305265F. However, funds were incorrectly loaded into BPAC 67A021 instead of 64A021.

0603430F

Advanced (EHF MILSATCOM (Space)

In FY 2012,totals include funding for PRCP Program Number 261, AEHF. The program funding includes Overhead reduction and Reports/Studies/ Boards/Reviews efficiencies that are not intended to impact program content. The efficiencies reductions total \$4.3M. The Capability and Affordability Insertion Program (CAIP) is funded in BPAC 64A030, Evolved AEHF MILSATCOM. Prior to FY12PB, BPAC 64A030 funds were included in BPAC 644050.

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0603432F	Polar MILSATCOM (Space)	In FY2012, totals include funding for PRCP Program Number 121, EPS. The program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.8M.
0603438F	Space Control Technology	FY 2012, the program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.063M. CY funding totals include \$16.000M requested for Overseas Contingency Operations.
0603850F	Integrated Broadcast Service (DEM/VAL)	In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.085M.
0603860F	Joint Precision Approach and Landing Systems - Dem/Val	In FY2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.161M. While the Joint Precision Approach and Landing System (JPALS) is an ACAT ID program, the Air Force Exhibit R-3 does not include "to complete" costs as the JPALS Land-Based Increment 2 (Air Force lead) is pre-Milestone B (FY15) and not Section 2366a certified. The Sea-Based Increment 1a (Navy lead) is post-Milestone B and Section 2366a certified. Reference Navy JPALS R-Doc for data (PNO 238). Totals include funding for Program Resources Collection Process Program Number (PNO) 238, JPALS (Land-Based Increment 2).
0604283F	BMC2 Sensor Development	In FY 2012, Project 6002, Three Dimensional Expeditionary Long Range Radar (3DELRR), efforts were transferred from PE 0207412F, Control and Reporting Center, BPAC 675294, Theater Air Control System Improvement - Radar, in order to provide this pre-Major Defense Acquisition Program its own Program Element.
0604317F	Technology Transfer	In FY 2012, the Office of the Secretary of Defense (OSD) transferred this program to the Air Force.
0604857F	Operational Responsive Space	In FY 2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.187.

**BUDGET ACTIVITY #5: SYSTEM DEVELOPMENT AND DEMONSTRATION (SDD)
(Volume 2)**

0101125F	NUCLEAR WEAPON MODERNIZATION	In FY2012 B61 LEP efforts were transferred from PE 0604222F, Nuclear Weapons Support, to PE 0101125F, Nuclear Weapon Modernization in order to support B61 LEP development. In FY2012 LRSO efforts were transferred from PE 0101122F, Air Launched Cruise Missile, to PE 0101125F, Nuclear Weapon Modernization in order to support LRSO development.
0207100F	LAAR Squadrons	In FY 2012, Project 657005, Light Attack, includes New Start efforts.
0603840F	Global Broadcast Service (GBS)	In FY2012,the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.070M.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

PROGRAM ELEMENT COMPARISON SUMMARY

0604222F	Nuclear Weapons Support	In FY12 B61 LEP efforts were transferred from PE 0604222F, Nuclear Weapons Support, to PE 0101125F, Nuclear Weapon Modernization in order to support B61 LEP development. In FY12 Joint Fuze efforts were transferred from PE 0604222F, Nuclear Weapons Support, to PE 0604851F, ICBM EMD in order to support Joint Fuze development.
0604270F	EW Development	In FY 2012, Project 653891, Advanced IR Counter Measures (AIRCМ), includes new start efforts.
0604281F	TACTICAL DATA NETWORKS ENTERPRISE	In FY 2012, the program funding includes reductions for reports/studies/boards efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.509M.
0604421F	Counterspace Systems	In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.099M in FY12. The program funding includes reductions for Knowledge Based Services, Acquisition Program Management Administrative efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.306M.
0604425F	Space Situational Awareness Systems	In FY 2012, the program funding in this Program Element includes overhead reductions that are not intended to impact program content. The efficiencies reductions total \$6.663M. Totals include funding for PRCP Program Number 328, SBSS Block 10.
0604429F	AIRBORNE ELECTRONIC ATTACK	In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.433M.
0604441F	Spaced Based Infrared System (SBIRS) High	In FY 2012, the program funding includes overhead reductions for efficiencies that are not intended to impact program content. The efficiencies reductions total \$12.499. Totals include funding for PRCP Program (PNO) 210 SBIRS High.
0604617F	Agile Combat Support	In FY2012, Project 652895, Civil Engineering Readiness, includes two new start efforts, one for Basic Expeditionary Airfield Resources and the other for Explosives Ordnance Disposal.
0604706F	Life Support Systems	In FY2012, Project 65412A, Life Support Systems, includes new starts for Aircrew Laser Eye Protection (ALEP) Block 3 and Voice in Beacon (ViB) programs. The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.879M in FY12.
0604735F	Combat Training Ranges	In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.134.
0604851F	ICBM - EMD	In FY2012, Project Number 655037, Support Equipment, includes the Single Integrated Operation Plan Targeting Application Computer System new start effort. In FY2012, the fuze efforts in Project Number 657006, ICBM EMD: Fuze Support, were transferred from PE 0604222F Nuclear Weapons Support in order to consolidate service activities as they progress towards deployable products. The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.432M in FY12 from the Support Equipment Programs.

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0604853F	Evolved Expendable Launch Vehicle - EMD	In FY 2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.059M.
0605221F	KC-X, Next Generation Aerial Refueling Aircraft	In FY2012, the program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions are \$13.806M.
0605229F	CSAR HH-60 Recapitalization	In FY2012, Project Number 657001, Avionics Development and Integration efforts were transferred to PE 0207224F, Project Number 676016, and PE 0101235F, Modification Number 3149T, in order to effectively execute this effort for both HH-60G and UH-1N aircraft.

BUDGET ACTIVITY #6: RDT&E MANAGEMENT SUPPORT (Volume 2)

0605807F	Test and Evaluation Support	In FY 2012, the program funding includes reductions for manpower efficiencies that are not intended to impact program content. The efficiencies total \$109.336.
0605860F	Rocket Systems Launch Program (RSLP)	In FY 2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$406k. In FY2012, Deep Space Climate Observatory (DSCOVR) launch service is a "New Start" effort.
0605864F	Space Test Program	In FY 2012, the program funding includes reductions for (Knowledge Based Services)efficiencies that are not intended to impact program content. The efficiencies reductions total \$291k.
0702806F	ACQUISITION AND COMMAND SUPPORT	In FY 2012, the program funding includes an increases for overhead reductions of \$4.822M efficiencies that are intended to reduce out year costs through improvement in program infrastructure or reduction in unit costs. The program funding also includes reductions for service support contractor efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.187M.

BUDGET ACTIVITY #7: OPERATIONAL SYSTEM DEVELOPMENT (Volume 3)

0101113F	B-52 SQUADRONS	In FY 012, the program funding includes reductions for Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.378M.
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PROGRAM ELEMENT (BY BUDGET ACTIVITY)

PROGRAM ELEMENT COMPARISON SUMMARY

0101127F	B-2 SQUADRONS	<p>In FY 2012, three new project numbers were established: 676021 Baseline Support 676022 EHF SATCOM and Computer 676023 Defensive Management System</p> <p>Funding for the three new project numbers was transferred from the existing 675345 project number. Project number 675345 will continue to be used for B-2 Modernization efforts that are not allocated to the three new project numbers.</p> <p>The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.515M in FY12.</p> <p>The program funding includes reductions for acquisition excellence efficiencies for project 676023 in FY15 and FY16 that are not intended to impact program content. Reductions for efficiencies may be spread to other Air Force programs at a later date. Amounts of the reductions are: \$3.7M/FY15 and \$54.2M/FY16.</p>
0205219F	MQ-9 Development and Fielding	<p>In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.742M</p>
0207131F	A-10 SQUADRONS	<p>In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.777M</p>
0207133F	F-16 SQUADRONS	<p>In FY2012, the program funding includes reductions for acquisition excellence efficiencies and program management administration reductions that are not intended to impact program content. The efficiencies reductions total \$2.189M</p>
0207134F	F-15 PROGRAMS	<p>In FY 2012, the F-15 program has two FY 2012 new starts: F-15C/D BLOS will provide Beyond Line of Sight (BLOS)communications for Air Superiority and Air Sovereignty Alert missions. F-15 Radar Enhancements will improve F-15E capabilities with emphasis on Electronic Protection and other radar improvements.</p>
0207136F	Manned Destructive Suppression	<p>In FY 2012, the program funding includes reductions for Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.077M.</p>
0207142F	Joint Strike Fighter Squadrons	<p>In FY 2012, Project 676011 Dual Capable Aircraft includes new start efforts. PE 0207142F was a new PE for Joint Strike Fighter (JSF) starting in FY11 for post SDD enhancements. PE 0604800F is the USAF RDT&E funding for JSF SDD. Program funding reflects reductions to overhead. These efficiencies total \$.643M in FY12, and do not impact program content.</p>
0207163F	Advanced Medium Range Air-to-Air Missile	<p>In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.345M.</p>
0207224F	0207224F	<p>In FY2012, Project Number 676016, Avionics Development and Integration, efforts were transferred from PE 0605229F, Project Number 657001, Avionics Development and Integration in order to effectively execute the HH-60G portion of the effort.</p>
0207253F	Compass Call	<p>In FY 2012, the program funding includes reductions for economic efficiencies that are not intended to impact program content. The efficiencies reduction total \$0.062M.</p>

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

PROGRAM ELEMENT COMPARISON SUMMARY

0207325F	Joint Air-to-Surface Standoff Missile (JASSM)	In FY 2012, the program funding includes reduction for overhead cost efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.721M.
0207410F	AEROSPACE OPERATION CENTER (AOC)	In FY 2012, The program funding includes reductions for efficiencies that are not intended to impact program content. The efficiencies reductions total \$8.703M.
0207412F	Modular Control System	In FY 2012, BPAC 675294, Theater Control System Improvement-Radar (TACSI-R) efforts transfer to PE 0604283F, Battle Management Command & Control (BMC2) Sensor Development, BPAC 646002, Three Dimensional Expeditionary Long Range Radar in order to provide this pre-Major Defense Acquisition Program its own Program Element.
0207417F	Airborne Warning and Control System (AWACS)	In FY 2012, totals include funding for Program Resources Collection Process (PRCP) Program Number, 277, AWACS Upgrade (for Block 40/45 Upgrade). The program funding includes reduction for Overhead Reduction, Service Support Contractors, and Reports/Studies/Boards efficiencies that are not intended to impact program content. The efficiencies reductions total \$17.565M
0207423F	Advanced Communications Systems	In FY2012, Project 674934, Tactical Air Control Party,efforts transferred to PE 0207444F, Tactical Air Control Party, Project 676013, Equipment Modernization, in order to better identify and delineate efforts for Tactical Air Control Party Modernization.
0207438F	Theater Battle Management (TBM) C4I	In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.127M
0207444F	Tactical Air Control Party Modernization	In FY2012, Project 676013, Equipment Modernization, efforts were transferred from PE 0207423F, Advanced Communications Systems, Project 674934, TACP-M, in order to better identify and deliniate efforts for Tactical Air Control Party Modernization.
0207449F	C2 Constellation	In FY 2012, the program funding includes reductions for efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.262M
0207581F	JOINT STARS	In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.490M
0207605F	Wargaming and Simulation Centers	In FY 2012, the program funding includes reductions for Air Force efficiencies that are not intended to impact program content. The efficiencies reductions total \$.118M.
0208006F	Mission Planning Systems	In FY 2012, the program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.664M.
0303131F	Minimum Essential Emergency Communications Network (MEECN)	In FY 2012, Project 675378 Long Term Solution (LTS) includes new start efforts. The program funding for Project 672832 MEECN System Improvements (MSI) includes reductions for Reports/Studies/Board efficiencies that are not intended to impact program content. The efficiencies reductions total \$292K in FY12.

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

PROGRAM ELEMENT COMPARISON SUMMARY

0303140F	Information Systems Security Program	<p>In FY 2012, the program funding includes reductions for CENTCOM Fourth Estate Baseline Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.455M.</p> <p>The program funding includes reductions for Reports, Studies, Boards and Commissions Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.572M in FY12.</p> <p>The program funding includes reductions for Reducing Reliance of DoD Services Support Contractors efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.012M in FY12.</p>
0303601F	MILSATCOM Terminals	<p>In FY 2012, the program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.948M.</p>
0304260F	Airborne SIGINT Enterprise (JMIP)	<p>In FY 2012, the program funding includes reductions for Overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$2.455M.</p> <p>Totals include funding for PRCP program number 375 "ASIP"</p>
0305110F	Satellite Control Network	<p>In FY2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.681M.</p>
0305111F	WEATHER SERVICE	<p>In FY 2012, The program funding includes reductions for Overhead and Reports/Studies Board efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.260M.</p>
0305164F	NAVSTAR Global Positioning System User Equipment Space	<p>In FY2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.902M.</p>
0305173F	SPACE TEST CTR/RANGE CONSOLIDATION	<p>In FY 2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$12.4M in FY12.</p> <p>FY2012-FY2016: +\$1.0B for Acquisition workforce civilian pay.</p>
0305182F	Spacelift Range System	<p>In FY 2012, the program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.063M.</p>
0305205F	Endurance Unmanned Aerial Vehicles	<p>In FY2012, funding was added to this AF-DARPA joint project to develop a prototype for flight test and a potential operational demo in FY14.</p>
0305206F	Airborne Reconnaissance Systems	<p>In FY 2012, the program funding includes reductions for Overhead Reduction and 4th Estate Baseline Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.488M and \$.017M, respectively, in FY12.</p> <p>In FY2012, project 675292, is renamed from Airborne Cueing & Exploitation System-Hyperspectral (ACES HY) to Hyperspectral Sensors to better reflect the depth of development efforts and operational need for hyperspectral airborne sensors.</p> <p>In FY2012, project 675382 is renamed from Wide Area Airborne Surveillance Program of Record (WAAS PoR) to Broad Area Surveillance Sensors to better reflect the WAAS PoR termination and continued technical development of Broad Area Surveillance Sensors.</p>
0305208F	Distributed Common Ground Systems	<p>In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.513M.</p> <p>In FY 2012, Project Number 676025, Data Compression, includes new start efforts.</p>
0305219F	PREDATOR DEVELOPMENT/FIELDING	<p>In FY 2012, Totals include funding for PRCP Program Number 271, "MQ-1 Predator".</p> <p>The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.086M.</p>

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

PROGRAM ELEMENT COMPARISON SUMMARY

0305220F	GLOBAL HAWK DEVELOPMENT/FIELDING	<p>In FY 2012, This program element funds three related Air Force efforts sharing the Global Hawk platform in common: Global Hawk program, the Multi-Platform Radar Technology Insertion Program (MP-RTIP), and U.S participation and support of the North Atlantic Treaty Organization (NATO) Alliance Ground Surveillance (AGS) program.</p> <p>The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content. In FY 2012, P018, NATO AGS efforts transfer from PE 1001018D8Z, NATO AGS, to PE 0305220F, Project 676001, NATO AGS, in order to transfer control of this effort from OSD to the USAF.</p>
0305265F	GPS III Space Segment	<p>In FY 2012,totals include funding for PRCP Program Number 292, GPS IIIA.</p> <p>The program funding includes overhead reduction and Review, Study, Board reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.965M in FY12.</p> <p>FY12-16 total OCX funding transferred to PE 0603423F.</p> <p>In FY2012, BPAC 67007, DASS Integration, includes new start efforts.</p>
0305614F	JSpOC Mission System	<p>In FY 2012, the program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.417M.</p>
0305887F	Electronic Combat Intelligence Support	<p>In FY 2012, the program funding includes reductions for Service Support Contractors efficiencies that are not intended to impact program content. The efficiencies reductions total \$00.028M.</p>
0305913F	NUDET Detection System (Space)	<p>In FY 2012, the program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.556M.</p>
0305940F	Space Situational Awareness Operations	<p>In FY 2012, the program funding in this Program Element includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.440M.</p>
0308699F	Shared Early Warning System	<p>In FY 2012, the program funding includes reductions for Fourth Estate Baseline Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$10k.</p>
0401139F	LIGHT MOBILITY AIRCRAFT (LIMA)	<p>In FY2012, Project 5379, Light Mobility Aircraft, efforts were transferred from PE 0401315F, Cargo-Short Takeoff and Landing (C-STOL) Aircraft, Project 5379, Light Mobility Aircraft, in order to more readily differentiate Light Mobility Aircraft (LiMA) efforts from C-STOL activities.</p>
0401315F	C-STOL AIRCRAFT	<p>In FY2012, Project number 5379, Light Mobility Aircraft, efforts transferred to PE 0401139F, Light Mobility Aircraft, Project 5379, in order to more readily differentiate Light Mobility Aircraft (LiMA) efforts from Cargo-Short Takeoff and Landing (C-STOL) Aircraft efforts.</p>
0603423F	Global Positioning System III - Operational Control Segment	<p>In FY 2012, FY12-16 funding is in an incorrect BPAC - should be in 64A021, GPS III OCX.</p>
0708610F	Logistics Information Technology (LOGIT)	<p>In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$7.003M.</p>

PROGRAM ELEMENT (BY BUDGET ACTIVITY)

0901202F

PROGRAM ELEMENT COMPARISON SUMMARY

JOINT PERSONNEL RECOVERY AGENCY
(JPRA)

In FY 2012, the program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.598M.

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


<u>Program Element</u>	<u>Title</u>
0101314F	NIGHT FIST- USSTRATCOM
0101815F	Advanced Strategic Program
0207424F	Evaluation and Analysis Program
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
0301555F	Classified Programs
0301556F	Special Program
0304111F	Special Activities
0304311F	Selected Activities
0304348F	Advanced Geospatial Intelligence (AGI)
0305124F	Special Applications Program
0305142F	Applied Technology and Integration
0305159F	Defense Reconnaissance Support Activities
0305172F	Combined Advanced Applications
0605798F	Analysis Support Group
0305127F	Foreign Counterintelligence Activities

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1. COMPONENT AIR FORCE	FY 2010 PROJECT DATA (computer generated)			2. DATE
3. INSTALLATION AND LOCATION EGLIN AIR FORCE BASE, FLORIDA			4. PROJECT TITLE CONSTRUCT FUZE ELECTRONICS EXPERIMENTATION FACILITY	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 315-237	7. PROJECT NUMBER FTFA101048	8. PROJECT COST (\$000) EEIC 52900 1,517.5	
9. COST ESTIMATES				
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
PRIMARY FACILITIES				1,103.1
CONSTRUCT FUZE FACILITY	SF	4,666	236	(1,103.1)
SUPPORTING FACILITIES				207.0
UTILITIES	LS			(95.0)
PAVEMENTS	LS			(90.0)
SITE WORK	LS			(20.0)
COMM	LS			(2.0)
SUBTOTAL				1,310.1
CONTINGENCY (5.0%)				65.5
DESIGN/BUILD - DESIGN COST (4.0% OF SUBTOTAL)				52.4
SUPERVISION, INSPECTION, AND OVERHEAD (6.5%)				89.4
PROFIT AND OVERHEAD (.0%)				0.0
TOTAL FUNDED COST				1,517.5
UNFUNDED COST (.0%)				0.0
TOTAL REQUEST				1,517.5
<p>10. Description of Proposed Work: Construct a 4666 SF single story insulated building with concrete foundation, steel frame structural system, metal siding, sloped metal roof, and interior facility utilities (electrical, plumbing, fire suppression, and HVAC) to house offices, administrative space, restrooms, locker rooms, and electronics research laboratory space. Project to provide adequate paved parking as well as paving surface on an existing unimproved roadway to the new facility; also extended utility run to sewer tie-in. Contractor profit and overhead costs are built into the cost proposal of the project.</p> <p>Air Conditioning: 4 Tons</p>				
<p>11. Requirement: 4666 SF Adequate: 0 SF Substandard: 7222 SF</p> <p><u>PROJECT:</u> Construct Fuze Electronics Experimentation Facility</p> <p><u>REQUIREMENT:</u> Office, laboratory space, and much needed storage space is required to support research, development, test, and evaluation activities for fuze (specialized detonators for explosives), characterization and phenomenology research. This facility will provide the necessary space required for 12 permanent scientists, engineers, technicians, research equipment and project materials. Locker rooms will provide storage of personal protective equipment and shower facilities for personnel who have been contaminated by munitions detonation residue. The work space proposed will allow for creation of and test of fire control circuitry used with large caliber guns, air guns, and light gas guns as well as allow continued support the Air Force Special Operations Command weapons development efforts and the Air Combat Command Hard Target Roadmap. Continuing technology needs require the development of predictive modeling and a cost effective testing capability to support the development of fuze component and system technologies.</p> <p><u>CURRENT SITUATION:</u> The current work space is insufficient for the number of in-house projects under investigation, there is inadequate storage for the amount of research equipment that is required in the electronics laboratory, and there is</p>				

1. COMPONENT AIR FORCE	FY 2010 PROJECT DATA (computer generated)			2. DATE
3. INSTALLATION AND LOCATION EGLIN AIR FORCE BASE, FLORIDA			4. PROJECT TITLE CONSTRUCT FUZE ELECTRONICS EXPERIMENTATION FACILITY	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 315-237	7. PROJECT NUMBER FTFA101048	8. PROJECT COST (\$000) EEIC 52900 1,517.5	
<p>inadequate office space to house the research scientists, engineers, and technicians. The current facility has extensive roof leaks every time it rains (145 days/year on average) that pose a threat to computers and other electronic equipment. The leaks have lead to the growth of mold and mildew which pose long term health risks to personnel. Gaps in the structure allow the incursion of rodents posing long term health risks from their waste.</p> <p>IMPACT IF NOT PROVIDED: Fuze research and development must meet public law for insensitive munitions and support the trend of smaller warhead, higher speed, hard target munitions. Without this laboratory revitalization, the AF will incur a 3-5 year delay in validating the design strategies necessary for fuze electronics to survive the ever-increasing harsh penetration environment when attacking hard targets. This delay will translate into a 3-5 year delay in the development and fielding of the next generation of hard target fuze systems to meet the deficiencies identified in the Air Combat Command Hard Target Roadmap.</p> <p>ADDITIONAL: This project will be accomplished with using the Lab Revitalization and Demonstration Program (LRDP) funds authority minor construction limit up to \$2,000,000, supporting mission requirements under section 2804 of the National Defense Authorization Act amended Section 2805 of Title 10. The siting for this project was approved by the Base Civil Engineer on 6 May 2010. Base Civil Engineer: Colonel David H. Maharrey, Jr., (850) 882-2876.</p> <p>JOINT USE CERTIFICATION: This facility can be used by other components on an "as available" basis; however, the scope of the project is based on Air Force requirements. AFRL/RWMP is the only AF agency conducting shock hardened electronics, post impact intelligent fuzing, and fuze environment characterization R&D. These unique capabilities allow for the conduct of R&D activities across RW and for the Air Armament Center, the Defense Threat Reduction Agency, the Army, Navy, other governmental agencies (NASA), and DoD's Industry Partners.</p> <p>CERTIFICATIONS: I have reviewed this document and certify it is complete and accurate. I have validated the project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander:</p> <div style="display: flex; justify-content: space-between;"> <div>  DAVID H. MAHARREY, JR., Colonel, USAF Commander, 96th Civil Engineer Group </div> <div> DAVID W. FUNK, Colonel, USAF Chief, Programs Division AFMC Installations and Mission Support </div> </div>				

1. COMPONENT AIR FORCE		FY 2010 PROJECT DATA (computer generated)		2. DATE 13 July 2010	
3. INSTALLATION AND LOCATION KIRTLAND AIR FORCE BASE, NEW MEXICO			4. PROJECT TITLE LRDP-CONSTRUCT ISCOON TELESCOPE FACILITY		
5. PROGRAM ELEMENT 62205	6. CATEGORY CODE 310-923	7. PROJECT NUMBER MHMV101125	8. PROJECT COST (\$000) EEIC 52900 1,596.0		
9. COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)
PRIMARY FACILITIES					222.8
ISCOON PRE-ENGINEERED TELESCOPE FACILITY		SF	1,375	162	(222.8)
SUPPORTING FACILITIES					1,215.3
CONSTRUCT BASE COURSE ACCESS ROAD		LF	4,121	48	(197.8)
ANTITERRORISM/FORCE PROTECTION		LS			(13.0)
PAVEMENTS		SP	20	870	(17.4)
SITE WORK		LS			(35.0)
UTILITIES		LS			(837.1)
ELECTRICAL TRANSFORMER		LS			(48.0)
EMERGENCY GENERATOR		LS			(67.0)
SUBTOTAL					1,438.1
CONTINGENCY (5.0%)					71.9
SUPERVISION, INSPECTION, AND OVERHEAD (5.7%)					86.1
PROFIT AND OVERHEAD (.0%)					0.0
TOTAL FUNDED COST					1,596.0
UNFUNDED COST (.0%)					0.0
TOTAL REQUEST					1,596.0
EQUIPMENT FROM OTHER APPROPRIATIONS (NON-ADD)					(15.0)
<p>10. Description of Proposed Work: Construct a one-story, pre-engineered facility with reinforced concrete foundation to house the Improved Solar Observing Optical Network (ISCOON) telescope. Work includes a 20'-wide aggregate base course roadway, a dedicated T-1 communication line, a four-ton HVAC system to maintain a temperature of 60-79 degrees F and relative humidity of 30-60% (non-condensing), backup generator and pad, water, sewer, and electrical utility lines, and site work. Lightning and grounding protection are required to protect the ISCOON telescope. Project complies with DoD minimum antiterrorism force protection standards.</p> <p>Air Conditioning: 4 Tons</p>					
<p>11. Requirement: 1375 SF Adequate: 0 SF Substandard: 0 SF</p> <p>PROJECT: Construct an Improved Solar Observing Optical Network (ISCOON) Telescope Facility. (Current Mission)</p> <p>REQUIREMENT: A state-of-the-art facility is required to house the ISCOON Telescope to support the detection of solar flares, as well as magnetic field signatures and sunspot groups that are known to lead to flares, coronal mass ejections, and other eruptive activity that impact the Department of Defense's Space Situational Awareness (SSA). The Air Force Research Laboratory uses the data to develop models of solar activity and its forecast and to develop future instrumentation for the Air Force.</p> <p>CURRENT SITUATION: The USAF's ISCOON prototype telescope is currently located at the National Solar Observatory (NSO) in Sunspot, New Mexico. This prototype is being transitioned to the Air Force Weather Agency (AFWA) and is expected to become the first operational unit at Kirtland AFB. After the remaining four ISCOON telescopes are installed around other AF locations, the Kirtland ISCOON will become</p>					

1. COMPONENT AIR FORCE		FY 2010 PROJECT DATA (computer generated)		2. DATE 13 July 2010	
3. INSTALLATION AND LOCATION KIRTLAND AIR FORCE BASE, NEW MEXICO			4. PROJECT TITLE LRDP-CONSTRUCT ISOON TELESCOPE FACILITY		
5. PROGRAM ELEMENT 62205	6. CATEGORY CODE 310-923	7. PROJECT NUMBER MHMV101125	8. PROJECT COST (\$000) EEIC 52900 1,596.0		

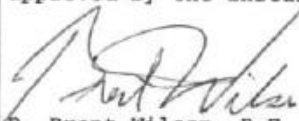
the network test bed. The Space Weather Center of Excellence Branch, AFRL/RVBX, is supporting AFWA in this transition and uses the data from the telescope for research. In addition, the NSO will be shutting down its Sunspot operations in approximately five years in order to consolidate its facilities at a new location.

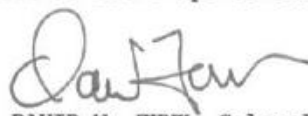
IMPACT IF NOT PROVIDED: The termination of NSO operations at Sunspot will place the ISOON telescope's future in jeopardy and adversely impact the USAF's ability to continue operating the instrument. If not moved, the Air Force will become responsible for all operations and maintenance bills for all support infrastructure at the NSO. Since all space weather originates with the sun, solar activity is the dominant factor that drives all other space weather. This critical instrument provides the Air Force's solar program with data to perform research on solar events. Many new methods coming out of the program in the near future will require the ISOON's data to test theories. The ISOON telescope is a key part of overall integrated Space Weather Forecasting. The ISOON, as an Air Force asset, will need a new location from which to operate.

ADDITIONAL: This project meets the criteria/scope specified in Air Force Handbook 32-1084, "Facility Requirements." Block 9 costs exclude design. Line item costs shown in Block 9 include contractor overhead and profit. The unfunded equipment line amount will be funded by RDT&E funds and will be available at project completion. All known alternative options were considered during the development of this project. The project has undergone environmental analysis, resulting in a Categorical Exclusion. The project is in direct support of a research program, and as such is using the Lab Revitalization and Demonstration Program (LRDP) authority to exceed the \$750,000 minor construction limit up to \$2,000,000. Base Civil Engineer: Mr. D. Brent Wilson (505) 846-7911.

JOINT USE CERTIFICATION: This facility can be used by other components on an "as available" basis; however, the scope of the project is based on Air Force requirements.

I have reviewed this document and certified it is complete and accurate. I have validated the project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander at the 2 Apr 09 Facilities Board.


13 JUL 2010
D. Brent Wilson, P.E.
Base Civil Engineer
Kirtland Air Force Base, NM


20 JUL 10
DAVID W. FUNK, Colonel, USAF
Chief, Programs Division
HQ AFMC Installations and Mission Support

1. COMPONENT AF (AFMC)	FY 2011 CONSTRUCTION PROJECT DATA COMPUTER GENERATED		2. DATE 16 Dec 2010
3. INSTALLATION AND LOCATION WRIGHT-PATTERSON AFB OH (AFMC)		4. PROJECT TITLE CNST HVAC FOR TEST FACILITY F/20019	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 318-612	7. PROJECT NUMBER ZHTV060039C	8. PROJECT COST (\$000) EEIC 529: \$ 890.0

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
Construct HVAC for Test Facility				712.0
25% Overhead & Profit				178.0
Total Funded Cost				890.0

10. DESCRIPTION OF PROPOSED WORK: Remove unit heaters and construct ducted heating, ventilation, and air conditionings system. Provide ducts, diffusers, danpers, chillers, air handlers, fans, coils, motors, controls, connections, and all labor and material to provide a ducted HVAC system in 20019.

11. PROJECT: Construct HVAC for Test Facility

REQUIREMENT: Facilities to house research, development, test, and evaluation of new propulsion systems for military aircraft.

CURRENT SITUATION: Air Force Research Laboratory (AFRL) lacks a testing capacity to simulate propulsion systems for ground testing. AFRL develops prototype propulsion technology but does not have a system of apparatus to evaluate the new technology on the ground by modeling and simulating critical systems under flight and propulsion conditions. Using private sector test facilities is not a realistic option as these facilities are frequently not available to the Air Force since they are used and scheduled to support aircraft production and configured to support specific aircraft types. The proposed system will provide a neutral evaluation and itegration capability, permitting the Air Force to independently assess manufactures' components in support of aquisition decisions. Presently the Air Force lacks this type of independent evaluation capability. The proposed facility for the test and evaluation apparatus is a 1920s-era wind tunnel facility which lacks a ducted HVAC system, only having unit heaters, and can not support the test function without proper heating, cooling and air conditioning.

IMPACT IF NOT PROVIDED: New components and technology will not be evaluated in a timely manner, resulting in delays in program development. Research programs into advanced technology will be delayed by months, adversely impacting the development and fielding of new techonology. Delays in schedule would increase contract costs significantly and ultimately cause the technology to be unavailable for insertion at the right time in the weapon systems development cycle. Evaluation will be limited to flight tests, putting aircraft and crew at risk in the event of components not functioning as intended while in flight


ADDITIONAL: Companion Project: ZHTV060039A, B, Repair/Modernize for Test Facility

1. COMPONENT AIR FORCE	FY 2011 PROJECT DATA (computer generated)			2. DATE
3. INSTALLATION AND LOCATION KIRTLAND AIR FORCE BASE, NEW MEXICO			4. PROJECT TITLE LRDP-CONSTRUCT IRREL LABORATORY	
5. PROGRAM ELEMENT 62205	6. CATEGORY CODE 312-472	7. PROJECT NUMBER MHMV101145	8. PROJECT COST (\$000) EEIC 52900 1,847.9	
9. COST ESTIMATES				
ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
PRIMARY FACILITIES				1,575.0
CONSTRUCT IRREL LAB	SF	6,000	263	(1,575.0)
SUPPORTING FACILITIES				90.0
UTILITIES	LS			(50.0)
ANTITERRORIS/FORCE PROTECTION	LS			(15.0)
SITE WORK	LS			(25.0)
SUBTOTAL				1,665.0
CONTINGENCY (5.0%)				83.3
SUPERVISION, INSPECTION, AND OVERHEAD (5.7%)				99.7
PROFIT AND OVERHEAD (.0%)				0.0
TOTAL FUNDED COST				1,847.9
UNFUNDED COST (.0%)				0.0
TOTAL REQUEST				1,847.9
10. Description of Proposed Work: Construct a single story building with reinforced concrete foundation, CMU walls, structural steel framing, with a standing seam metal insulated sloped roof system. Work includes multi-zone HVAC systems, multi-voltage electrical systems, air and gas supplies and all site work. Project complies with DoD minimum antiterrorism force protection standards.				
11. Requirement: As Required.				
PROJECT: Laboratory Revitalization Demonstration Program (LRDP) Construct Infrared Radiation Effects Laboratory (Current Mission)				
REQUIREMENT: Construct a 6,000 SF facility with two laboratories and office space for up to 15 personnel. This facility will replace a portion of the Space Vehicles Component Development Laboratory MILCON project. The Infrared Radiation Effects Laboratory (IRREL) has demanding power requirements due to high current draw devices and very low noise measurements floor (electronic noise caused by improper electrical isolation, poor quality ground, and interference from other RF sources, as well as low frequency mechanical noise due to building vibration).				
CURRENT SITUATION: The 2010 Air Force Scientific Advisory Board review of AFRL/RV recognized infrared radiation effects research as a unique capability in DoD, playing a critical role in maturing technology for Space-based ISR, but commented that poor facility conditions were holding back critical research and integration potential. Specifically, the existing lab, Building 426, was constructed in 1958 as a dining hall. Experiment setup time is extremely time consuming due to adjusting for varying conditions; extended data samples cannot be taken. The noise created by other electrical equipment and power demands make experiments impossible to perform during duty hours due to the power and noise requirements. Currently, the IRREL occupies 2478 SF of lab space and 553 SF of office space in Bldg 426. In addition to the poor facility conditions described, there is no space available for the IRREL to expand lab characterization capabilities, nor space available for additional employees. The IRREL characterization schedule is maximized in terms of what projects can be simultaneously performed in the lab, and people dedicated to these projects.				
IMPACT IF NOT PROVIDED: IRREL is the only DoD laboratory capable of focal plane				

1. COMPONENT AIR FORCE	FY 2011 PROJECT DATA (computer generated)		2. DATE
3. INSTALLATION AND LOCATION KIRTLAND AIR FORCE BASE, NEW MEXICO		4. PROJECT TITLE LRDP-CONSTRUCT IRREL LABORATORY	
5. PROGRAM ELEMENT 62205	6. CATEGORY CODE 312-472	7. PROJECT NUMBER MHMV101145	8. PROJECT COST (\$000) EEIC 52900 1,847.9
<p>array characterization for radiometric performance, radiation tolerance, and assessment of mission readiness for these state-of-the art sensors. The Air Force Scientific Advisory Board review of AFRL/RV recognized this research as a unique capability, playing a critical role in maturing technology for several space-based platforms, but commented that poor facility conditions were holding back critical research and integration potential. This laboratory project completes two of the nine labs planned within the Space Vehicles Component Development Lab MILCON project that has been in the FYDP for the last seven years; however, the need for this critical technology can no longer wait or be performed in such substandard facilities. Therefore, it is being removed and executed under the new LRDP authority.</p> <p><u>ADDITIONAL:</u> This project meets the criteria/scope specified in Air Force Handbook 32-1084, "Facility Requirements." Block 9 costs exclude design. Line item costs shown in Block 9 include contractor overhead and profit. All known alternative options were considered during the development of this project. The project is in direct support of a research program, and as such is using the Lab Revitalization and Demonstration Program(LRDP) authority to exceed the \$750,000 minor construction limit up to \$2,000,000. Base Civil Engineer: Mr. D. Brent Wilson (505) 846-7911.</p> <p>The original \$1.6M programmatic estimate would constrain this project severely; \$1.85M allows for the correct complement of laboratory to office space. The Space Vehicles Directorate, in collaboration with the Kirtland AFB BCE, has a history of small project success (40 projects/yr; \$2M), and the local funding climate for construction contracting has been exceptional. The \$56M BRAC MILCON, Battlespace Environment Laboratory, was completed within budget and with all separate bid items (long-span joists, additional service yard, 109 extra parking spaces, and an AT/FP wall) successfully added. The Directorate is experienced in small to mid-sized projects.</p> <p><u>JOINT USE CERTIFICATION:</u> This facility can be used by other components on an "as available" basis; however, the scope of the project is based in Air Force requirements.</p> <p>I have reviewed this document and certified it is complete and accurate. I have validated the project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander at the 2 Apr 09 Facilities Board.</p> <p>D. Brent Wilson, P.E. Base Civil Engineer Kirtland Air Force Base, NM</p> <p>DAVID W. FUNK, Colonel, USAF Chief, Programs Division HQ AFMC Installations and Mission Support</p>			

1. COMPONENT AIR FORCE	FY 2012 PROJECT DATA (computer generated)			2. DATE 3 JAN 2011	
3. INSTALLATION AND LOCATION EGLIN AIR FORCE BASE, FLORIDA			4. PROJECT TITLE ADVANCED ENERGETICS RESEARCH LAB		
5. PROGRAM ELEMENT 62602	6. CATEGORY CODE 316-333	7. PROJECT NUMBER FTFA041133R3	8. PROJECT COST (\$000) EEIC 52900 1,600.0		
9. COST ESTIMATES					
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)
PRIMARY FACILITIES					1,263.6
ADVANCED ENERGETICS RESEARCH LABORATORY		SF	6,600	191	(1,263.6)
SUPPORTING FACILITIES					178.0
UTILITIES		LS			(96.0)
PAVEMENTS		LS			(9.0)
SITE WORK		LS			(73.0)
SUBTOTAL					1,441.6
CONTINGENCY (5.0%)					72.1
SUPERVISION, INSPECTION, AND OVERHEAD (5.7%)					86.3
PROFIT AND OVERHEAD (.0%)					0.0
TOTAL FUNDED COST					1,600.0
UNFUNDED COST					0.0
TOTAL REQUEST					1,600.0
<p>10. Description of Proposed Work: Construct a 60' x 110' pre-engineered metal building with a 14' minimum clear ceiling height containing two 35' x 40' modular isolated lab rooms with a 14' ceiling height at AFRL/RW's High Explosives Research and Development (HERD) Complex. Each isolated lab room floor is a thick reinforced concrete slab, a vibration dampening pad to isolate it from the exterior metal building floor with a 2-inch separation to ensure no exterior vibration. Rest rooms, lab support work areas, mechanical, electrical, and communication rooms are located inside the exterior metal building. The isolated lab rooms are also isolated from these rooms located inside the exterior metal building with a 2-inch separation to ensure no exterior vibration. The existing HERD's circulating chilled/heated water will be used for heating and cooling with new air handling units installed for each of the modular isolated lab rooms as well for the areas inside the exterior metal building surrounding the two modular isolated lab rooms. The air handling unit for each modular isolated lab room must be capable of maintaining a set air temperature plus or minus 1 degree C inside the modular lab room at all times and provide a minimum of 12 air changes per hour when exposed energetic/reactive materials or their mixtures/formulations are present. No recirculation of air is permitted in the two modular isolated lab rooms or their associated chem lab rooms. Site work will provide access, storm water drainage and utilities for the facility as required. The metal building plus rebar and any other conductors in or connected to the metal building foundation/floor, and all connected external building components must have electrical continuity and be grounded to the building master ground bus bar. All conductors in each isolated lab room plus rebar and any other conductors in the vibration dampening pad must have electrical continuity and be grounded to the building master ground bus bar.</p>					
<p>11. Requirement: 6600 SF Adequate: 0 SF Substandard: 0 SF</p> <p>PROJECT: Construct a new Advanced Energetics Research Laboratory for 6.1 Advanced Energetics basic research activities being conducted at the Air Force Research Laboratory, Munitions Directorate, High Explosives Research and Development (HERD) Complex, a unique Air Force capability accomplishing advanced energetics and explosives research, development, integration, and testing activities in support of Air Force munitions.</p>					

1. COMPONENT AIR FORCE		FY 2012 PROJECT DATA (computer generated)		2. DATE 3 JAN 2011
3. INSTALLATION AND LOCATION EGLIN AIR FORCE BASE, FLORIDA			4. PROJECT TITLE ADVANCED ENERGETICS RESEARCH LAB	
5. PROGRAM ELEMENT 62602	6. CATEGORY CODE 316-333	7. PROJECT NUMBER FTFA041133R3	8. PROJECT COST (\$000) EEIC 52900 1,600.0	
<p>REQUIREMENT: This facility will provide critically needed/mission essential laboratory areas capable of handling advanced energetic materials for 6.1 advanced energetics basic research supporting the Director of Defense Research & Engineering's (DDR&E) Advanced Energetics Major Thrust and the National Aerospace Initiative. This facility is also critical to AFRL's role as a "key participant" in the National Advanced Energetics Technology Program. This Advanced Energetics Research Lab is a critical initial component necessary to achieve the AFRL goal to develop a 6.1 Advanced Energetics basic research program recognized by AFOSR as a "Star Team", a unique world class research capability. This new facility is required to allow the HERD Complex to expand its advanced energetic basic research efforts to include laboratory work and to significantly improve the productivity of the increasing number of researchers. It will facilitate increased scientific collaboration with leading universities and distinguished researchers by providing a facility needed to support world class advanced energetics laboratory research. This world-class energetics program is critical to the development of future Air Force munitions required to meet present AFRL, AFMC, Air Force and DoD strategic plans.</p> <p>CURRENT SITUATION: No existing lab space is available or suitable/usable for the expanding 6.1 advanced energetics research activities. Existing HERD requirements are increasing and the mission is significantly expanding. The Processing Section through-put doubled in the last 3 years, quadrupled in the last 6 years. All existing facilities are fully utilized and are overcrowded causing explosives safety concerns, impacting the mission and increasing development time because of a lack of space. The number of researchers assigned to the 6.1 basic research advanced energetics program has increased 533% in the last 4 years and is increasing again this year. Without this new facility, these scientists will be unable to accomplish their critical research. Over half of current research efforts are modeling and developing experiments that cannot be completed without this new facility, and designing/procuring unique equipment for development and testing of advanced energetics. Many researchers will share the two modular isolated lab rooms. Safety allows only one experiment/test at a time in each modular isolated lab room. The lack of adequate facilities currently prevents researchers from pursuing projects offering the biggest payoff or the best chance of success. Current strategic plans at all levels of DoD show a critical need to aggressively pursue advanced energetics concepts especially for applications to future micro munitions. This unique facility will allow advanced energetic researchers to apply nano fundamental research breakthroughs currently being discovered in other labs using non explosive nano materials to advanced energetics for Air Force munitions applications. Existing facilities at universities and basic research institutes working with nano materials do not meet minimum safety requirements for working with advanced energetics.</p> <p>IMPACT IF NOT PROVIDED: AFRL will be unable to meet mid and far term DoD, Air Force, and AFRL munitions development strategic plans resulting in significant delays or forfeited future war fighter capabilities. Without this unique and critical facility we anticipate the loss of a large number of critical researchers with unique capabilities needed to support advanced energetic research. This will result in the loss or delay of time critical/essential research that will impact future Air Force and DoD munitions development for years to come, leading to a lack of appropriate munitions for future Air Force use and a significant reduction in future war fighter capabilities.</p> <p>ADDITIONAL: Under the FY2005 \$1M LRDP authorization this project was initiated and approved by the Air Armament Center Base Civil Engineer and the Installation Commander. A construction contract was signed for \$930K. Due to explosive safety and storm water requirements the current total request amount is now \$1.6M. These issues have been resolved however the resulting delay and pending contract</p>				

1. COMPONENT AIR FORCE	FY 2012 PROJECT DATA (computer generated)			2. DATE 3 Jan 2011
3. INSTALLATION AND LOCATION EGLIN AIR FORCE BASE, FLORIDA			4. PROJECT TITLE ADVANCED ENERGETICS RESEARCH LAB	
5. PROGRAM ELEMENT 62602	6. CATEGORY CODE 316-333	7. PROJECT NUMBER FTFA041133R3	8. PROJECT COST (\$000) EEIC 52900 1,600.0	
<p>amendments drove a total request increase of \$670K above the 2005 contract award amount. The current construction estimate includes SIOH and contractor overhead and profit. Approval under the 2008 LRDP authority will ensure a complete and usable facility as originally programmed.</p>				
<p><u>JOINT USE CERTIFICATION:</u> This facility will be available for use by other services on an "as-available" basis, but the requirements set forth in this document are based only on the Air Force requirements.</p>				
<p>CERTIFICATION: I have reviewed this document and certify it is complete and accurate. I have validated the Project's primary and supporting costs and work classification. It has been fully coordinated with the user and other appropriate agencies and approved by the Installation Commander.</p>				
 DAVID H. MAHARREY, JR., Colonel, USAF Commander, 96th Civil Engineering Group Eglin Air Force Base, FL			DAVID W. FUNK, Colonel, USAF Chief Programs Division Installations and Mission Support	

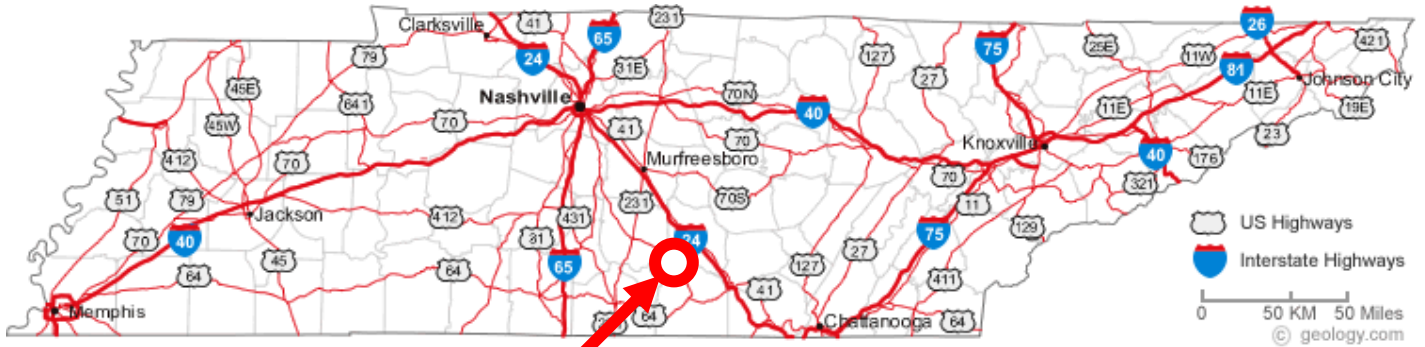
1. COMPONENT AIR FORCE		FY2012 MILITARY CONSTRUCTION PROJECT DATA			2. DATE 16 DEC 2010	
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE				4. PROJECT TITLE CONSTRUCT TEST CELL COOLING WATER LINE		
5. PROGRAM ELEMENT 65976		6. CATEGORY CODE 845-363	7. PROJECT NUMBER ANZY109056		8. PROJECT COST (\$000) 1,974.2	
9. COST ESTIMATES						
ITEM		U/M	QUANTITY	UNIT COST	COST (\$000)	
PRIMARY FACILITIES						
66-INCH COOLING WATER LINE		LF	700	2,150.00	1,505.0	
66-INCH VALVE WITH PIT & ELECTRICAL OPERATORS		EA	1	100,000.00	100.0	
MANHOLE		EA	1	40,000.00	40.0	
CATHODIC PROTECTION		LF	700	85.00	59.5	
SUBTOTAL					1,704.5	
CONTINGENCY (5%)					85.2	
SUBTOTAL					1,789.7	
SIOH (6.5%)					116.3	
TOTAL FUNDED COST OF PROJECT					1,906.0	
DESIGN/BUILD - DESIGN COST (4% OF SUBTOTAL)					68.2	
TOTAL REQUEST					1,974.2	
10. DESCRIPTION OF PROPOSED CONSTRUCTION						
Install a coated steel water line from the 84" header leaving the Secondary Pumping Station to the 54" main supplying the ASTF (Aeropropulsion Systems Test Facility) Air Supply area. Size pipe to provide all ASTF water requirements west of CB01 distribution valve (105,000 gpm). Project will include cathodic protection. An isolation valve will be installed at the supply end of the pipeline and an access manhole at opposite end to provide maintenance access.						
11. REQUIREMENT: 700 LF						
<u>PROJECT:</u> Construct Test Cell Cooling Water Line (Current Mission)						
<u>REQUIREMENT:</u> Arnold Engineering Development Center's (AEDC) mission is to provide pre-flight testing in support of DoD pre/post fuselage, turbine and weapons testing programs. The test facilities at the AEDC require cooling water to support this mission. This project will provide a new capability to conduct concurrent turbine engine and wind tunnel testing during the hot summer months.						
<u>CURRENT SITUATION:</u> The existing cooling water to support wind tunnel and turbine engine testing is inadequate during the hottest period of the summer. Configuration of the cooling water system creates a water source problem where several test cells are all competing for the same inadequate water supply. Inability to support concurrent testing occurs during peak test load as customers attempt to accomplish testing before the end of the fiscal year. Significant test scheduling issues arise because AEDC's test capacity is reduced and the flexibility to meet customer schedules is lost. Typically, the hot summer period where the problem occurs is approximately 6-8 weeks, which equals to 12-16% of AEDC's annual earning capacity. Turbine engine testing can generate up to \$6M of testing per month. Wind tunnel testing is usually scheduled to near-full capacity, which translates to approximately \$1M per month. Alternating testing between the mission areas reduces significantly needed revenue and adversely impacts customer platforms such as fighters, bombers, missiles, bombs, and stores.						
<u>IMPACT IF NOT PROVIDED:</u> Inability to test turbine engines directly affects the component improvement program, which enhances the safety and reliability of fielded engines such as F-15 (F100), F-16 (F100/F110), F-22A (F119), and B-1B (F101); qualification testing for next generation aircraft such as F-35 (F135) and Global Hawk (F137); high speed engine demonstration testing on the XTE-88 to develop technology for cruise missiles; developmental testing on the alternate engine for the next generation fighter F-35 (F136), and alternate fuels certification for F-15 (F100), F-16 (F100/F110), B-1B (F101), and F-35 (F135). Wind tunnel testing supports classified programs; fighters (e.g. F-35, F-22, F-15, F-18, and UCAS); bombers (e.g. B-1 and B-52); missiles (e.g. SM3, Next Gen AEGIS); stores (e.g. SDB II, JDAM, Next Generation Jammer) classified programs; fighters (e.g. F-35, F-22, F-15, F-18, and UCAS); bombers (e.g. B-1 and B-52); missiles (e.g. SM3, Next Gen AEGIS); stores (e.g. SDB II, JDAM, Next Generation Jammer).						

1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 16 DEC 2010
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE		4. PROJECT TITLE CONSTRUCT TEST CELL COOLING WATER LINE	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 845-363	7. PROJECT NUMBER ANZY109056	8. PROJECT COST (\$000) 1,974.2

ADDITIONAL: Section 2804 of the National Defense Authorization Act amended Section 2805 of Title 10 USC to allow an unspecified minor construction project costing not more than \$2,000,000 for Laboratories. Base Civil Engineer: Mr. William (Bill) E. Wendle, DSN: 340-7916/COMM: (931) 454-7916.

JOINT USE CERTIFICATION: This is an installation utility/infrastructure project, and does not qualify for joint use at this location. However, all tenants on this installation are benefited by this project.

1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 16 DEC 2010
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE		4. PROJECT TITLE CONSTRUCT TEST CELL COOLING WATER LINE	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 845-363	7. PROJECT NUMBER ANZY109056	8. PROJECT COST (\$000) 1,974.2



Arnold Air Force Base, TN

Project Location



1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 17 DEC 2010
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3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE	4. PROJECT TITLE CONSTRUCT SL2/SL3 ADMINISTRATIVE FACILITY
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5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 318-614	7. PROJECT NUMBER ANZY089010	8. PROJECT COST (\$000) 1,106.5
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9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT COST	COST (\$000)
PRIMARY FACILITIES				846.0
SL2/SL3 ADMINISTRATIVE FACILITY	SF	4,000	201.35	(829.0)
SDD/EPA ACT5/EO13423	SF	4,000	4.25	(17.0)
SUPPORT FACILITIES				109.3
UTILITIES				
ELECTRICAL POWER LINE	LF	250	7.50	(1.9)
TRANSFORMER	EA	1	3,000	(3.0)
WATER SUPPLY	LF	250	5.50	(1.4)
SEWER SUPPLY CONNECTION	LF	250	6.00	(1.5)
PAVEMENTS	SY	1,500	20	(30.0)
SITE IMPROVEMENTS				
CLEARING	AC	1	1,500	(1.5)
LANDSCAPING	AC	0.5	4,000	(2.0)
SIDEWALK	LF	100	29.75	(3.0)
COMMUNICATIONS	LS			(65.0)
SUBTOTAL				955.3
CONTINGENCIES (5%)				47.8
TOTAL CONTRACT COST				1,003.1
SIOH (6.5%)				65.2
TOTAL FUNDED COST OF PROJECT				1,068.3
DESIGN/BUILD – DESIGN COST (4% OF SUBTOTAL)				38.2
TOTAL REQUEST				1,106.5

10. DESCRIPTION OF PROPOSED CONSTRUCTION
Construct a single story facility with reinforced concrete foundation, floor slabs, masonry walls, brick veneer, and standing seam metal roof. Work includes electrical, mechanical, fire detection/suppression, pre-wiring of the facility, supporting utilities, site improvements, and parking. Comply with DoD force protection requirements per Unified Facilities Criteria (UFC) and Leadership in Energy and Environmental Design (LEED) mandated by the Environmental Protection Act of 2005 and Executive Order 13423.

11. REQUIREMENT: 4,000 SF

PROJECT: Construct SL2/SL3 Administrative Facility

REQUIREMENT: Provide an administrative office space for 9 personnel to include supervisors, planner, schedulers, and engineers; conference/training/meeting room and break room for 40 personnel, conditioned storage area, shipping area, and restrooms. Sea-Level Test Cells SL-2 and SL-3 provide the capability to economically conduct durability testing on large augmented turbine engines at near-sea-level conditions (1000 ft altitude) by eliminating the cost of running inlet and exhaust plant machinery. They also provide the capability of using the Engine Test Facility (ETF) plant to run ram conditions (inlet pressures above ambient), allowing testing at up to Mach 1.2 when necessary to achieve test objectives. Test programs supported include the F35, F22, F15 and F16.

CURRENT SITUATION: The existing SL2/SL3 facilities do not adequately accommodate the number of personnel assigned to the area. The existing office area does not provide adequate space for the nine supervisors/planner/schedulers/engineers, including the ability to meet with their workers in a private setting. Control rooms, test observation rooms and the electrical shop area are currently being utilized as office space for these personnel. Currently, there are 40 personnel per shift who conduct the required training, safety briefings and staff meetings in the industrial area. These activities are also conducted in the high bay area, control rooms, data conditioning rooms and electrical shop area which is not conducive due to high noise level environment. In addition, thousands of dollars of AF equipment are also being stored in control rooms, data conditioning rooms, the electrical

1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 17 DEC 2010
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE		
4. PROJECT TITLE CONSTRUCT SL2/SL3 ADMINISTRATIVE FACILITY	7. PROJECT NUMBER ANZY089010	
<p>and mechanical shop areas, and at various remote locations. These equipment need to be centrally stored in an environmentally controlled area. This would allow a single point delivery and pickup and ready access to SL2/SL3 personnel. Much of the materials, equipment and personnel that are needed to be on site for efficient and reliable operations located at various remote locations have to be retrieved when the need arises. SL2/3 testing has consistently been heavy and the testing is projected to increase in the future. Over the past three years (FY08 – FY10) the test load has averaged 1489 engine test hours per year. The average test load projected for the next five years (FY12 – FY16) is 1645 engine test hours per year.</p> <p><u>IMPACT IF NOT PROVIDED:</u> Due to lack of adequate space for personnel, materials and equipment required to efficiently support the mission have increased inefficiencies and risks posed on the programs that test at SL2 and SL3. Personnel will continue to work in cramped quarters, share desks, eat at their work station, and perform tedious tasks in high noise level areas. The new space would allow for these resources to be on site in close proximity to the needed location and allow for them to be organized in a much more efficient and reliable manner. It will provide a low noise work environment to reduce the risks on jobs that require tedious verbal communications. Not funding this building will drive inefficiencies and delays to a very demanding test programs to include the F35, F22, F15 and F16.</p> <p><u>ADDITIONAL:</u> Section 2804 of the National Defense Authorization Act amended Section 2805 of Title 10 USC to allow an unspecified minor construction project costing not more than \$2,000,000 for Laboratories. Base Civil Engineer: Mr. William (Bill) E. Wendle, DSN: 340-7916/COMM: (931) 454-7916.</p> <p><u>JOINT USE CERTIFICATION:</u> This facility can be used by other components on an "as available" basis; however, the scope of the project is based on Air Force requirements.</p>		

1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA	2. DATE 17 DEC 2010
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3. INSTALLATION AND LOCATION
ARNOLD AIR FORCE BASE, TENNESSEE

4. PROJECT TITLE CONSTRUCT SL2/SL3 ADMINISTRATIVE FACILITY	7. PROJECT NUMBER ANZY089010
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Existing Facilities/Deficiency Detail Data Sheet

a. Requirements and Assets:

(1) **Scope of FY12 Request (SM):** 372 SM (4,000 SF)

(2) **Mission:** The mission of AEDC is to support the development of aerospace systems by testing hardware in aerodynamic, propulsion, and space environmental ground test facilities that simulate flight conditions, and to develop advanced test techniques, instrumentation, and facilities through the performance of research and the application of new technology..

Requirement: Sea-Level Test Cells SL-2 and SL-3 provide the capability to economically conduct durability testing on large augmented turbine engines at near-sea-level conditions (1000 ft altitude) by eliminating the cost of running inlet and exhaust plant machinery. They also provide the capability of using the Engine Test Facility (ETF) plant to run ram conditions (inlet pressures above ambient), allowing testing at up to Mach 1.2 when necessary to achieve test objectives. Test programs supported include the F35, F22, F15 and F16.

(3) Functional Breakout of Proposed Scope:

SL2 Administrative Facility	(318-614)	4,000 SF
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(4) Requirements/Assets Summary

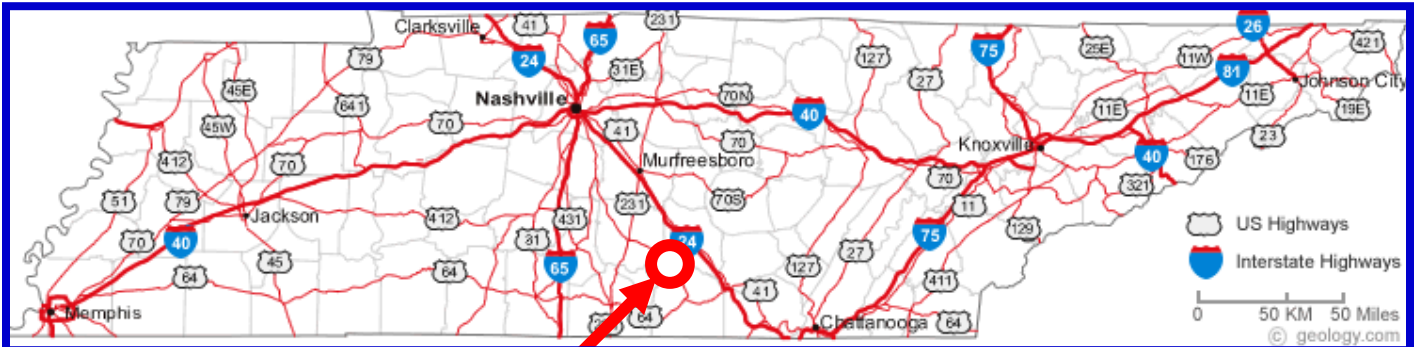
	SM	# of Facilities	Remarks
a. Total Requirement	67101	64	
b. Existing Substandard	66,729	63	Retain
c. Existing Adequate	0	0	
d. Funded, Not in Inventory	0	0	
e. Adequate Assets (c+d)	0	0	
f. Included in prior program	0	0	
g. Deficiency (a-e-f)	372	1	This FY request

Facility Summaries

<u>Cat Code</u>	<u>Nomenclature/Bldg #</u>	<u>Scope Used (SM)</u>	<u>Total Scope Bldg (SM)</u>	<u>Year</u>	<u>Cond Code</u>	<u>Type Const</u>	<u>Remarks</u>
b. Existing Substandard							
318-614	J-4 HYDRAULIC BLDG./519	36	36	1968	2	P	Retain
318-614	J-4/J-5 CNTRL ROOM./520	1,003	1,003	1963	2	P	Retain
318-614	J-4 STORAGE BLDG./521	190	190	1968	2	P	Retain
318-614	J-5 TEST CELL BLDG./522	520	520	1966	2	P	Retain
318-614	J-4/J-5 H2O SOFTENER/528	55	55	1965	2	P	Retain
318-614	J-4 LCL ELECTRONICS/529	119	119	1966	2	P	Retain
318-614	J-4 DATA COND BLDG./534	118	118	1966	2	P	Retain
318-614	J-4 SUPPORT BLDG./536	543	543	1965	2	P	Retain
318-614	J-5 VALVE SHELTER/537	50	50	1964	2	P	Retain
318-614	ETF TEST BLDG./559	50	50	1971	2	P	Retain
318-614	ETF RKT TEST CNTRL./560	17	17	1958	2	P	Retain
318-614	J-4 HE STORAGE&CMR/567	71	71	1967	2	P	Retain
318-614	J-4 POWER DIST BLDG./569	144	144	1967	2	P	Retain
318-614	APTU VALVE BLDG./576	26	26	1985	2	P	Retain
318-614	APTU MAINT/STORAGE/577	286	286	1972	2	P	Retain
318-614	APTU CONTROL BLDG./578	171	171	1972	2	P	Retain
318-614	APTU TEST CELL./579	956	956	1972	2	P	Retain
318-614	J-6 FIELD OFFICE BLDG)/591	669	669	1989	2	P	Retain

1. COMPONENT AIR FORCE		FY2012 MILITARY CONSTRUCTION PROJECT DATA					2. DATE 17 DEC 2010	
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE								
4. PROJECT TITLE CONSTRUCT SL2/SL3 ADMINISTRATIVE FACILITY						7. PROJECT NUMBER ANZY089010		
Cat Code	Nomenclature/Bldg #	Scope Used (SM)	Total Scope Bldg (SM)	Year	Cond Code	Type Const	Remarks	
b. Existing Substandard								
318-614	FSD MAINT. SHOP/645	260	260	1959	2	P	Retain	
318-614	EXP RESEARCH LAB/646	133	133	1966	2	P	Retain	
318-614	FSD RESEARCH BLDG./648	520	520	1963	2	P	Retain	
318-614	ETF TEST FUEL METER/830	456	456	1954	2	P	Retain	
318-614	ETFA J-3 MAINT BLDG./832	30	30	1963	2	P	Retain	
318-614	ETF INSTRUMENT OPS/850	303	303	1968	2	P	Retain	
318-614	ETF ELEC EQUIP NO. 1/862	8	8	1997	2	P	Retain	
318-614	ETF ELEC EQUIP NO. 2/863	16	16	1999	2	P	Retain	
318-614	I & C STAGING LAB/868	269	269	1974	2	P	Retain	
318-614	ETF SHOP BLDG./876	3,332	3,332	1953	2	P	Retain	
318-614	ETF AC&T BLDG. /878	16,651	16,651	1953	2	P	Retain	
318-614	ETF-B EXHAUSTER/879	4,329	4,329	1953	2	P	Retain	
318-614	ETF-A AIR SUPPLY/881	2,057	2,057	1956	2	P	Retain	
318-614	ETF-A EXHAUSTER/882	962	962	1957	2	P	Retain	
318-614	ETFA REFRIGERATION/884	1,219	1,219	1967	2	P	Retain	
318-614	ETFA HEATER CNTRL/ 885	49	49	1956	2	P	Retain	
318-614	HIGH PRESS STATION/886	30	30	1957	2	P	Retain	
318-614	ETFA HEATER BLOWER/887	40	40	1957	2	P	Retain	
318-614	ETFA PUMP HOUSE/889	4	4	1958	2	P	Retain	
318-614	ETFA HYDRAULIC BLDG./891	37	37	1967	2	P	Retain	
318-614	ETFA VALVE HOUSE/892	36	36	1958	2	P	Retain	
318-614	ETFA J-2A CRYOGENIC/893	139	139	1974	2	P	Retain	
318-614	ETFA FUEL SHELTER/894	245	245	1960	2	P	Retain	
318-614	ETFA INSTR HUT 1/895	14	14	1960	2	P	Retain	
318-614	ETFA INSTR HUT 2/896	24	24	1967	2	P	Retain	
318-614	ETFA VALVE RPR /897	84	84	1964	2	P	Retain	
318-614	T-3 TEST CELL ENCL/898	191	191	1963	2	P	Retain	
318-614	ETF SPECIAL PROJ/899	460	460	1980	2	P	Retain	
318-614	ETF-C EXHAUSTER/903	10,261	10,261	1984	2	P	Retain	
318-614	TEST BLDG, C1 & C2/912	4,806	4,806	1983	2	P	Retain	
318-614	ETF-C COMPRESSOR/913	690	690	1983	2	P	Retain	
318-614	ETF-C TEST FUEL COND/914	325	325	1984	2	P	Retain	
318-614	ETF-C RC-3 COOLER/916	228	228	1984	2	P	Retain	
318-614	ETF-C HEATER CNTRL/921	96	96	1983	2	P	Retain	
318-614	ETF-C REFRIG. CNTRL/922	1,404	1,404	1983	2	P	Retain	
318-614	ETF-C AIR SUPPLY/929	8,533	8,533	1983	2	P	Retain	
318-614	PROP TECH DIAG LAB /936	297	297	1988	2	P	Retain	
318-614	ELECTRO-OPTICS LAB/938	297	297	1992	2	P	Retain	
318-614	AMSC/939	1,547	1,547	1992	2	P	Retain	
318-614	ROCKET PREP NO. 1/1690	299	299	1960	2	P	Retain	
318-614	RPA IGNITOR BLDG./1695	17	17	1962	2	P	Retain	
318-614	RPA SUPPORT BLDG./1697	90	90	1966	2	P	Retain	
318-614	J6 SUPPORT BUILDING/2120	320	320	1987	2	P	Retain	
318-614	WEBBER BOX/2214	25	25	1962	2	P	Retain	
318-614	RPA - 2 BLDG./2215	574	574	1966	2	P	Retain	

1. COMPONENT AIR FORCE	FY2012 MILITARY CONSTRUCTION PROJECT DATA		2. DATE 17 DEC 2010
3. INSTALLATION AND LOCATION ARNOLD AIR FORCE BASE, TENNESSEE		4. PROJECT TITLE CONSTRUCT SL2/SL3 ADMINISTRATIVE FACILITY	
5. PROGRAM ELEMENT 65976	6. CATEGORY CODE 318-614	7. PROJECT NUMBER ANZY089010	8. PROJECT COST (\$000) 1,106.5



Arnold Air Force Base
Site Location



Project Location



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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
67A021: <i>IMWS</i>	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing

Note

FY12-16 funding is in an incorrect BPAC - should be in 64A021, GPS III OCX.

A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based Position, Navigation and Time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for the next generation GPS control segment (OCX). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly legacy and GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funds will support science and technology, technology development and systems development efforts.

This program element is Budget Activity 4. OCX is in the Technology Development Phase.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	390.889	-	390.889
Total Adjustments	-	-	390.889	-	390.889
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	390.889	-	390.889

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>
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Change Summary Explanation

FY12 funding is in an incorrect BPAC - should be in 64A021, GPS III OCX.

FY10 funds are in this PE (0603423F), BPAC 64A021.

FY11 funds are in PE 0305265F.

FY12 funds transferred from PE 0305265F in PE 0603423F.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	PROJECT 67A021: <i>IMWS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A021: <i>IMWS</i>	-	-	390.889	-	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

FY12-16 funding was transferred to this PE from PE 0305265F, however is was incorrectly loaded into this BPAC - should be in 64A021, GPS III OCX.

A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space based Position, Navigation and Time (PNT) distribution system. This Program Element (PE) funds the Research and Development (R&D) for the next generation GPS control segment (OCX). This includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly legacy and GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, systems engineering, system development, test and evaluation efforts and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funds will support science and technology, technology development and systems development efforts.

This program element is Budget Activity 4. OCX is in the Technology Development Phase.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCX	-	-	390.889	-	390.889
Description: Development of the next generation control segment.					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	PROJECT 67A021: <i>IMWS</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue OCX Block 1-2 Integrated System Design, Systems Engineering & Integration (SE&I) and technical and program support.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	-	390.889	-	390.889

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• RDT&E: <i>AF PE 0305265F GPS III Space Segment</i>	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing
• RDT&E (1): <i>AF PE 0305265F, OCX</i>	0.000	381.867	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF PE 0305265F: <i>GPS III Space Segment</i>	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing
• OPAF 0603423F: <i>OCX</i>	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing

D. Acquisition Strategy
The Air Force is pursuing a "Block" approach to the next generation GPS control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition strategy approach follows the "Back to Basics" space program acquisition philosophy which focuses on mission success and on-time delivery.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	PROJECT 67A021: <i>IMWS</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Phase B OCX Block 1 & 2 Development	C/CPAF	Raytheon:Aurora, CO	-	-		288.156	Nov 2011	-		288.156	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:Huntington Beach, CA	-	-		5.900	Nov 2011	-		5.900	0.000	5.900	0.000
Modernization/SE & Technical Support	Various	Various:,	-	-		27.906	Nov 2011	-		27.906	0.000	27.906	0.000
Subtotal			-	-		321.962		-		321.962			0.000

Remarks

FY10 funding is in this PE (0603423F) in BPAC 64A021, GPS III OCX.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Wing Support	Various	Various:,	-	-		44.247	Nov 2011	-		44.247	Continuing	Continuing	0.000
FFRDC	Various	Aerospace:El Segundo, CA	-	-		24.680	Nov 2011	-		24.680	0.000	24.680	0.000
Subtotal			-	-		68.927		-		68.927			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>			PROJECT 67A021: <i>IMWS</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	-	390.889	-	390.889			0.000	

Remarks

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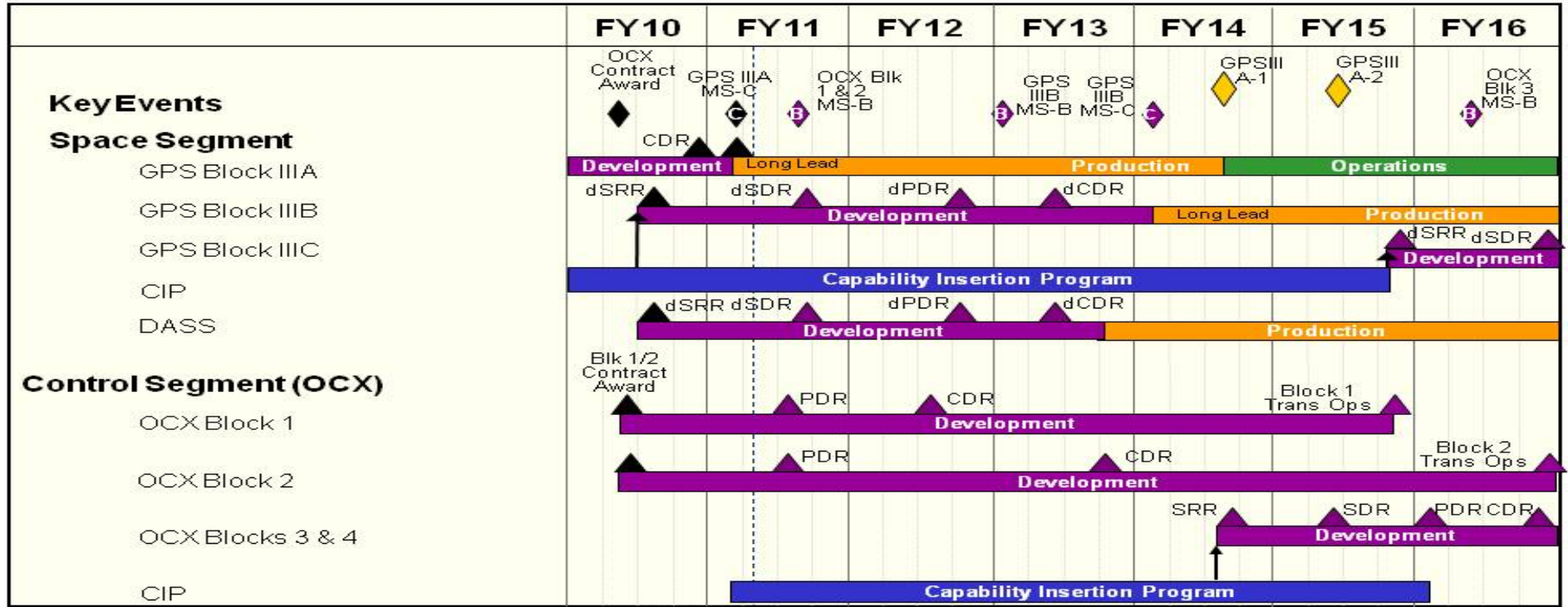
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0603423F: Global Positioning System III -
 Operational Control Segment

PROJECT
 67A021: IMWS



CDR – Critical Design Review
 CIP – Capability Insertion Program
 DASS – Distress Alerting Satellite System

PDR – Preliminary Design Review
 SRR – System Requirements Review
 SV – Space Vehicle

SDR – System Design Review
 d – Delta

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0603423F: <i>Global Positioning System III - Operational Control Segment</i>	PROJECT 67A021: <i>IMWS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
OCX Block 1 Critical Design Review (CDR)	3	2012	3	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: <i>CVLSP</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	3.847	-	5.365	-	5.365	7.440	8.934	-	-	Continuing	Continuing
675277: <i>CVLSP</i>	3.847	-	5.365	-	5.365	7.440	8.934	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Common Vertical Lift Support Platform (CVLSP) program will replace the current USAF UH-1N fleet of 62 aircraft with an aircraft with improved speed, range, capacity and survivability. CVLSP core missions are to provide nuclear weapon convoy escort, 24/7 adverse weather capable InterContinental Ballistic Missile (ICBM) emergency security response/operational support, and mass passenger transport/Operational Support Airlift (OSA) in the National Capital Region. Other assigned missions include Pacific Air Forces (PACAF) OSA, survival school support, test and range support, and combat aviation advisor training.

CVLSP RDT&E provides for missionization of an in-production, non-developmental, Government Off-The-Shelf or Commercial Off-The-Shelf (GOTS/COTS) aircraft including flight testing, Live Fire Test and Evaluation, and airworthiness certification. Funding also provides for development or conversion of COTS training systems, technical data, support equipment, and logistics elements as required for use in an operational environment.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production fielding in the current or subsequent fiscal year.

Totals include funding for Program Resources Collection Process (PRCP), Program Number 434, Common Vertical Lift Support Platform (CVLSP), a Pre-MDAP program.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.755M in FY 2012.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: <i>CVLSP</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	4.000	-	-	-	-
Current President's Budget	3.847	-	5.365	-	5.365
Total Adjustments	-0.153	-	5.365	-	5.365
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.017	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.013	-			
• SBIR/STTR Transfer	-0.123	-			
• Other Adjustments	-	-	5.365	-	5.365

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: <i>CVLSP</i>	PROJECT 675277: <i>CVLSP</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675277: <i>CVLSP</i>	3.847	-	5.365	-	5.365	7.440	8.934	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Common Vertical Lift Support Platform (CVLSP) program will replace the current USAF UH-1N fleet of 62 aircraft with an aircraft with improved speed, range, capacity and survivability. CVLSP core missions are to provide nuclear weapon convoy escort, 24/7 adverse weather capable InterContinental Ballistic Missile (ICBM) emergency security response/operational support, and mass passenger transport/Operational Support Airlift (OSA) in the National Capital Region. Other assigned missions include Pacific Air Forces (PACAF) OSA, survival school support, test and range support, and combat aviation advisor training.

CVLSP RDT&E provides for missionization of an in-production, non-developmental, Government Off-The-Shelf or Commercial Off-The-Shelf (GOTS/COTS) aircraft including flight testing, Live Fire Test and Evaluation, and airworthiness certification. Funding also provides for development or conversion of COTS training systems, technical data, support equipment, and logistics elements as required for use in an operational environment.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production fielding in the current or subsequent fiscal year.

Totals include funding for Program Resources Collection Process (PRCP), Program Number 434, Common Vertical Lift Support Platform (CVLSP), a Pre-MDAP program.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.755M in FY 2012.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: CVLSP	3.847	-	5.365	-	5.365
Description: Procure a medium lift helicopter with improved speed, range, capacity and survivability to replace the AF fleet of UH-1N.					
FY 2010 Accomplishments: Conduct initial analysis of requirements and assessment of technical maturity of system/subsystems and acquisition risks. Formulate preliminary strategies for acquisition.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: <i>CVLSP</i>	PROJECT 675277: <i>CVLSP</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><i>FY 2012 Base Plans:</i> Initiate integration of avionics subsystems on to non-developmental airframe and flight testing including live fire test and evaluation, airworthiness certification, and operational testing. Analyze test results and assess performance against user's production requirements and concept of operations. Formulate acquisition strategies for aircraft, subsystem procurement, logistics, and training system procurement.</p> <p><i>FY 2012 OCO Plans:</i></p>					
Accomplishments/Planned Programs Subtotals	3.847	-	5.365	-	5.365

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0604263F: <i>CVLSP, APAF, BA 04</i>	0.000	6.432	52.800	0.000	52.800	126.568	133.184	221.094	224.398	Continuing	Continuing

D. Acquisition Strategy
Common Vertical Lift Support Platform (CVLSP) program will replace the current USAF UH-1N fleet of 62 aircraft with an aircraft with improved speed, range, capacity and survivability. CVLSP program will award a contract starting in FY12 to achieve Initial Operational Capability by FY15. The CVLSP is expected to be an in-production, non-developmental, Government Off-The-Shelf or Commercial Off-The-Shelf (GOTS/COTS) aircraft.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: <i>CVLSP</i>	PROJECT 675277: <i>CVLSP</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
CVLSP Subsystems Development	TBD	TBD:TBD,	-	-		0.585	Jan 2012	-		0.585	6.550	7.135	0.000
Subtotal			-	-		0.585		-		0.585	6.550	7.135	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Acquisition Program Planning	Various	Various:Dayton, OH	5.161	-		-		-		-	0.000	5.161	0.000
Subtotal			5.161	-		-		-		-	0.000	5.161	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Test Support	Various	Various:Dayton, OH	0.062	-		2.730	Apr 2012	-		2.730	9.824	12.616	0.000
Subtotal			0.062	-		2.730		-		2.730	9.824	12.616	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Office Support	Various	Various:Dayton, OH	2.482	-		2.050	Jan 2012	-		2.050	0.000	4.532	0.000
Subtotal			2.482	-		2.050		-		2.050	0.000	4.532	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			7.705	-		5.365		-		5.365	16.374	29.444	0.000

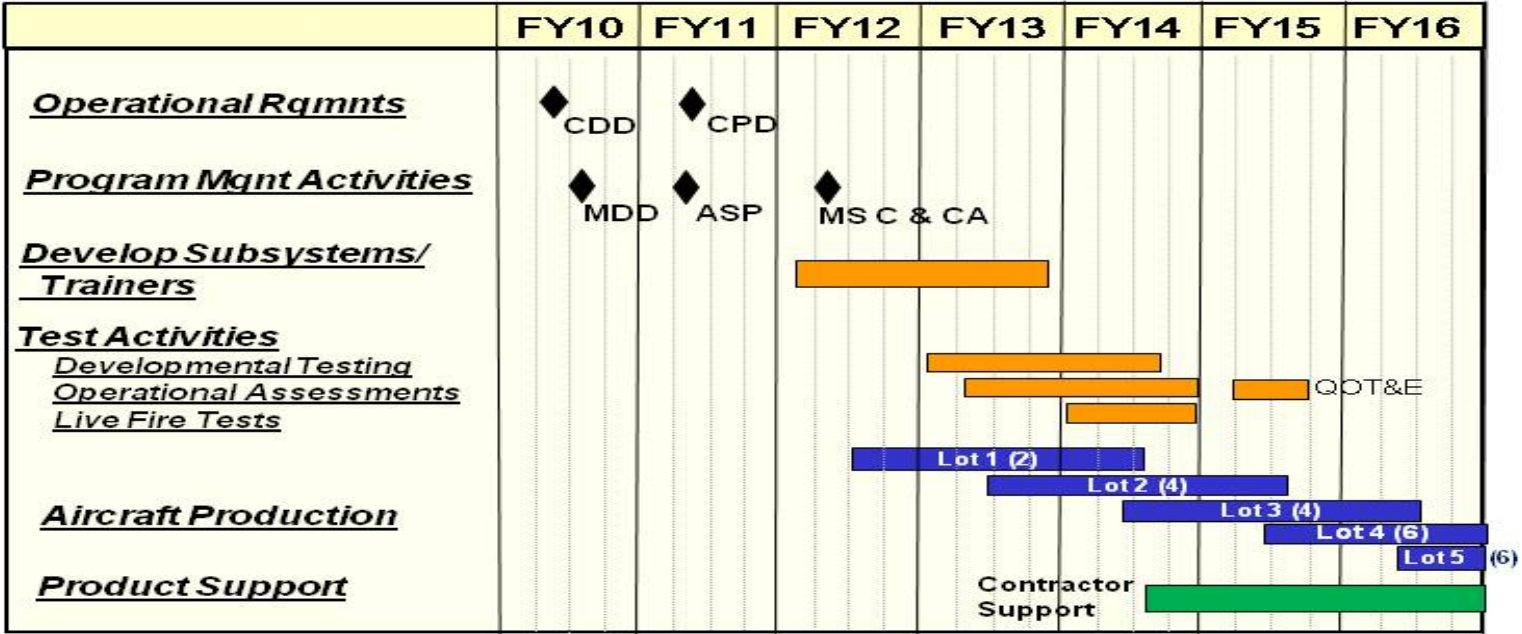
Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0604263F: CVLSP	PROJECT 675277: CVLSP

CVLSP Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0604263F: *CVLSP*

PROJECT

675277: *CVLSP*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop Subsystems/Training Systems	1	2012	4	2013
Developmental Testing	1	2013	3	2014
Operational Assessments	2	2013	4	2014
Live Fire Tests/Analyses	1	2014	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	20.405	43.300	91.866	-	91.866	90.598	129.201	113.040	85.188	Continuing	Continuing
676003: <i>HRM Structural Development</i>	20.405	43.300	91.866	-	91.866	90.598	129.201	113.040	85.188	Continuing	Continuing

Note

The original iteration of a modernized personnel and pay system was the Defense Integrated Military Human Resources System (DIMHRS) program. Following the 8 Sep 09 Acquisition Decision Memorandum (ADM), the program was tentatively named the Air Force Integrated Military Human Resources System (AF-IMHRS), to reflect ADM direction for Service-specific systems. The program has since been renamed the Air Force Integrated Personnel and Pay System (AF-IPPS). Within this RDT&E Exhibit, "DIMHRS" refers to the system prior to the 8 Sep 09 ADM, while "AF-IPPS" refers to the current program.

A. Mission Description and Budget Item Justification

AF-IPPS is an unbaselined Major Automated Information System (MAIS) transitioned from the Business Transformation Agency (BTA) to the Services as directed by OSD/AT&L through the 8 Sep 09 ADM. The program, initially known as DIMHRS, has transitioned into Service-specific systems. Each system will expose data elements to a common DoD-wide Enterprise Information Web (EIW) - thus maintaining key elements of the original intent of the program. The AF is currently developing an acquisition strategy for a Service-specific integrated military personnel and pay system, building on the DIMHRS Core IT Investment "where practical and cost-effective" (9 Jul 10 ADM).

RDT&E activities include preserving the DoD DIMHRS Core in a lab environment (to include maintaining legacy software licenses necessary for development and transition to new AF per/pay system), analysis and studies, planning activities, Request for Proposal (RFP) development, system integration, test, deployment, and acquisition logistics. Since AF-IPPS is replacing and/or interfacing with operational systems, this system must also ensure that current required pay and personnel capabilities are provided through AF-IPPS gap-filler tasks or legacy operational system adaptation. Planning and deployment activities include communication, change management, testing, training, systems transition, deployment, data cleansing/migration and schedule management. FY12 will include activities to support the development of functionality currently provided by the legacy Pers/Pay environment, allowing for that environment to be retired upon deployment of AF-IPPS. Such functionality includes automated workflow, forms management, and training/education course management.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	20.405	43.300	91.866	-	91.866
Current President's Budget	20.405	43.300	91.866	-	91.866
Total Adjustments	-	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-	-	-

Change Summary Explanation

As a result of a successful Materiel Development Decision (MDD) (9 Jul 10 ADM), the Milestone Decision Authority (MDA) authorized the AF-IPPS program to proceed as an unbaselined MAIS program.

\$48.566 increase from FY11 to FY12 due to planned start of Increment 1 effort.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676003: <i>HRM Structural Development</i>	20.405	43.300	91.866	-	91.866	90.598	129.201	113.040	85.188	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The original iteration of a modernized personnel and pay system was the Defense Integrated Military Human Resources System (DIMHRS) program. Following the 8 Sep 09 Acquisition Decision Memorandum (ADM), the program was tentatively named the Air Force Integrated Military Human Resources System (AF-IMHRS), to reflect ADM direction for Service-specific systems. The program has since been renamed the Air Force Integrated Personnel and Pay System (AF-IPPS). Within this RDT&E Exhibit, "DIMHRS" refers to the system prior to the 8 Sep 09 ADM, while "AF-IPPS" refers to the current program.

A. Mission Description and Budget Item Justification

AF-IPPS is an unbaselined Major Automated Information System (MAIS) transitioned from the Business Transformation Agency (BTA) to the Services as directed by OSD/AT&L through the 8 Sep 09 ADM. The program, initially known as DIMHRS, has transitioned into Service-specific systems. Each system will expose data elements to a common DoD-wide Enterprise Information Web (EIW) - thus maintaining key elements of the original intent of the program. The AF is currently developing an acquisition strategy for a Service-specific integrated military personnel and pay system, building on the DIMHRS Core IT Investment "where practical and cost-effective" (9 Jul 10 ADM).

RDT&E activities include preserving the DoD DIMHRS Core in a lab environment (to include maintaining legacy software licenses necessary for development and transition to new AF per/pay system), analysis and studies, planning activities, Request for Proposal (RFP) development, system integration, test, deployment, and acquisition logistics. Since AF-IPPS is replacing and/or interfacing with operational systems, this system must also ensure that current required pay and personnel capabilities are provided through AF-IPPS gap-filler tasks or legacy operational system adaptation. Planning and deployment activities include communication, change management, testing, training, systems transition, deployment, data cleansing/migration and schedule management. FY12 will include activities to support the development of functionality currently provided by the legacy Pers/Pay environment, allowing for that environment to be retired upon deployment of AF-IPPS. Such functionality includes automated workflow, forms management, and training/education course management.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: AF-IPPS System Integration	-	-	27.173	-	27.173
Description: Conduct system integration activities.					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><i>FY 2010 Accomplishments:</i></p> <p><i>FY 2011 Plans:</i></p> <p><i>FY 2012 Base Plans:</i> The AF-IPPS prime contractor will continue work on requirements analysis, design, and integration for the AF-IPPS system and support other activities associated with ensuring Air Force pay and personnel capabilities remain viable until system deployment.</p> <p><i>FY 2012 OCO Plans:</i></p>					
<p><i>Title:</i> Technical and Program Management</p> <p><i>Description:</i> Conduct technical and program management activities.</p> <p><i>FY 2010 Accomplishments:</i> Activities included contracted advisory and assistance services, MITRE, functional contracted support, travel, and other program management expenses. Additional activities included beginning to stand-up and utilize the Transition Lab Environment (TLE) and planning/development of the acquisition strategy and RFP.</p> <p><i>FY 2011 Plans:</i> Includes contracted advisory and assistance services, MITRE, travel, independent test, and other program management expenses. Some of the activities will include completion of the TLE effort, acquisition strategy and RFP development.</p> <p><i>FY 2012 Base Plans:</i> Includes contracted advisory and assistance services, MITRE, travel, independent test, and other program management expenses. Activities also include source selection and award of the prime contract.</p> <p><i>FY 2012 OCO Plans:</i></p>	9.871	7.565	8.044	-	8.044
<p><i>Title:</i> Transition Lab Environment (TLE) and Evaluation</p> <p><i>Description:</i> Conduct Transition Lab Environment (TLE) and evaluation activities.</p> <p><i>FY 2010 Accomplishments:</i> Established the TLE to provide a technical integration, demonstration, and investigation environment for preserving the DIMHRS Core were initiated. The environment when complete will allow the Air Force to set</p>	4.677	32.294	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>the stage for a robust competition by supporting investigation of the DIMHRS Core, evaluating PeopleSoft and providing an area for potential AF-IPPS offerors to review the core products. Also included were studies, analyses, and activities associated with planning and preparation for the AF-IPPS program acquisition.</p> <p>FY 2011 Plans: The TLE will be completed, operated, and maintained. The TLE will provide a technical integration, demonstration, and investigation environment for preserving the DIMHRS Core. This environment will allow the Air Force an opportunity to level-set industry via DIMHRS IT Core knowledge transfer. Also includes studies, analyses, and activities associated with planning and preparation for the AF-IPPS program acquisition.</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: Independent Verification and Validation (IV&V)</p> <p>Description: Conduct Independent Verification and Validation (IV&V) activities.</p> <p>FY 2010 Accomplishments: Drafted a Memorandum of Understanding (MOU) and conducted initial preparation to establish an IV&V contract.</p> <p>FY 2011 Plans: IV&V will be performed on governance, risk management and configuration management prior to contract award. An Independent Logistic Assessment (ILA) will also be completed prior to contract award. ESC/ENI (Engineering group located at Gunter Annex) will be the independent agent in charge of managing the contractor selected to perform IV&V. This has been established via a MOU.</p> <p>FY 2012 Base Plans: IV&V will be performed on governance, risk management and configuration management prior to contract award. An Independent Logistic Assessment (ILA) will also be completed prior to contract award. ESC/ENI (located at Gunter Annex) will be the independent agent in charge of managing the contractor selected to perform IV&V. This has been established via a Memorandum of Understanding (MOU).</p> <p>FY 2012 OCO Plans:</p>	0.049	1.077	1.314	-	1.314
<p>Title: Commercial-Off-The-Shelf (COTS) Software (S/W)</p>	5.808	2.364	12.335	-	12.335

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: Conduct commercial-off-the-shelf (COTS) software maintenance and oversight for use in Transition Lab Environment (TLE).</p> <p>FY 2010 Accomplishments: Acquired maintenance extension agreements on the COTS S/W licenses transferred from the DIMHRS program.</p> <p>FY 2011 Plans: AF-IPPS will continue to maintain COTS S/W licenses to include PeopleSoft as well as various other key COTS products. Continuous maintenance ensures continuity from past year COTS S/W purchases.</p> <p>FY 2012 Base Plans: AF-IPPS will extend the existing COTS S/W maintenance agreements (including PeopleSoft as well as various other key COTS products) to procure additional COTS S/W to support the new system integration effort as a result of the source selection contract award. Continuous maintenance ensures continuity from past year COTS S/W purchases.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: Change Management</p> <p>Description: Support development of functionality currently provided by legacy Pers/Pay environment.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: Includes development of automated workflow, forms management, and training/education course management for AF-IPPS.</p> <p>FY 2012 OCO Plans:</p>	-	-	43.000	-	43.000
Accomplishments/Planned Programs Subtotals	20.405	43.300	91.866	-	91.866

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0901220F: <i>O&M</i>	7.250	8.665	8.856	0.000	8.856	8.881	8.976	9.167	9.359	Continuing	Continuing
• PE 0901250F: <i>OPAF</i>	0.000	0.000	0.000	0.000	0.000	24.760	0.000	13.339	0.000	Continuing	Continuing

D. Acquisition Strategy

Air Force Integrated Personnel and Pay System (AF-IPPS) employs an incremental acquisition strategy development contract that will be negotiated and awarded in a competitive environment.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TLE and Evaluation	C/CPFF	Northrop Grumman:McClean, VA	4.677	32.294	Jan 2011	-		-		-	0.000	36.971	36.971
System Integration, Test, and Deployment	C/TBD	TBD:TBD,	-	-		27.173	Jul 2012	-		27.173	0.000	27.173	TBD
IV&V	C/Various	PASS (Summaria Systems Inc.), TBD:Montgomery, AL	0.049	1.077	Sep 2011	1.314	Sep 2012	-		1.314	0.000	2.440	TBD
COTS S/W	C/CPFF	Northrop Grumman:McClean, VA	5.808	2.364	Dec 2010	12.335	Dec 2011	-		12.335	0.000	20.507	TBD
Change Management	C/TBD	TBD:TBD,	-	-		43.000		-		43.000	0.000	43.000	TBD
Subtotal			10.534	35.735		83.822		-		83.822	0.000	130.091	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Functional Management Support	C/Various	Booze, Allen, Hamilton, Inc.:McClean, VA	4.227	-		-		-		-	0.000	4.227	TBD
Architecture	SS/CPFF	MITRE:Hanscom AFB, MA	0.798	1.000	Oct 2010	0.974	Jun 2012	-		0.974	0.000	2.772	TBD
A&AS	C/Various	ETASS - Jacobs, PASS - Oasis, SCS - Tecolote:Hanscom AFB, MA	3.713	5.686	Jun 2011	5.669	Jun 2012	-		5.669	0.000	15.068	TBD
Program Support	Various	Various:Bedford, MA	1.091	0.498		0.469		-		0.469	0.000	2.058	TBD
Subtotal			9.829	7.184		7.112		-		7.112	0.000	24.125	

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0605018F: Air Force Integrated Personnel and Pay System (AF-IPPS)	PROJECT 676003: HRM Structural Development
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Operations	C/Various	PASS:Orlando, FL	0.042	0.381	Aug 2011	0.932	Aug 2012	-		0.932	0.000	1.355	TBD
Subtotal			0.042	0.381		0.932		-		0.932	0.000	1.355	

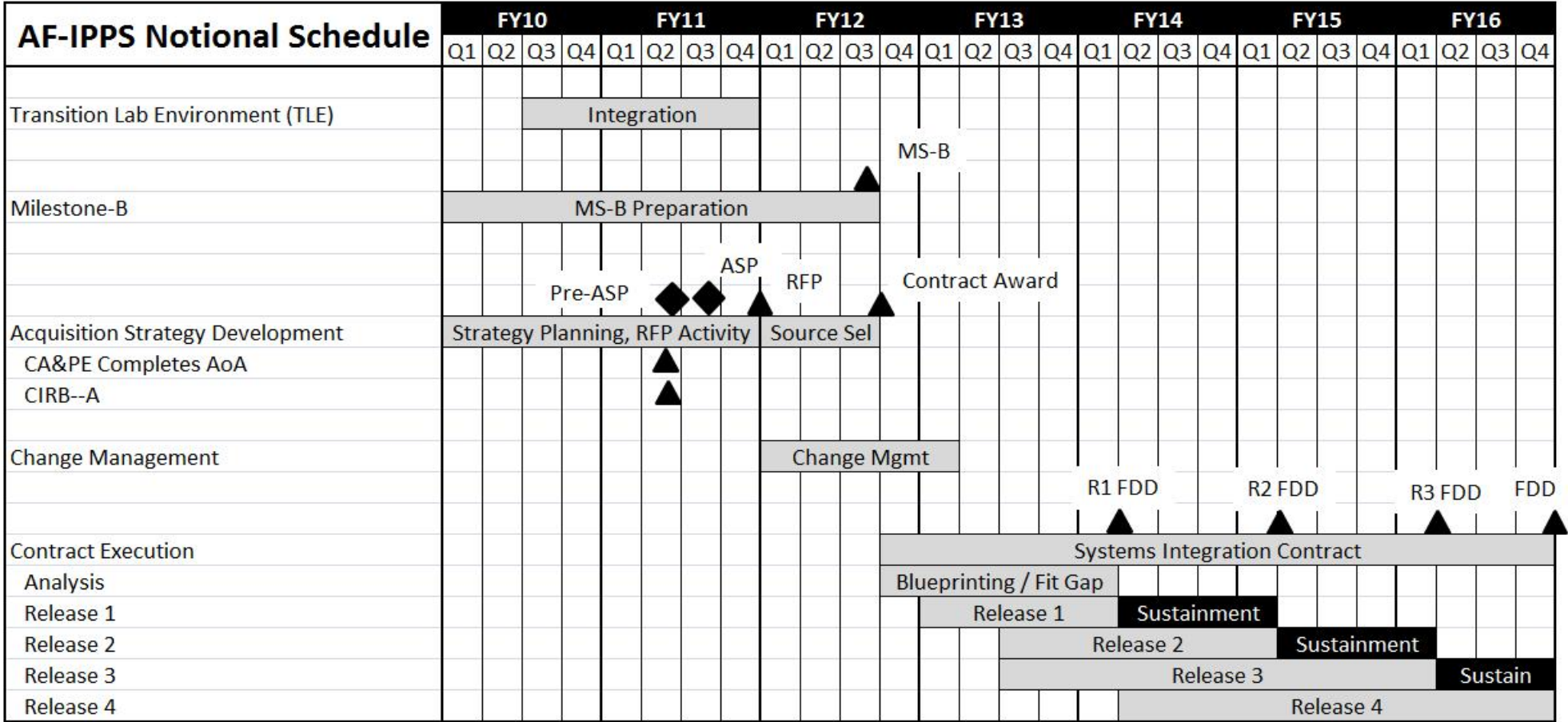
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			20.405	43.300		91.866		-		91.866	0.000	155.571	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>



*The above notional schedule is a real-world update (i.e., adjustment to the program's Milestone-B / Contract Award dates due to slip of AoA) to the PMO-briefed schedule at the 19 Nov 10 AFRB.

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605018F: <i>Air Force Integrated Personnel and Pay System (AF-IPPS)</i>	PROJECT 676003: <i>HRM Structural Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Strategy Planning, RFP Activity (Development and Release)	1	2010	4	2011
TLE Integration / Evaluation	3	2010	4	2011
Acquisition Strategy Panel (ASP)	3	2011	3	2011
Source Selection	1	2012	3	2012
Change Management	1	2012	2	2013
Milestone-B (MS-B)	3	2012	3	2012
Contract Award	4	2012	4	2012
Systems Integration Contract	4	2012	4	2016
Release 1	1	2013	1	2014
Release 2	3	2013	1	2015
Release 3	3	2013	1	2016
Release 4	2	2014	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing
675066: <i>Anti-Tamper Technology Executive Agent</i>	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing

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 technology development and enhancement efforts among the Services, DoD Agencies, and laboratories, and with industry. The DoD ATEA will issue contracts for AT technology development as well as plus-up existing AT technology efforts to increase the technology readiness level. Priorities will be given to technologies that benefit the majority of the AT community. The Anti-Tamper technology development and enhancement efforts 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. 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 increase in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand. Beginning in FY09 additional funding has been dedicated to the technical development of new AT capabilities. Emerging research in the areas of materials, cryptography and electronic circuits has the potential to bring new AT capabilities that have reduced power needs, a smaller form factor, and less detectability by nation class adversary using state of the art reverse engineering tools. The goal of the research is to mature promising technologies to the point that they can be transitioned to a program office or industry prime for implementation in our weapons systems. This program is in Budget Activity 07, Operational System Development, because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	47.276	42.255	37.140	-	37.140
Current President's Budget	45.828	42.255	35.467	-	35.467
Total Adjustments	-1.448	-	-1.673	-	-1.673
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-1.448	-	-1.673	-	-1.673

Change Summary Explanation

None

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>				PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675066: <i>Anti-Tamper Technology Executive Agent</i>	45.828	42.255	35.467	-	35.467	30.338	29.725	28.923	29.433	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 technology development and enhancement efforts among the Services, DoD Agencies, and laboratories, and with industry. The DoD ATEA will issue contracts for AT technology development as well as plus-up existing AT technology efforts to increase the technology readiness level. Priorities will be given to technologies that benefit the majority of the AT community. The Anti-Tamper technology development and enhancement efforts 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. 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 increase in late FY03. Based on Anti-Tamper validation requirement projections, the number of Anti-Tamper experts needs to expand. Beginning in FY09 additional funding has been dedicated to the technical development of new AT capabilities. Emerging research in the areas of materials, cryptography and electronic circuits has the potential to bring new AT capabilities that have reduced power needs, a smaller form factor, and less detectability by nation class adversary using state of the art reverse engineering tools. The goal of the research is to mature promising technologies to the point that they can be transitioned to a program office or industry prime for implementation in our weapons systems. This program is in Budget Activity 07, Operational System Development, because it includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Anti-Tamper Technology	45.828	42.255	35.467	-	35.467
Description: Advanced Anti-Tamper Technology Executive Agent activities including: AFRL/Ryw Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and technology development					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>	PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYT Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology					
<i>FY 2011 Plans:</i> Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development.					
<i>FY 2012 Base Plans:</i> Continue advanced Anti-Tamper Technology Executive Agent activities including: AFRL/RYW Management, ATEA outsourcing, Anti-Tamper Verification and Validation, Assessments and Technology Development.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	45.828	42.255	35.467	-	35.467

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: NONE	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing Continuing

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.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>	PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEA Field Office Program Oversight	Various	AFRL/RYW:Dayton, OH	1.107	1.609	Mar 2011	1.361	Mar 2012	-		1.361	Continuing	Continuing	TBD
Security/Infrastructure	Various	AFRL/RYW:Dayton, OH	0.255	0.192	Mar 2011	0.286	Mar 2012	-		0.286	Continuing	Continuing	TBD
Databases, Website & Tools	Various	AFRL/RYW:Dayton, OH	0.812	0.620	Mar 2011	0.755	Mar 2012	-		0.755	Continuing	Continuing	0.000
Education and Outreach Support	Various	AFRL/RYW:Dayton, OH	0.563	0.418	Mar 2011	0.443	Mar 2012	-		0.443	Continuing	Continuing	0.000
Subtotal			2.737	2.839		2.845		-		2.845			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ATEA Outreach & Education AT Conference	Various	AFRL/RYW:WPAFB, OH	-	0.010	Apr 2011	0.010	Apr 2012	-		0.010	Continuing	Continuing	TBD
AT Short Course	PO	MIT/LL:Lexington, MA	0.230	0.275	Apr 2011	0.275	Feb 2012	-		0.275	Continuing	Continuing	TBD
DAU Course	TBD	TBD:TBD,	-	0.010	Apr 2011	-	Feb 2012	-		-	Continuing	Continuing	TBD
SME Training	MIPR	SNL:Albuquerque, NM	0.112	0.075	Mar 2011	0.075	Feb 2012	-		0.075	Continuing	Continuing	TBD
SBIR Workshop	MIPR	AFRL/RYW:WPAFB, OH	0.008	0.008	Jun 2011	0.008	Jun 2012	-		0.008	0.000	0.024	0.000
Threat Report Updates	MIPR	SNL:Albuquerque, NM	0.270	-		-		-		-	0.000	0.270	0.000
OSD Desk Reference	MIPR	Navy:.,	0.337	-		-		-		-	0.000	0.337	0.000
AF AT Management	Various	SAF/AQL:Washington, DC	0.033	0.335	Jan 2011	0.335	Jan 2012	-		0.335	0.000	0.703	0.000
Subtotal			0.990	0.713		0.703		-		0.703			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>	PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Anti-Tamper Verification & Validation Army	Various	Army:Huntsville, AL	0.800	0.800	Mar 2011	0.800	Mar 2012	-		0.800	Continuing	Continuing	TBD
Navy	MIPR	Navy:China Lake, CA	1.227	1.270	Apr 2011	1.270	Apr 2012	-		1.270	Continuing	Continuing	TBD
Air Force	PO	Air Force:WPAFB, OH	0.400	1.203	Feb 2011	1.200	Feb 2012	-		1.200	Continuing	Continuing	TBD
AF Mentorship	PO	Air Force:WPAFB, OH	-	0.525	Jan 2011	0.680	Jan 2012	-		0.680	0.000	1.205	0.000
SNL	MIPR	SNL:Albuquerque, NM	0.760	0.400	Feb 2011	0.700	Feb 2012	-		0.700	Continuing	Continuing	TBD
V&V Contingency	TBD	TBD:TBD,	-	-	Mar 2011	1.023	Mar 2012	-		1.023	Continuing	Continuing	TBD
Subtotal			3.187	4.198		5.673		-		5.673			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Anti-Tamper Assessments Air Force AT Field Agent	PO	Air Force:WPAFB, OH	0.231	0.340	Feb 2011	0.350	Feb 2012	-		0.350	Continuing	Continuing	TBD
NAWC CRANE (Navy)	MIPR	Navy:Crane, IN	2.398	4.275	Feb 2011	1.350	Feb 2012	-		1.350	Continuing	Continuing	TBD
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR	Army:Huntsville, AL	0.925	2.645	Feb 2011	1.450	Feb 2012	-		1.450	Continuing	Continuing	TBD
DoD Executive Agent Field Agent (AFRL/RYW)	Allot	Air Force:WPAFB, OH	-	-		-		-		-	Continuing	Continuing	TBD
SNL	MIPR	SNL:Albuquerque, NM	3.226	4.490	Mar 2011	4.015	Mar 2012	-		4.015	Continuing	Continuing	TBD
Assessment Contract Activities	Various	Various:,	-	0.950	Mar 2011	0.250	Mar 2012	-		0.250	Continuing	Continuing	TBD
Capability Development	Various	Services:,	5.646	0.495		-		-		-	0.000	6.141	0.000
Anti-Tamper Technology Development AFRL/RYW	Various	AFRL/RYW:WPAFB, OH	-	-		-		-		-	0.000	0.000	0.000
Technology Contract Activities	Various	AFRL/RYW:WPAFB, OH	17.323	21.310		18.831		-		18.831	0.000	57.464	0.000
New Activity Funds	TBD	TBD:TBD,	9.166	-		-		-		-	0.000	9.166	0.000
Subtotal			38.915	34.505		26.246		-		26.246			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>			PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	45.829	42.255	35.467	-	35.467				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0605024F: *Anti-Tamper Technology Executive Agent*

PROJECT

675066: *Anti-Tamper Technology Executive Agent*



PE 0605024F - Anti-Tamper Executive Agency

FUNCTIONS	FY10				FY11				FY12				FY13				FY14				FY15			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
ATEA Field Office																								
Databases & Website Updates & Maintenance																								
Education & Outreach																								
ATEA Other																								
AT Conference			▲				▲				▲				▲				▲				▲	
V&V																								
Program V&V Evaluations																								
Assessment																								
Review Assessment Proposals			◆				◆				◆				◆				◆				◆	
Tri-Service Coordination			◆				◆				◆				◆				◆				◆	
Reviews	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Technology Enhancement																								
Review Technology Proposals			◆				◆				◆				◆				◆				◆	
Tri-Service Coordination			◆				◆				◆				◆				◆				◆	
Reviews	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0605024F: <i>Anti-Tamper Technology Executive Agent</i>	PROJECT 675066: <i>Anti-Tamper Technology Executive Agent</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ATEA Field Office	1	2010	4	2015
Database and Website Updates & Maintenance	1	2010	4	2015
Education & Outreach	1	2010	4	2015
AT Conference	2	2010	3	2015
Program V&V Evaluations	1	2010	4	2015
Assessments	2	2010	3	2015
Anti-Tamper Technology Development Enhancement	1	2010	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	33.151	32.373	31.084	-	31.084	31.428	31.305	31.624	32.032	Continuing	Continuing
672738: <i>Weather Service</i>	33.151	32.373	31.084	-	31.084	31.428	31.305	31.624	32.032	Continuing	Continuing

Note

The program funding includes reductions for Overhead and Reports/Studies Board efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.260M in FY12.

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, sustain, and enhance segments of the Air Force Weather Weapon System (AFWWS). Activities also include studies and analysis to support both current program planning and execution and future program planning. The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for global 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 as well as centralized, reach-back capabilities. Air Force Weather (AFW) programs align 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 (presently 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 terrestrial and space weather data and produces decision-quality information for warfighters. Improved weather analysis of real-time information also supports DoD's role in transformation of the National Airspace System through the Next Generation Air Transportation System (NextGen) and enhances Air Force energy security plans. 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, local and regional 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. FY12 funding will continue development of dual-polarization weather radar capability for improved severe weather detection. During FY12, the weather data analysis capability will continue to develop incremental software enhancements and integrate improved analysis capabilities including processing of data from a new generation of environmental sensing satellites. In FY12, the program plans to continue development of software to integrate advanced terrestrial and space weather forecast capabilities to improve models for warfighter operations. In PT/WA program, the FY12 funding will continue developing software for warfighter tailoring and exploitation products and integrate regional and tactical weather systems with warfighter C4I systems. These efforts will enhance the availability and integration of weather information in multiple Wings, Squadrons, Air and Space Operations Centers, Army decision processes, ATC operations, and exploitation of weather at global, regional, and tactical levels.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	33.291	32.373	32.260	-	32.260
Current President's Budget	33.151	32.373	31.084	-	31.084
Total Adjustments	-0.140	-	-1.176	-	-1.176
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.140	-	-1.176	-	-1.176

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
672738: <i>Weather Service</i>	33.151	32.373	31.084	-	31.084	31.428	31.305	31.624	32.032	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, sustain, and enhance segments of the Air Force Weather Weapon System (AFWWS). Activities also include studies and analysis to support both current program planning and execution and future program planning. The AFWWS provides timely, accurate, consistent and relevant space and terrestrial weather information for global 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 as well as centralized, reach-back capabilities. Air Force Weather (AFW) programs align 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 (presently 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 terrestrial and space weather data and produces decision-quality information for warfighters. Improved weather analysis of real-time information also supports DoD's role in transformation of the National Airspace System through the Next Generation Air Transportation System (NextGen) and enhances Air Force energy security plans. 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, local and regional 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. FY12 funding will continue development of dual-polarization weather radar capability for improved severe weather detection. During FY12, the weather data analysis capability will continue to develop incremental software enhancements and integrate improved analysis capabilities including processing of data from a new generation of environmental sensing satellites. In FY12, the program plans to continue development of software to integrate advanced terrestrial and space weather forecast capabilities to improve models for warfighter operations. In PT/WA program, the FY12 funding will continue developing software for warfighter tailoring and exploitation products and integrate regional and tactical weather systems with warfighter C4I systems. These efforts will enhance the availability and integration of weather information in multiple Wings, Squadrons, Air and Space Operations Centers, Army decision processes, ATC operations, and exploitation of weather at global, regional, and tactical levels.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Weather Data Collection	0.195	0.270	0.310	-	0.310

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: WDC provides automated terrestrial and space environmental sensing capabilities at fixed and deployed locations worldwide.</p> <p>FY 2010 Accomplishments: Participated with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.</p> <p>FY 2011 Plans: Participating with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.</p> <p>FY 2012 Base Plans: Will participate with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: Weather Data Analysis</p> <p>Description: WDA provides a net-centric infrastructure that assimilates worldwide sources of terrestrial and space weather data and produces decision-quality information for warfighters.</p> <p>FY 2010 Accomplishments: Continued incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.</p> <p>FY 2011 Plans: Continuing incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.</p> <p>FY 2012 Base Plans: Will continue incremental software development and integration of enhanced analysis capabilities including processing of data from a new generation of environmental sensing satellites.</p> <p>FY 2012 OCO Plans:</p>	8.095	7.007	6.898	-	6.898
<p>Title: Weather Forecasting</p>	13.222	13.127	16.191	-	16.191

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: Forecasting provides advanced scientific numerical weather prediction capabilities for automated, high resolution forecast products for mission planning, rehearsal, and execution.</p> <p>FY 2010 Accomplishments: Continued integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.</p> <p>FY 2011 Plans: Continuing integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.</p> <p>FY 2012 Base Plans: Will continue integration of advanced terrestrial and space weather forecast capabilities including exploitation of a new generation of environmental sensing satellites.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: Product Tailoring/Warfighter Applications</p> <p>Description: PT/WA provides timely, local and regional 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.</p> <p>FY 2010 Accomplishments: Continued software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.</p> <p>FY 2011 Plans: Continuing software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.</p> <p>FY 2012 Base Plans: Will continue software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.</p> <p>FY 2012 OCO Plans:</p>	11.639	11.969	7.685	-	7.685
Accomplishments/Planned Programs Subtotals	33.151	32.373	31.084	-	31.084

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• PE 0305111F: <i>Weather Service, OPAF</i>	38.941	37.743	24.763	0.000	24.763	22.920	22.487	23.109	23.282	Continuing	Continuing
• PE 0305111F (1): <i>Weather Service, O&M</i>	153.520	145.759	132.562	0.000	132.562	142.573	146.432	148.930	152.121	Continuing	Continuing

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.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>				PROJECT 672738: <i>Weather Service</i>					

Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Development and integration of weather forecast software	C/CPAF	Northrop Grumman:Bellevue, NE	5.549	5.835	Jan 2011	9.052	Jan 2012	-		9.052	Continuing	Continuing	TBD
Development and integration of weather analysis software	C/CPFF	Raytheon:Long Beach, CA	6.620	6.467	Dec 2010	5.060	Oct 2011	-		5.060	Continuing	Continuing	TBD
Integrate weather systems with warfighter C4I systems	C/CPIF	Raytheon:Bellevue, NE	8.617	5.671	May 2011	4.893	Feb 2012	-		4.893	Continuing	Continuing	TBD
Improve numerical weather prediction	MIPR	NCAR:Boulder, CO	3.676	5.381	Feb 2011	4.500	Feb 2012	-		4.500	Continuing	Continuing	TBD
Improve weather forecast capabilities	MIPR	NASA:Greenbelt, MD	0.837	1.050	Feb 2011	1.100	Feb 2012	-		1.100	Continuing	Continuing	TBD
Hardware and software integration	C/CPAF	Northrop Grumman:Redondo Beach, CA	1.903	-		-		-		-	0.000	1.903	0.000
Various	Various	Various:Various,	2.206	2.494	Oct 2010	2.639	Oct 2011	-		2.639	Continuing	Continuing	TBD
Subtotal			29.408	26.898		27.244		-		27.244			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>
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Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Electronic Systems Center	Various	ESC:Hanscom AFB, MA	3.713	5.445	Oct 2010	3.805	Oct 2011	-		3.805	Continuing	Continuing	TBD
Space & Missile Systems Center	Various	SMC:Los Angeles AFB, CA	0.030	0.030	Oct 2010	0.035	Oct 2011	-		0.035	Continuing	Continuing	TBD
Air Force Weather Agency	TBD	AFWA:Offutt AFB, NE	-	-		-		-		-	Continuing	Continuing	TBD
Subtotal			3.743	5.475		3.840		-		3.840			

Project Cost Totals	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
	33.151	32.373	31.084	-	31.084			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

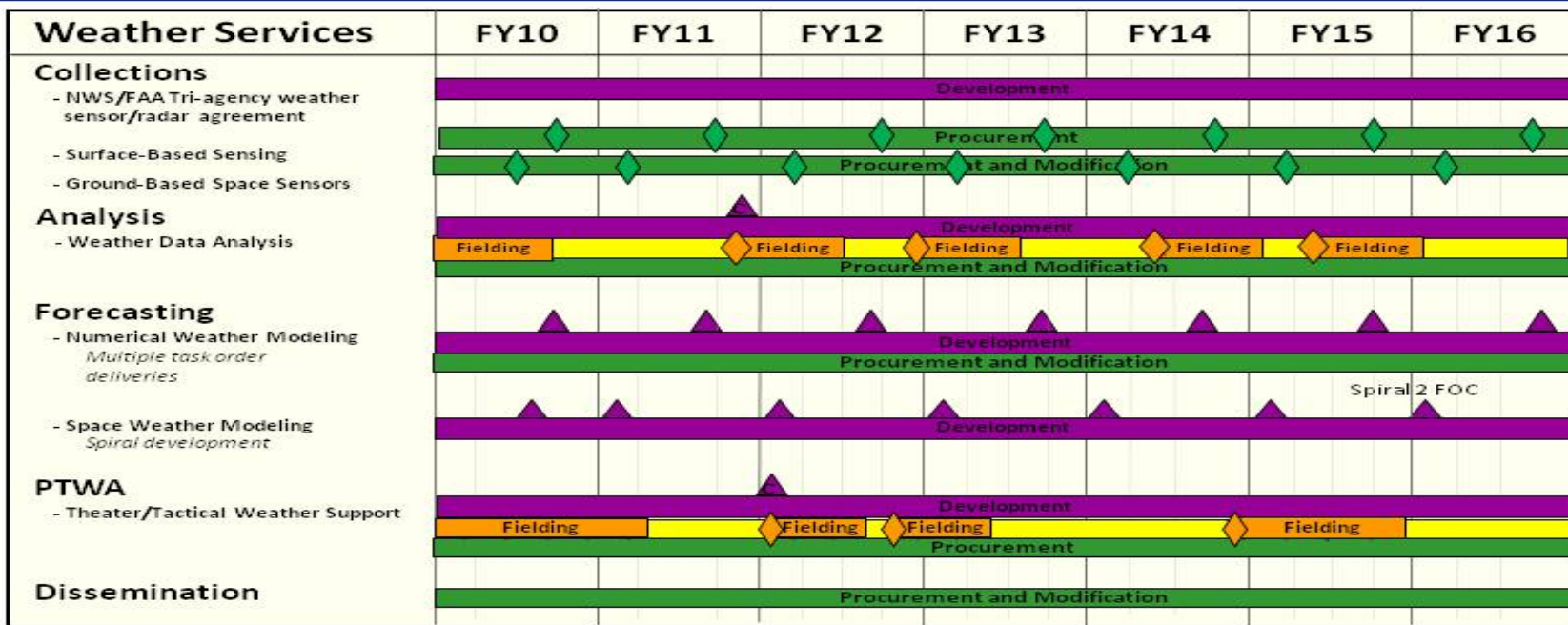
DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

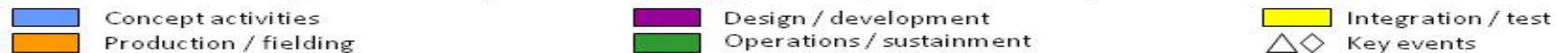
R-1 ITEM NOMENCLATURE
 PE 0305111F: WEATHER SERVICE

PROJECT
 672738: Weather Service

Weather Services Schedule



Note: Radar Network, Forecasting, and SWAFS are operational and being upgraded through incremental development activities.



As of Jan 11

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305111F: <i>WEATHER SERVICE</i>	PROJECT 672738: <i>Weather Service</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Collections -- NWS/FAA Tri-agency weather sensor/radar agreement	1	2010	4	2016
Weather Data Analysis (WDA) Milestone C	4	2011	4	2011
WDA Increment 4 Build A Delivery	4	2011	4	2011
WDA Increment 4 Build B2 Delivery	2	2014	2	2014
WDA Increment 4 Build C Delivery	2	2015	2	2015
Forecasting -- Numerical Weather Modeling	1	2010	4	2016
Forecasting -- Space Weather Modeling	1	2010	4	2016
Product Tailoring/Warfighter Applications (PT/WA) Milestone C	1	2012	1	2012
PT/WA Increment 2 Build A Fielding	1	2012	1	2012
PT/WA Increment 2 Build B Fielding	3	2012	3	2012
PT/WA Increment 2 Build C Fielding	4	2014	4	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/Landing System (ATCAL)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	12.939	33.268	63.367	-	63.367	15.667	4.853	4.961	5.076	Continuing	Continuing
673587: <i>Air Traffic Control Systems</i>	12.939	33.268	63.367	-	63.367	15.667	4.853	4.961	5.076	Continuing	Continuing

A. Mission Description and Budget Item Justification

To support the Air Force worldwide flying mission, this program element funds research, development and management of new air traffic control surveillance, positioning, and precision approach landing systems. When applicable, this includes joint efforts with the Federal Aviation Administration (FAA) and coordination with the International Civil Aviation Organization (ICAO) and the North Atlantic Treaty Organization (NATO). FY12 funding focuses on three main efforts as follows:

Deployable Instrument Landing System (D-ILS). This effort develops a deployable version of the fixed base ILS which is the standard precision approach and landing system for conducting Air Force contingency operations and humanitarian or domestic disaster restoral operations in adverse weather conditions. The current Air Force mobile precision approach radar system (PAR) used to support operations at deployed locations were procured in the 1970s, are manpower intensive, and logistically unsupportable. On average, only 18% (three of 17 systems) of the mobile PAR systems are operational on a daily basis. Development and deployment of D-ILS will support increased operations in the AOR, allow phase out of the currently obsolete legacy systems and will provide interoperability with the Civil Reserve Air Fleet (CRAF). FY12 funds support contract award efforts as well as initial development of the D-ILS. Related OPAF funds are in PE 0305114F.

Deployable Radar Approach Control (D-RAPCON). D-RAPCON will replace the 40 year old AN/MPN-14K and AN/TPN-19 Airport Surveillance Radar (ASR) and Operations Shelter (OPS) subsystems with state of the art digital systems. Modification and overhaul of the existing systems have proven to be ineffective due to diminishing manufacturing sources over the 40 years for some of the components and subsystems. The D-RAPCON will be used to provide both a terminal and enroute surveillance capability. The D-RAPCON will also be used with the D-ILS and a fixed or mobile control tower to provide a complete ATC capability. The D-RAPCON will support tactical military operations and also provide a capability to support domestic disaster relief. The new digital technology will also provide the capability to transmit and display surveillance radar data to/from other sensors and command and control nodes. The primary surveillance radar coverage (non-cooperative targets) is out to 60 nautical miles (nm) and the secondary surveillance radar coverage (cooperative targets) is out to 120 nm. FY12 funds will support the post contract activities to include conduct of the preliminary and critical design reviews and the start of assembly of two pre-production units to support DT/OT. Related OPAF funds are in PE 0305114F.

Next Generation Air Transportation System (NextGen): This is an interagency effort designed to enable the transition from a ground infrastructure dominated Air Traffic Management capability for the U.S. National Airspace System (NAS) to a capability that leverages advances in Performance Based Navigation (PBN), non-radar based surveillance services, transition from voice communications to digital data exchange, as well as advances in weather forecast delivery systems. NextGen will be built on key elements from existing programs and technologies and on new systems under development. FY12 efforts will focus on preparations leading to the implementation of new surveillance technologies including Automatic Dependent Surveillance - Broadcast (ADS-B) and multilateration systems utilizing transponder technologies. Both will improve the display of aircraft position to air traffic managers and will enhance flight safety. Early efforts will focus on analysis and demonstration of technologies to enable the seamless integration of Remotely Piloted Aircraft (RPA) into the NAS and the airspaces of other nations. Design studies and engineering analysis will be initiated to ensure ground system upgrades are coordinated and fielded concurrently with aircraft avionics capabilities that are acquired

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305114F: <i>Air Traffic Control/Approach/Landing System (ATCALs)</i>
BA 7: <i>Operational Systems Development</i>	

and integrated into Air Force aircraft and RPA; these efforts will run in close parallel with the Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) program in PE 0305099F.

This program is in budget activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	11.313	33.268	57.727	-	57.727
Current President's Budget	12.939	33.268	63.367	-	63.367
Total Adjustments	1.626	-	5.640	-	5.640
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	1.946	-			
• SBIR/STTR Transfer	-0.272	-			
• Other Adjustments	-0.048	-	5.640	-	5.640

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 673587: *Air Traffic Control Systems*

Congressional Add: *TTLS*

Congressional Add Subtotals for Project: 673587

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	2.400	-
	2.400	-
	2.400	-

Change Summary Explanation

FY12: Funding increased for D-ILS (fully funded development prior to Milestone C in FY13) and NextGen (increased funding to continue remotely piloted aircraft (RPA) Ground Based Sense and Avoid technology and RPA pilot/controller communications demonstrations).

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/ Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673587: <i>Air Traffic Control Systems</i>	12.939	33.268	63.367	-	63.367	15.667	4.853	4.961	5.076	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

To support the Air Force worldwide flying mission, this program element funds research, development and management of new air traffic control surveillance, positioning, and precision approach landing systems. When applicable, this includes joint efforts with the Federal Aviation Administration (FAA) and coordination with the International Civil Aviation Organization (ICAO) and the North Atlantic Treaty Organization (NATO). FY12 funding focuses on three main efforts as follows:

Deployable Instrument Landing System (D-ILS). This effort develops a deployable version of the fixed base ILS which is the standard precision approach and landing system for conducting Air Force contingency operations and humanitarian or domestic disaster restoral operations in adverse weather conditions. The current Air Force mobile precision approach radar system (PAR) used to support operations at deployed locations were procured in the 1970s, are manpower intensive, and logistically unsupportable. On average, only 18% (three of 17 systems) of the mobile PAR systems are operational on a daily basis. Development and deployment of D-ILS will support increased operations in the AOR, allow phase out of the currently obsolete legacy systems and will provide interoperability with the Civil Reserve Air Fleet (CRAF). FY12 funds support contract award efforts as well as initial development of the D-ILS. Related OPAF funds are in PE 0305114F.

Deployable Radar Approach Control (D-RAPCON). D-RAPCON will replace the 40 year old AN/MPN-14K and AN/TPN-19 Airport Surveillance Radar (ASR) and Operations Shelter (OPS) subsystems with state of the art digital systems. Modification and overhaul of the existing systems have proven to be ineffective due to diminishing manufacturing sources over the 40 years for some of the components and subsystems. The D-RAPCON will be used to provide both a terminal and enroute surveillance capability. The D-RAPCON will also be used with the D-ILS and a fixed or mobile control tower to provide a complete ATC capability. The D-RAPCON will support tactical military operations and also provide a capability to support domestic disaster relief. The new digital technology will also provide the capability to transmit and display surveillance radar data to/from other sensors and command and control nodes. The primary surveillance radar coverage (non-cooperative targets) is out to 60 nautical miles (nm) and the secondary surveillance radar coverage (cooperative targets) is out to 120 nm. FY12 funds will support the post contract activities to include conduct of the preliminary and critical design reviews and the start of assembly of two pre-production units to support DT/OT. Related OPAF funds are in PE 0305114F.

Next Generation Air Transportation System (NextGen): This is an interagency effort designed to enable the transition from a ground infrastructure dominated Air Traffic Management capability for the U.S. National Airspace System (NAS) to a capability that leverages advances in Performance Based Navigation (PBN), non-radar based surveillance services, transition from voice communications to digital data exchange, as well as advances in weather forecast delivery systems. NextGen will be built on key elements from existing programs and technologies and on new systems under development. FY12 efforts will focus on preparations leading to the implementation of new surveillance technologies including Automatic Dependent Surveillance - Broadcast (ADS-B) and multilateration systems utilizing transponder technologies. Both will improve the display of aircraft position to air traffic managers and will enhance flight safety. Early efforts will focus on analysis and demonstration of technologies to enable the seamless integration of Remotely Piloted Aircraft (RPA) into the NAS and the airspaces of other nations. Design studies and engineering analysis will be initiated to ensure ground system upgrades are coordinated and fielded concurrently with aircraft avionics capabilities that are acquired

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>
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and integrated into Air Force aircraft and RPA; these efforts will run in close parallel with the Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) program in PE 0305099F.

This program is in budget activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Next Gen</p> <p>Description: Includes efforts to implement NextGen efficiencies and capabilities. Efforts focus on integrating Remotely Piloted Aircraft (RPAs) in to the NAS, ADS-B implementation, and multilateration technology.</p> <p>FY 2010 Accomplishments: Began analysis of Ground Based Sense and Avoid (GBSAA) technology to support seamless integration of RPAs into civil airspace and ADS-B coverage evaluations and demonstrations. Conducted multilateration system demonstrations to evaluate system set-up times, logistics/airlift footprint, aircraft surveillance coverage area, and supportability.</p> <p>FY 2011 Plans: Continues GBSAA development and ADS-B analysis/demos. Begins pilot/controller RPA communications demonstrations. Completes multilateration deployment/surveillance capability demonstration. Provides resources for NextGen capability mapping and architecture development and integration efforts.</p> <p>FY 2012 Base Plans: Will continue FY11 efforts to implement NextGen efficiencies. Focus will be on integrating RPAs into the NAS, pilot/controller RPA communications, ADS-B integration, and continuing NextGen architecture development, capability mapping and preparation of implementation roadmaps, cost estimates and acquisition strategies.</p> <p>FY 2012 OCO Plans:</p>	4.544	4.874	4.822	-	4.822
<p>Title: D-RAPCON</p> <p>Description: Effort leads to award of D-RAPCON engineering, manufacturing and fabrication and test of two pre-production units.</p> <p>FY 2010 Accomplishments: Continued market research and finalized industry Technology Readiness Assessment.</p> <p>FY 2011 Plans:</p>	2.689	16.053	53.484	-	53.484

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continues Milestone (MS) B documentation preparation and completes the Request for Proposal (RFP) package to include conducting the appropriate Multi-Independent Review Teams (MIRTs). Conduct Source Selection, brief Source Selection Authority and select winning bidder and prior to contract award, successfully conduct a Milestone B decision with the Milestone Decision Authority (MDA). FY 2012 Base Plans: Tasks will include award of the Engineering, Manufacturing and Development contract, conduct of the preliminary and critical design reviews, and the start of fabrication to two D-RAPCON pre-production systems to support DT/OT. FY 2012 OCO Plans:					
Title: D-ILS Description: Includes preparation of acquisition documentation and conduct of associated contract award tasks leading to a new Deployable Instrument Landing System (D-ILS). FY 2010 Accomplishments: Finalized industry Technology Readiness Assessment. Completed the Request for Proposal (RFP) package to include conducting the appropriate Multi-Independent Review Teams (MIRTs). Began source selection. FY 2011 Plans: Efforts include completion of source selection and briefings to the Source Selection Authority, obtaining Milestone B approval from the Milestone Decision Authority (MDA), awarding the Engineering Manufacturing Development (EMD) contract, and executing the EMD phase to include a completion of the Initial Baseline and System Function Reviews and preparations for the Preliminary and Critical Design Reviews. FY 2012 Base Plans: Tasks will include conduct of preliminary and critical design reviews and support development of demonstration units for contractor and developmental testing. FY 2012 OCO Plans:	3.306	12.341	5.061	-	5.061
Accomplishments/Planned Programs Subtotals	10.539	33.268	63.367	-	63.367
	FY 2010	FY 2011			
Congressional Add: TTLS	2.400	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/ Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>
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	FY 2010	FY 2011
FY 2010 Accomplishments: Continued development and test of the Transportable Transponder Landing System (TTLS) to increase its landing capacity (number of aircraft on final approach) and demonstrate its pseudo precision approach radar capability.		
FY 2011 Plans:		
Congressional Adds Subtotals	2.400	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0305114F: <i>Air Traffic Control and Landing Systems (OPAF)</i>	30.327	10.830	44.634	0.000	44.634	55.777	137.425	134.634	120.476	Continuing	Continuing

D. Acquisition Strategy

Award multiple, competitive contract vehicles emphasizing off-the-shelf technology and maximizing the use of non-developmental items (NDIs).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/ Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
TTLS	SS/CPFF	Advanced Navigation & Positioning Corp:Hood River, OR	16.887	-		-		-		-	Continuing	Continuing	TBD
D-RAPCON	C/TBD	TBD:TBD,	-	10.086	May 2011	41.984	Mar 2012	-		41.984	Continuing	Continuing	TBD
D-ILS	C/TBD	TBD:TBD,	-	9.743	May 2011	1.639	Nov 2011	-		1.639	Continuing	Continuing	TBD
Subtotal			16.887	19.829		43.623		-		43.623			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NextGen Studies and Analysis, Capability Mapping, and Architecture Development	C/TBD	Massachusetts Institute of Technology Lincoln Labs:Bedford, MA	3.000	1.800	Apr 2011	0.950	May 2012	-		0.950	Continuing	Continuing	TBD
D-ILS	C/TBD	TBD:TBD,	-	-		0.500	May 2012	-		0.500	Continuing	Continuing	TBD
Subtotal			3.000	1.800		1.450		-		1.450			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NextGen ADS-B Integration/ Demo	C/TBD	TBD:TBD,	-	0.633	Apr 2011	0.250	Jan 2012	-		0.250	Continuing	Continuing	TBD
NextGen RPA Pilot/Controller Comm Demo	C/TBD	TBD:TBD,	-	0.700	Apr 2011	0.750	Jan 2012	-		0.750	Continuing	Continuing	TBD
NextGen RPA GBSAA Demo	SS/TBD	Volpe Ctr:Cambridge, MA	0.175	0.630	Apr 2011	1.478	Jan 2012	-		1.478	Continuing	Continuing	TBD
Next Gen RPA GBSAA Demo	SS/TBD	DTIC:Ft Belvoir, VA	0.294	-		-		-		-	0.000	0.294	0.000
NextGen Multilateralation Demo	TBD	TBD:TBD,	-	0.050	Apr 2011	-		-		-	0.000	0.050	0.050
D-RAPCON	SS/TBD	DISA:Ft Huachuca, AZ	0.020	0.500	Jul 2011	2.900	Feb 2012	-		2.900	Continuing	Continuing	TBD

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/ Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
D-ILS	SS/TBD	46 Test Wing:Eglin, FL	0.215	0.071	Jul 2011	1.500	Jul 2012	-		1.500	Continuing	Continuing	TBD
Subtotal			0.704	2.584		6.878		-		6.878			

Remarks
In FY10 Multilateration Demonstration/Implementation analysis funded in PE0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM).

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Next Gen	C/TBD	Quantech, Jacobs Engineering, MITRE, Telecote Services:Bedford, MA	1.075	1.061	Apr 2011	1.394	Oct 2011	-		1.394	Continuing	Continuing	TBD
D-RAPCON	C/TBD	Quantech, Jacobs Engineering, MITRE, Telecote Services:Bedford, MA	2.669	5.467	Apr 2011	8.600	Oct 2011	-		8.600	Continuing	Continuing	TBD
D-ILS	C/TBD	Quantech, Jacobs Engineering, MITRE, Telecote Services:Bedford, MA	3.091	2.527	Apr 2011	1.422	Oct 2011	-		1.422	Continuing	Continuing	TBD
Subtotal			6.835	9.055		11.416		-		11.416			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			27.426	33.268		63.367		-		63.367				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305114F: Air Traffic Control/Approach/
Landing System (ATCALs)

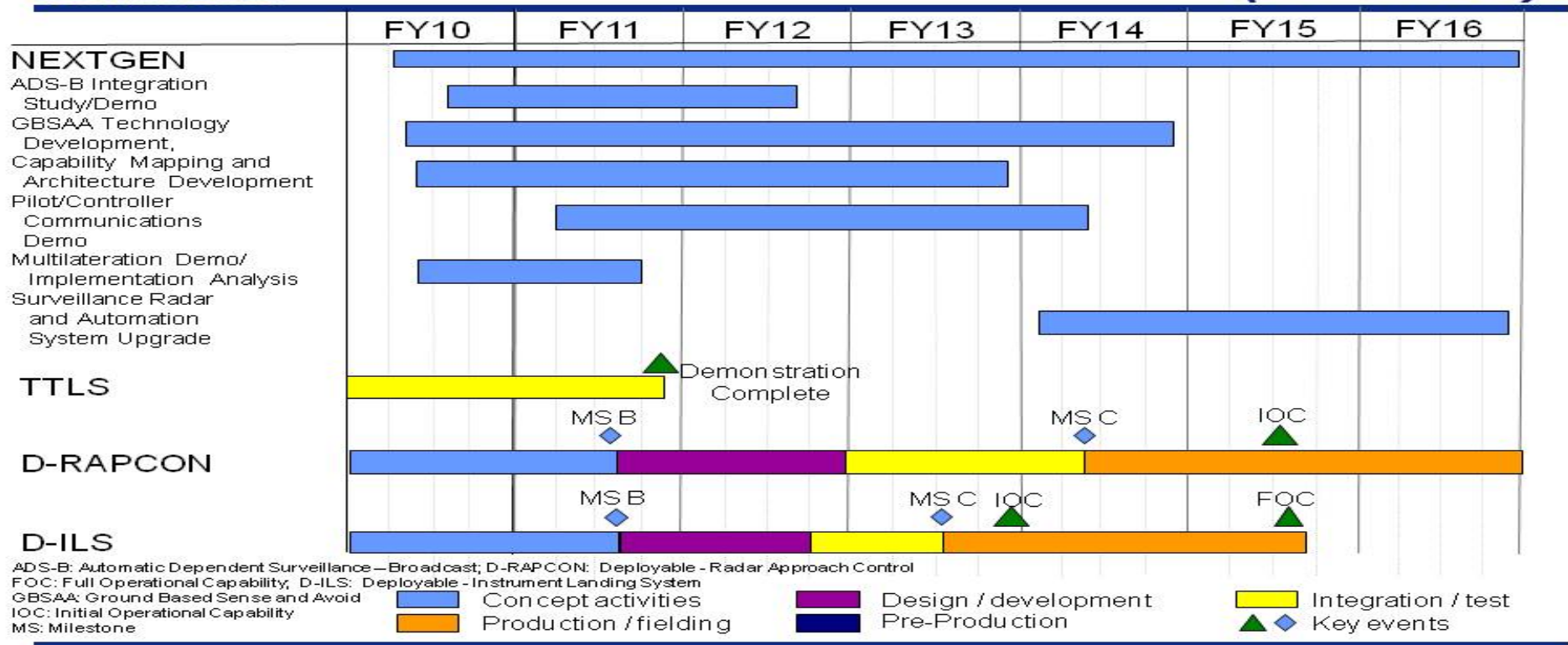
PROJECT

673587: Air Traffic Control Systems



U.S. AIR FORCE

Air Traffic Control and Landing Systems (ATCALs)



TTLS: Transportable Transponder Landing System

Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305114F: <i>Air Traffic Control/Approach/Landing System (ATCALs)</i>	PROJECT 673587: <i>Air Traffic Control Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Next Generation Air Transportation System (NextGen)	2	2010	4	2016
ADS-B Integration Study/Demo	3	2010	3	2012
Ground Based Sense and Avoid Technology (GBSAA) Tech Dev	2	2010	4	2014
Capability Mapping and Architecture Development	2	2010	4	2013
Pilot/Controller Communications Demo	2	2011	2	2014
Multilateral Demo/Implementation Analysis	2	2010	3	2011
Surveillance Radar and Automation System Upgrade	1	2014	4	2016
Tactical Transponder Landing System (TTLS)	1	2010	4	2011
D-RAPCON	1	2010	4	2016
D-ILS	1	2010	3	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	28.981	63.573	50.620	-	50.620	47.169	26.521	35.211	34.275	Continuing	Continuing
675136: <i>Target Systems Development</i>	-	3.472	6.462	-	6.462	6.694	6.887	3.757	1.613	Continuing	Continuing
675366: <i>QF-16</i>	28.981	60.101	44.158	-	44.158	40.475	19.634	31.454	32.662	Continuing	Continuing

A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial Targets support 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-35, F-18, F-16, F-15, etc., aircraft. This program element funds development, improvements, and updates of full-scale/subscale aerial targets and target control systems to ensure aerial targets represent enemy threat airborne systems. Specialized target payload subsystems are developed for requirements to include but not limited to missile scoring, electronic attack, electronic countermeasures and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems.

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 developmental testing.

Note: In FY10, QF-16 was separated from the Target Systems Development Project 675136 in RDT&E funding only. QF-16 RDT&E execution data for FY10 can be found in Project 675336; in FY11 Project 675366 will be used.

The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.317M in FY12.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	54.807	63.573	39.581	-	39.581
Current President's Budget	28.981	63.573	50.620	-	50.620
Total Adjustments	-25.826	-	11.039	-	11.039
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.229	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-24.778	-			
• SBIR/STTR Transfer	-0.819	-			
• Other Adjustments	-	-	11.039	-	11.039

Change Summary Explanation

FY12 increases to provide Target Control System (Gulf Range Drone Control System, GRDCS) mods in Project 675136 and update program increment breakout in Project 675366

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>				PROJECT 675136: <i>Target Systems Development</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675136: <i>Target Systems Development</i>	-	3.472	6.462	-	6.462	6.694	6.887	3.757	1.613	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters weapon systems will perform effectively against real-world enemy fighters and cruise missiles. The BQM-167A Air Force Subscale Aerial Target (AFSAT) is a jet powered drone aircraft measuring approximately 20 feet long with a mission to simulate threat aircraft for testing and evaluation of surface-to-air, ship-to-air, or air-to-air missiles. The target accomplishes this mission through the use of optional payloads including chaff and flare, electronic attack, and infrared devices. The AAC/EBYA, in consultation with the system operators and maintainers, has implemented a continuing system improvement process. Funding supports continued improvement of launch phase performance and overall reliability improvement efforts. In addition, efforts are on-going to determine ways to improve the efficiency of BQM-167A maintenance processes. Results of ongoing system improvement efforts are evaluated to determine which improvements will be incorporated into the BQM-167A. Also funds development, improvements, and updates of target control systems and specialized target payload subsystems for requirements to include but not limited to missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems.

Note: In FY10 and out, QF-16 was separated from the Target Systems Development Project 675136 in RDT&E funding only.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: BQM-167A Development	-	3.472	1.000	-	1.000
FY 2010 Accomplishments: No dollars.					
FY 2011 Plans: Start AFSAT product enhancements to include Radar Cross Section (RCS) augmentation and Alternate Launch study.					
FY 2012 Base Plans: Continue Radar Cross Section (RCS) augmentation, design integration, and test. Start design of Alternate Launch System (ALS).					
FY 2012 OCO Plans: No dollars.					
Title: Target Control System	-	-	5.462	-	5.462

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675136: <i>Target Systems Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: Provide subsystem modernization enhancements to Target Control System (Gulf Range Drone Control System, GRDCS) for tracking of Aerial Targets.</p> <p>FY 2010 Accomplishments: No dollars.</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: Provide subsystem modernization enhancements to Target Control System (Gulf Range Drone Control System, GRDCS) for tracking of Aerial Targets.</p> <p>FY 2012 OCO Plans: No dollars.</p>					
Accomplishments/Planned Programs Subtotals	-	3.472	6.462	-	6.462

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE0305116F: <i>Aerial Targets</i> <i>APAF, 3010 Total</i>	90.870	101.599	79.580	0.000	79.580	143.954	167.693	89.409	108.333	Continuing	Continuing
• PE0305116F (1): <i>Aircraft Procurement, APAF, BP10</i>	74.481	85.505	64.268	0.000	64.268	126.913	150.390	110.174	128.228	Continuing	Continuing
• PE0305116F (2): <i>Initial Spares, APAF BP16</i>	1.871	0.523	0.474	0.000	0.474	0.538	0.548	0.558	0.568	Continuing	Continuing
• PE0305116F (3): <i>Munitions, APAF, BP17</i>	5.713	5.311	4.198	0.000	4.198	4.268	4.341	4.432	4.503	Continuing	Continuing
• PE0305116F (4): <i>Electronic Attack Pods, APAF, BP19</i>	9.605	10.260	10.298	0.000	10.298	10.373	10.456	10.557	10.746	Continuing	Continuing

D. Acquisition Strategy

The AFSAT acquisition strategy is sole source follow-on to a competitive award, with fixed price and time and materials contracts.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675136: <i>Target Systems Development</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675136: <i>Target Systems Development</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Air Force Subscale Aerial Target (AFSAT) Product Improvements	SS/FFP	Composite Engineering Inc:Sacramento, CA	-	3.472	Jan 2011	1.000	Jan 2012	-		1.000	Continuing	Continuing	0.000
Target Control System	Various	46 TW:Eglin AFB, FL	-	-		5.462	Jan 2012	-		5.462	Continuing	Continuing	0.000
Subtotal			-	3.472		6.462		-		6.462			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

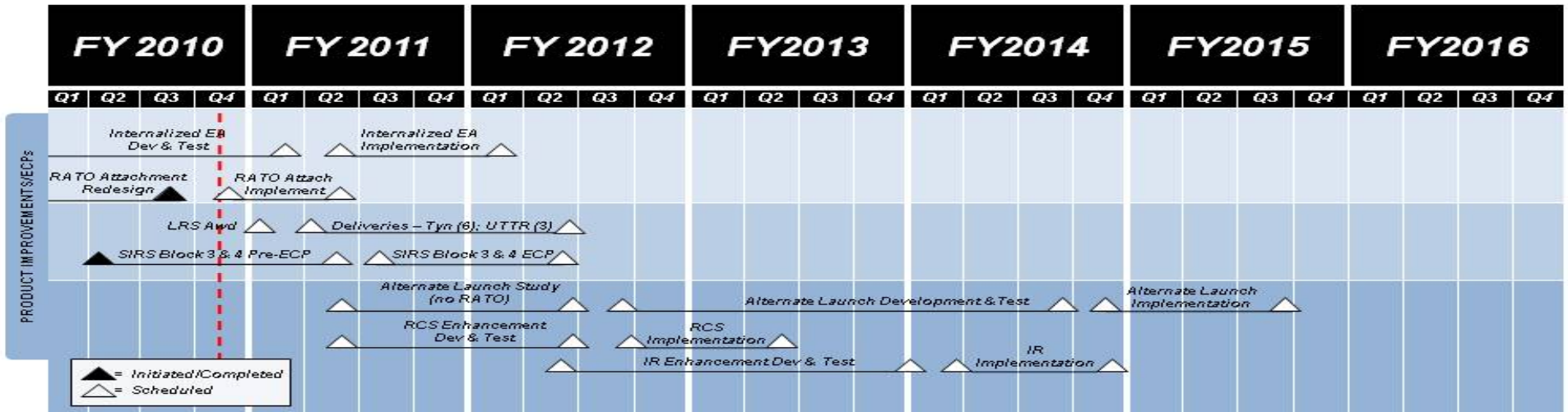
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	3.472		6.462		-		6.462			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0305116F: AERIAL TARGETS	PROJECT 675136: Target Systems Development

AFSAT Schedule Product Improvements/ECPs



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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305116F: AERIAL TARGETS

PROJECT

675136: Target Systems Development

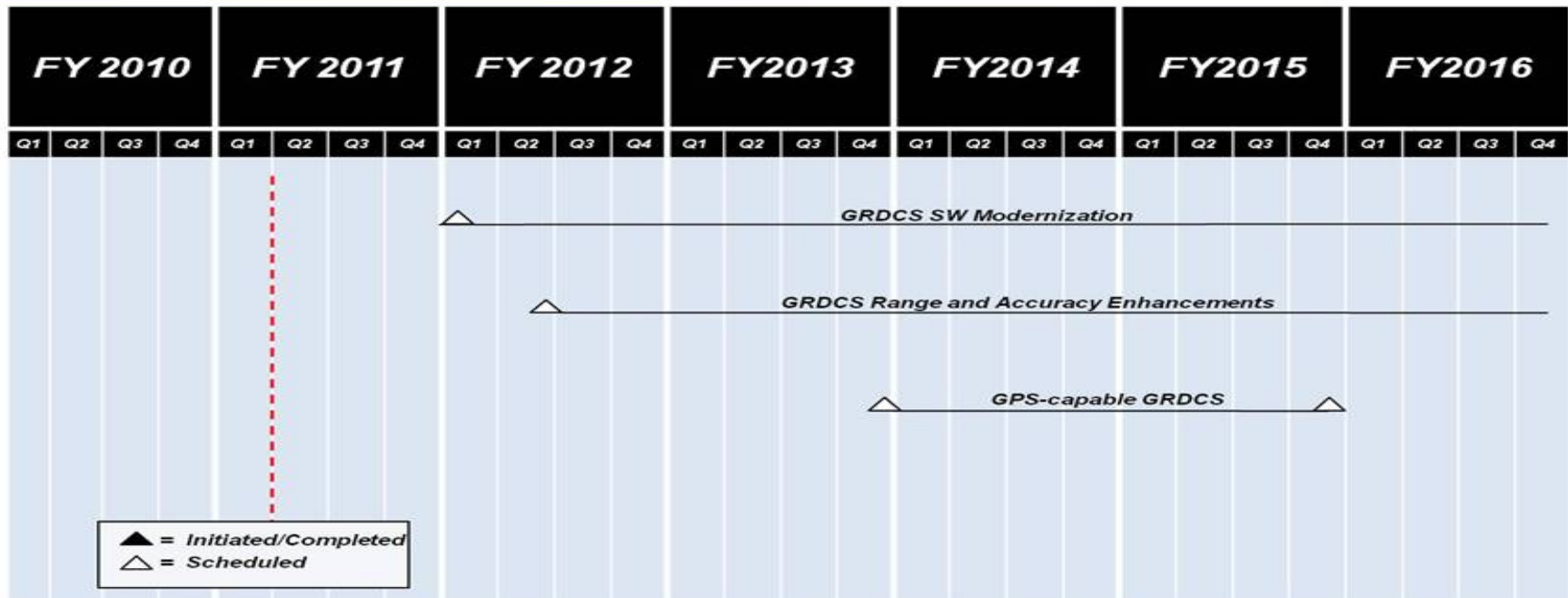


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Target Control Systems Schedule



AAC/EBYA



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675136: <i>Target Systems Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
BQM-167A: Product Improvements	1	2011	4	2012
BQM-167A: RCS Enhancement Dev and Test, contractor NAWC/ATSO	2	2011	3	2012
BQM-167A: Alternate Launch Study, contractor CEi	2	2011	3	2012
BQM-167A: Alternate Launch Dev and Test	3	2012	3	2014
BQM-167A: IR Enhancement Dev and Test	2	2012	4	2013
TCS: Gulf Range Drone Control System (GRDCS) SW Modernization	1	2012	4	2016
TCS: GRDCS Range and Accuracy Enhancements	2	2012	4	2016
TCS: GPS-Capable GRDCS	4	2013	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675366: <i>QF-16</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675366: <i>QF-16</i>	28.981	60.101	44.158	-	44.158	40.475	19.634	31.454	32.662	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Note: In FY10, QF-16 was separated from the Target Systems Development Project 675136 in RDT&E funding only. QF-16 RDT&E execution data for FY10 can be found in Project 675336; in FY11 Project 675366 will be used.

A. Mission Description and Budget Item Justification

Full-scale targets assure warfighters weapon systems perform effectively against real-world enemy fighters and cruise missiles. Aerial Targets support 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-35, F-18, F-16, F-15, etc., aircraft. The United States Air Force's (USAF) Air Superiority Modernization/ Mission Area Plan has identified aerial targets as a capability shortfall; the QF-16 program will fulfill this requirement. Funding supports continued development of the follow-on full-scale aerial target (QF-16), development, improvements, and updates of target control systems and specialized target payload subsystems for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems.

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 developmental testing.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: QF-16 Development Program	14.945	43.026	35.488	-	35.488
Description: QF-16 Development Program					
FY 2010 Accomplishments: Design/develop/integrate drone package into F-16; efforts include design/development of drone peculiar equipment, build/install drone hardware prototypes and contractor system test and evaluation.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675366: <i>QF-16</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continued design/development/integration of drone package into F-16; efforts include design/development of drone peculiar equipment, build/install drone hardware prototypes and contractor system test and evaluation. FY 2012 Base Plans: Continued design/development/integration of drone package into F-16; efforts include design/development of drone peculiar equipment, build/install drone hardware prototypes, contractor system test and evaluation, target control system integration and government development testing and operational testing (DT/OT). FY 2012 OCO Plans:					
Title: F-16 Regeneration Description: F-16 Regeneration FY 2010 Accomplishments: F-16 aircraft withdrawal and refurbishment, engine maintenance and refurbishment, acquisition of support equipment, programmatic efforts in support of QF-16 development program . FY 2011 Plans: Continued support of F-16 aircraft withdrawal and refurbishment, engine maintenance and refurbishment, acquisition of support equipment, programmatic efforts in support of QF-16 development program . FY 2012 Base Plans: Continued support of F-16 aircraft withdrawal and refurbishment, engine maintenance and refurbishment, acquisition of support equipment, programmatic efforts in support of QF-16 development program . FY 2012 OCO Plans:	14.036	17.075	8.670	-	8.670
Accomplishments/Planned Programs Subtotals	28.981	60.101	44.158	-	44.158

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE0305116F: <i>Aerial Targets</i> <i>APAF, 3010 Total</i>	90.870	101.599	79.580	0.000	79.580	143.954	167.693	89.409	108.333	Continuing	Continuing
• PE0305116F (1): <i>Aircraft Procurement, APAF, BP10</i>	74.481	85.505	64.268	0.000	64.268	126.913	150.390	110.174	128.228	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675366: <i>QF-16</i>
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C. Other Program Funding Summary (\$ in Millions)

Line Item	FY 2010	FY 2011	FY 2012	FY 2012	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	Cost To	Total Cost
			Base	OCO	Total					Complete	
• PE0305116F (2): <i>Initial Spares, APAF, BP16</i>	1.871	0.523	0.474	0.000	0.474	0.538	0.548	0.558	0.568	Continuing	Continuing
• PE0305116F (3): <i>Munitions, APAF, BP17</i>	5.713	5.311	4.198	0.000	4.198	4.268	4.341	4.423	4.503	Continuing	Continuing
• PE0305116F (4): <i>Electronic Attack Pods, APAF, BP19</i>	9.605	10.260	10.298	0.000	10.298	10.373	10.456	10.557	10.746	Continuing	Continuing

D. Acquisition Strategy

The QF-16 acquisition strategy is a fixed price incentive fee, time and materials development contract with fixed price production options.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675366: <i>QF-16</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development of Drone Peculiar Equipment	C/Various	The Boeing Company: Saint Louis, MO	14.945	43.026		35.488		-		35.488	0.000	93.459	0.000
Airframe/Engine - Government Furnished Equipment (GFE)	Various	AAC/EBYA: Eglin AFB, FL; AMARG: Tucson, AZ; 162d ANG: Tucson, AZ; OC-ALC, Tinker AFB, OK: Various,	10.525	13.258		3.101		-		3.101	0.000	26.884	0.000
Subtotal			25.470	56.284		38.589		-		38.589	0.000	120.343	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
QF-16 Program Support	Various	AAC/EBYA: Eglin AFB, FL; AMARG: Tucson, AZ; 162d ANG: Tucson, AZ; OO-ALC: Hill AFB, UT: Various,	3.511	3.817		5.569		-		5.569	0.000	12.897	0.000
Subtotal			3.511	3.817		5.569		-		5.569	0.000	12.897	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>			PROJECT 675366: <i>QF-16</i>		

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	28.981	60.101	44.158	-	44.158	0.000	133.240	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305116F: AERIAL TARGETS

PROJECT
 675366: QF-16

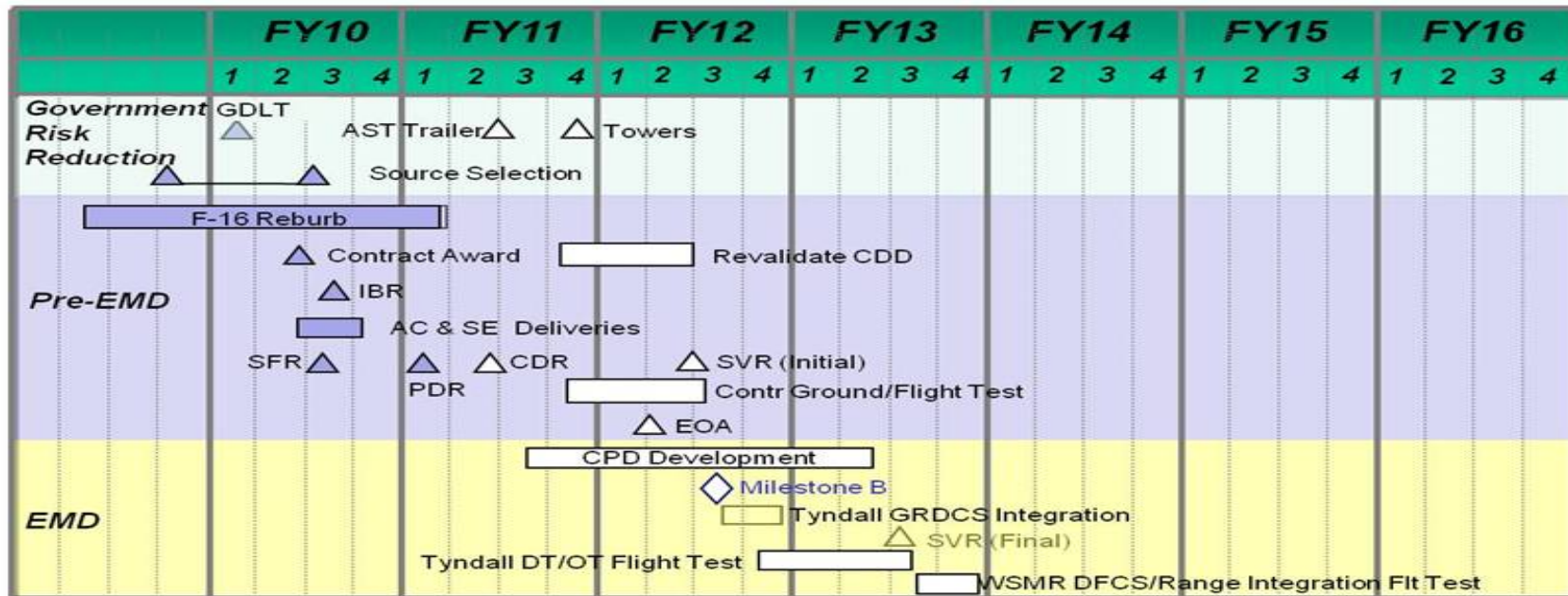


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QF-16 Master Schedule

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305116F: <i>AERIAL TARGETS</i>	PROJECT 675366: <i>QF-16</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
QF-16 Development Contract Award	2	2010	3	2012
Critical Design Review (CDR)	3	2011	3	2011
System Verification Review (SVR)	2	2012	2	2012
Milestone B (MS B)	3	2012	3	2012
Development Testing/Operational Testing (DT/OT)	3	2012	3	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0305128F: <i>Security And Investigative Activities</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	0.716	0.469	0.366	-	0.366	0.351	0.363	0.397	0.396	Continuing	Continuing
671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>	0.716	0.469	0.366	-	0.366	0.351	0.363	0.397	0.396	Continuing	Continuing

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.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>
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B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	0.742	0.469	0.366	-	0.366
Current President's Budget	0.716	0.469	0.366	-	0.366
Total Adjustments	-0.026	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.026	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>	0.716	0.469	0.366	-	0.366	0.351	0.363	0.397	0.396	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: TSCM	0.270	0.269	0.269	-	0.269
Description: Next Generation Technical Surveillance Countermeasures (TSCM) receiver					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><i>FY 2010 Accomplishments:</i> Next Generation Technical Surveillance Countermeasures (TSCM) receiver support.</p> <p><i>FY 2011 Plans:</i> Continue Next Generation Technical Surveillance Countermeasures (TSCM) receiver support.</p> <p><i>FY 2012 Base Plans:</i> Continue Next Generation Technical Surveillance Countermeasures (TSCM) receiver.</p> <p><i>FY 2012 OCO Plans:</i></p>					
<p><i>Title:</i> CCI</p> <p><i>Description:</i> Continue development of Computer Crimes Investigative (CCI) Equipment & Software</p> <p><i>FY 2010 Accomplishments:</i> Continue development of Computer Crimes Investigative (CCI) Equipment & Software.</p> <p><i>FY 2011 Plans:</i> Continue development of Computer Crimes Investigative (CCI) Equipment & Software.</p> <p><i>FY 2012 Base Plans:</i> Continue development of Computer Crimes Investigative (CCI) Equipment & Software.</p> <p><i>FY 2012 OCO Plans:</i></p>	0.250	0.200	0.097	-	0.097
<p><i>Title:</i> Accomplishment</p> <p><i>Description:</i> Next Generation TSCM receiver continuing development</p> <p><i>FY 2010 Accomplishments:</i></p> <p><i>FY 2011 Plans:</i></p> <p><i>FY 2012 Base Plans:</i></p> <p><i>FY 2012 OCO Plans:</i></p>	0.196	-	-	-	-
Accomplishments/Planned Programs Subtotals	0.716	0.469	0.366	-	0.366

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>	
• Other Procurement/Technical Surv...: <i>3080/WSC 846030</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• Other Procurement/Heavily Armored...: <i>3080/WSC 821700</i>	0.265	0.270	0.285	0.000	0.285	0.287	0.280	0.280	0.000	0.000	Continuing	Continuing

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 limitations of current and future investigative tools is sometimes highly sensitive or classified.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sandia Natl Lab	MIPR	TBD:TBD,	0.374	0.108	Mar 2011	0.199	Mar 2012	-		0.199	Continuing	Continuing	TBD
AFWIC	MIPR	TBD:TBD,	0.220	0.218	Mar 2011	0.100	Mar 2012	-		0.100	Continuing	Continuing	TBD
Other Agency	MIPR	TBD:TBD,	0.122	0.143	Mar 2011	0.067	Mar 2012	-		0.067	Continuing	Continuing	TBD
Subtotal			0.716	0.469		0.366		-		0.366			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.716	0.469		0.366		-		0.366			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0305128F: *Security And Investigative Activities*

PROJECT

671931: *TECH SURVEIL COUNTER MEAS EQPT*

Fiscal Year	FY08				FY09				FY10				FY12				FY13				FY14				FY15			
	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
CCI Software Items	[]				[]				[]				[]				[]				[]							
TSCM Receiver	[]				[]				[]				[]				[]				[]							

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305128F: <i>Security And Investigative Activities</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
TSCM Receiver	2	2010	4	2010
CCI Software/Equipment	2	2010	4	2010

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE								
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			PE 0305146F: <i>Defense Joint Counter Intelligence Program</i>								
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	0.039	0.040	0.039	-	0.039	0.042	0.043	0.043	0.044	Continuing	Continuing
671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>	0.039	0.040	0.039	-	0.039	0.042	0.043	0.043	0.044	Continuing	Continuing

A. Mission Description and Budget Item Justification

This effort encompasses protection of defense critical technology and infrastructure, personnel, and operations from foreign intelligence services, terrorists and other covert and clandestine threats. There are five sub-projects; CI Support to Force Protection, CI Support to Combatant Commands and Defense Agencies, Research Critical Technology Protection, CI Information Infrastructure Protection and CI Technical Services. This project is in Budget Activity 07, Operational System Development, because it supports research and development activities for fielded weapon systems.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	0.039	0.040	0.041	-	0.041
Current President's Budget	0.039	0.040	0.039	-	0.039
Total Adjustments	-	-	-0.002	-	-0.002
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.002	-	-0.002

Change Summary Explanation

Funding for the Air Force CounterIntelligence (CI) mission.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305146F: <i>Defense Joint Counter Intelligence Program</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>	0.039	0.040	0.039	-	0.039	0.042	0.043	0.043	0.044	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This effort encompasses protection of defense critical technology and infrastructure, personnel, and operations from foreign intelligence services, terrorists and other covert and clandestine threats. There are five sub-projects; CI Support to Force Protection, CI Support to Combatant Commands and Defense Agencies, Research Critical Technology Protection, CI Information Infrastructure Protection and CI Technical Services.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Technology and Infrastructure	0.039	0.040	0.039	-	0.039
Description: Funds manpower authorizations, support equipment, necessary facilities and associated costs.					
FY 2010 Accomplishments: Begin funding manpower authorizations, support equipment, necessary facilities and associated costs.					
FY 2011 Plans: Continue funding manpower authorizations, support equipment, necessary facilities and associated costs.					
FY 2012 Base Plans: Continue funding manpower authorizations, support equipment, necessary facilities and associated costs.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	0.039	0.040	0.039	-	0.039

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305146F: <i>Defense Joint Counter Intelligence Program</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• PE35128F: <i>Security/Investigative Activities</i>	0.804	0.809	0.823	0.000	0.823	0.841	0.830	0.830	0.000	Continuing	Continuing

D. Acquisition Strategy

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.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305146F: <i>Defense Joint Counter Intelligence Program</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Services	Various	Various:Various,	0.039	0.040	Mar 2011	0.039	Mar 2012	-		0.039	Continuing	Continuing	TBD
Subtotal			0.039	0.040		0.039		-		0.039			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.039	0.040		0.039		-		0.039			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

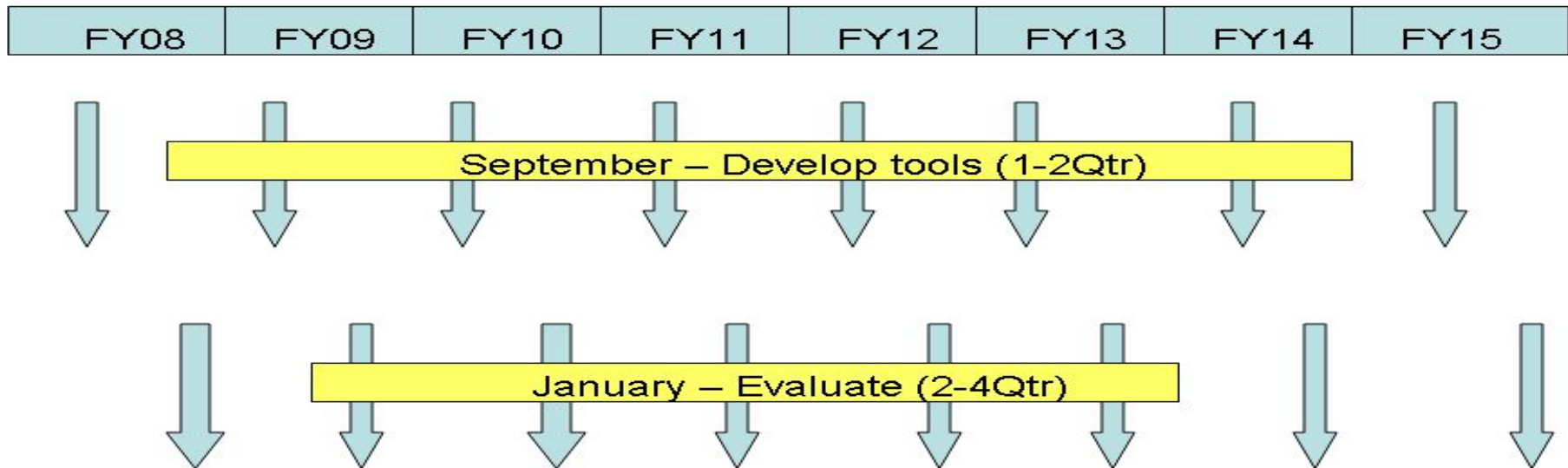
R-1 ITEM NOMENCLATURE

PE 0305146F: *Defense Joint Counter Intelligence Program*

PROJECT

671931: *TECH SURVEIL COUNTER MEAS EQPT*

Defense Joint Counterintelligence Program



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305146F: <i>Defense Joint Counter Intelligence Program</i>	PROJECT 671931: <i>TECH SURVEIL COUNTER MEAS EQPT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Develop tools	1	2010	2	2016
Test and Evaluate	2	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	131.564	165.936	133.601	-	133.601	133.527	128.118	125.262	156.109	Continuing	Continuing
673028: <i>Navstar GPS</i>	131.564	165.936	133.601	-	133.601	133.527	128.118	125.262	156.109	Continuing	Continuing

Note
 The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.902M in FY12.

A. Mission Description and Budget Item Justification
 Totals include funding for PRCP Program Number 166, Navstar GPS.

The Global Positioning System (GPS) is a space-based radio Positioning, Navigation, and Time (PNT) 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, test, and analysis for new PNT receiver capabilities in Navigation Warfare (Navwar) across all military platforms using GPS services. Additionally, it funds the integration with service nominated Military GPS User Equipment (MGUE) lead platforms, development of software upgrades, product improvement studies, GPS UE test and evaluation and mission support.

Due to increasing military dependence on GPS and emerging Electronic Warfare (EW) threat, the Navwar program was established to address EW solutions for GPS. Key elements of Navwar 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). MGUE will leverage upon the proof of concept work accomplished by the Modernized User Equipment (MUE) effort. MUE laid the foundation for the next generation of air, maritime and ground GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA) by developing air, maritime, and ground domain receiver card form factors and the Common GPS Module (CGM).

This program element is in Budget Activity 7 - Operational System Development, because UE supports operational systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	137.163	165.936	137.950	-	137.950
Current President's Budget	131.564	165.936	133.601	-	133.601
Total Adjustments	-5.599	-	-4.349	-	-4.349
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.574	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-5.025	-			
• Other Adjustments	-	-	-4.349	-	-4.349

Change Summary Explanation

FY2012: -\$4.349 for higher DoD priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>	PROJECT 673028: <i>Navstar GPS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673028: <i>Navstar GPS</i>	131.564	165.936	133.601	-	133.601	133.527	128.118	125.262	156.109	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number 166, Navstar GPS.

The Global Positioning System (GPS) is a space-based radio Positioning, Navigation, and Time (PNT) 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, test, and analysis for new PNT receiver capabilities in Navigation Warfare (Navwar) across all military platforms using GPS services. Additionally, it funds the integration with service nominated Military GPS User Equipment (MGUE) lead platforms, development of software upgrades, product improvement studies, GPS UE test and evaluation and mission support.

Due to increasing military dependence on GPS and emerging Electronic Warfare (EW) threat, the Navwar program was established to address EW solutions for GPS. Key elements of Navwar 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). MGUE will leverage upon the proof of concept work accomplished by the Modernized User Equipment (MUE) effort. MUE laid the foundation for the next generation of air, maritime and ground GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA) by developing air, maritime, and ground domain receiver card form factors and the Common GPS Module (CGM).

This program element is in Budget Activity 7 - Operational System Development, because UE supports operational systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: GPS User Equipment	131.564	165.936	133.601	-	133.601
Description: Development of next generation Military GPS User Equipment (MGUE). Testing, studies and engineering to assist User Equipment integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation and mission support.					
FY 2010 Accomplishments: Modernized User Equipment (MUE) proof of concept efforts to provide technical foundation for next generation military GPS UE that will receive Y-code, Military (M)-code, and Coarse Acquisition code (YMCA). Delivery					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>	PROJECT 673028: <i>Navstar GPS</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
of MUE technology demonstration receiver cards and independent government testing to support Technology Readiness Assessment (TRA).					
<i>FY 2011 Plans:</i> Modernized User Equipment (MUE) proof of concept efforts to provide technical foundation for next generation GPS User Equipment that will receive Y-code, Military (M) code, and Coarse Acquisition code (YMCA). Completion of independent government testing to support TRA. Source selection for next generation Military GPS User Equipment (MGUE).					
<i>FY 2012 Base Plans:</i> Completion of Military GPS User Equipment (MGUE) source selection activities and contract award for the development of embeded GPS receiver form factors for ground, air and maritime domains as well as a contractor defined Common GPS Module (CGM) for broad application across DoD.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	131.564	165.936	133.601	-	133.601

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing
• OPAF PE 0305164F: <i>GPS User Equipment</i>	8.486	8.198	10.201	0.000	10.201	9.530	9.895	10.284	10.468	Continuing	Continuing
• OPAF PE 0305164F: <i>GPS User Equipment</i>	5.705	5.180	2.008	0.000	2.008	2.031	2.061	2.093	2.131	Continuing	Continuing

D. Acquisition Strategy
The Modernized User Equipment (MUE) program awarded three competitive MUE technology demonstration contracts to develop and produce Ground-Based GPS Receiver Application Module (GB-GRAM-M) (ground) and GRAM-S/M (aviation) receiver form factors to mature the five critical technology elements (CTEs), test and demonstrate these CTEs in a relevant environment to achieve Technology Readiness Level (TRL) 6, and subject the prototypes to the Government's pilot security certification and performance evaluation processes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>	673028: <i>Navstar GPS</i>

The Military GPS User Equipment (MGUE) program was established to satisfy the following objectives: (a) develop a new set of GPS receivers capable of operating in a Navigation Warfare (NAVWAR) environment and countering current and emerging Positioning, Navigation, and Timing (PNT) threats, (b) upgrade GPS receivers to exploit new technologies, (c) shift SMC/GP development responsibility to a core GPS capability, and (d) prevent PNT service disruptions due to non-compliance.

To satisfy these objectives, SMC/GP has formulated an incremental acquisition strategy to deliver Military-Code (M-Code) capable GPS receiver form factors (receiver cards) to support the service nominated lead platforms identified in the draft MGUE Capabilities Development Document (CDD). SMC/GP will host a full and open competition for Increment 1 Technology Development (TD) with contract options for Engineering, Manufacturing, and Development (EMD), and Low Rate Initial Production (LRIP). Full Rate Production will be the subject of a subsequent acquisition strategy. Increment 1 will leverage existing mature technologies developed under the preceding MUE program to develop and produce a set of embedded GPS receiver form factors for the ground, air and maritime domains as well as a contractor-defined Common GPS Module (CGM) for broad application across DoD. In addition, the program will institute a GPS Enterprise wide security certification and performance evaluation process to support GPS receiver development efforts throughout DoD.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>	PROJECT 673028: <i>Navstar GPS</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Receiver Technology	Various	Various:Various,	27.062	7.644	Nov 2010	-		-		-	0.000	34.706	0.000
Advanced Antenna Technology	C/CPAF	Various:Various,	93.332	5.609	Nov 2010	-		-		-	0.000	98.941	0.000
SAASM	MIPR	Sandia National Labs:Kirtland AFB, NM	53.040	4.102	Nov 2010	-		-		-	0.000	57.142	0.000
SAASM/GB-GRAM	Various	Various:Various,	32.894	1.775	Nov 2010	-		-		-	0.000	34.669	0.000
Modernized User Equipment (MUE)	C/CPAF	Rockwell Collins:Cedar Rapids, IA	169.487	31.438	Nov 2010	-		-		-	0.000	200.925	0.000
MUE (Raytheon)	C/CPAF	Raytheon:Garland, TX	169.485	31.437	Nov 2010	-		-		-	0.000	200.922	0.000
MUE (L-3)	C/CPAF	L-3:Anaheim, CA	169.485	31.437	Nov 2010	-		-		-	0.000	200.922	0.000
Military GPS User Equipment (MGUE)	TBD	TBD:TBD,	-	-		91.865	Nov 2011	-		91.865	Continuing	Continuing	0.000
Integration	PO	46th Test Group:Holloman AFB, NM	7.884	4.767	Nov 2010	-		-		-	Continuing	Continuing	0.000
Completed UE Product Development Efforts	Various	Various:Various,	197.840	-		-		-		-	0.000	197.840	0.000
Subtotal			920.509	118.209		91.865		-		91.865			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Wing Support	Various	Various:Various,	86.913	20.095	Nov 2010	12.489	Nov 2011	-		12.489	Continuing	Continuing	0.000
FFRDC	Various	Aerospace:El Segundo, CA	11.900	14.450	Nov 2010	15.180	Nov 2011	-		15.180	0.000	41.530	0.000
SE/Program Spt/Joint Navwar Center (JNWC)	Various	Various:Various,	124.207	9.161	Nov 2010	14.067	Nov 2011	-		14.067	Continuing	Continuing	0.000
Completed Support Efforts	Various	Various:Various,	62.490	-		-		-		-	0.000	62.490	0.000
Subtotal			285.510	43.706		41.736		-		41.736			0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305164F: *NAVSTAR Global Positioning System User Equipment Space*

PROJECT
 673028: *Navstar GPS*

Test and Evaluation (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
User Equipment Development & Production Testing	PO	46th Test Group:Holloman AFB, NM	60.860	4.021	Nov 2010	-		-		-	0.000	64.881	0.000
Subtotal			60.860	4.021		-		-		-	0.000	64.881	0.000

Management Services (\$ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
				Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Cost Totals	1,266.879	165.936		133.601		-		133.601			0.000

Remarks

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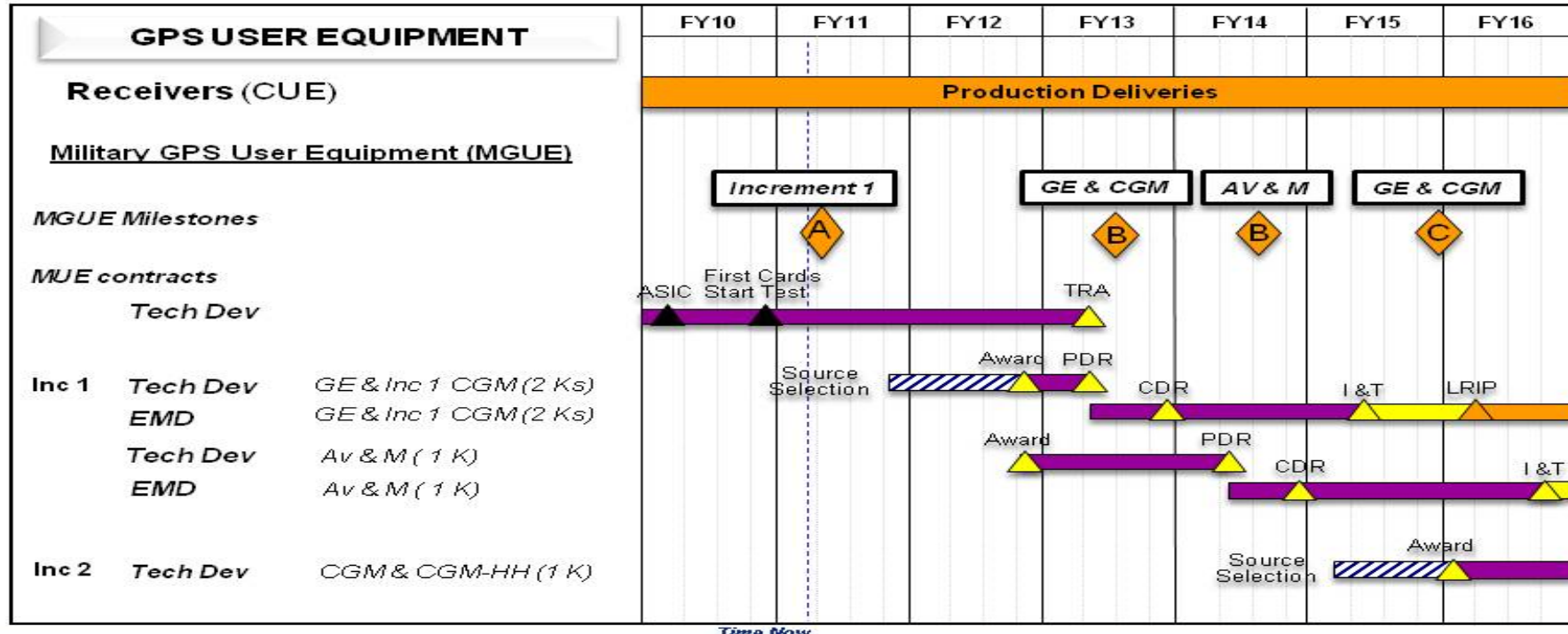
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305164F: NAVSTAR Global Positioning
 System User Equipment Space

PROJECT
 673028: Navstar GPS



Time Now

AE – Antenna Electronics ASIC – Application Specific Integrated Circuit CDR – Critical Design Review GE – Ground Embedded (GB-GRAM-M) GRAM – GPS Receiver Applications Module PDR – Preliminary Design Review I & T – Integration and Test	LRIP – Low Rate Initial Production MAGR2K – Miniaturized Airborne GPS 2000 MEMSIMU – Micro-Electronic Mechanical Inertial Measurement Unit SAASM – Selective Availability Anti-Spoofing Module TRA – Technology Readiness Assessment CGM – Common GPS Module CUE – Current User Equipment	AV – Aviation (GRAM-SM) M – Maritime (GRAM-PMC) PMC – PCI Mezzanine Card EMD – Engrg & Manufacturing Development K – contractor(s) HH – Handheld FRP – Full Rate Production
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305164F: <i>NAVSTAR Global Positioning System User Equipment Space</i>	PROJECT 673028: <i>Navstar GPS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Begin Modernized User Equipment (MUE) Technical Development Cards Delivery	4	2010	2	2011
MGUE Milestone A	2	2011	2	2011
MGUE Increment 1 Source Selection	4	2011	3	2012
Complete Independent government testing of MUE technology demonstration receiver card	1	2012	1	2012
MGUE Contract Award	4	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing
673030: <i>NAVSTAR GPS (Space & Control)</i>	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing

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 for GPS Block II satellites. It includes, but is not limited to: training simulators, Integrated Logistics Support (ILS) products, ground control segment development, sustaining engineering, space and ground segments upgrades, and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power. The Operational Control Segment (OCS) delivers control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

Funding will provide continued development upgrades for ground segment to include, but not limited to upgrades for the existing GPS Selective Availability Anti-Spoof Module (SAASM) capability and SAASM changes. AEP software changes needed to fly IIF 6-12 and Launch, Anomaly and Disposal operations (LADO) changes.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

Totals include funding for PRCP Program Number 166, Navstar GPS.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	51.197	34.471	17.953	-	17.953
Current President's Budget	50.527	34.471	17.893	-	17.893
Total Adjustments	-0.670	-	-0.060	-	-0.060
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.217	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.453	-			
• Other Adjustments	-	-	-0.060	-	-0.060

Change Summary Explanation

No significant program changes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>				PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673030: <i>NAVSTAR GPS (Space & Control)</i>	50.527	34.471	17.893	-	17.893	14.950	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments for GPS Block II satellites. It includes, but is not limited to: training simulators, Integrated Logistics Support (ILS) products, ground control segment development, sustaining engineering, space and ground segments upgrades, and R&D efforts to support GPS Block II system deployment including efforts to provide anti-jam capability through increased Military(M)-Code signal power. The Operational Control Segment (OCS) delivers control segment capabilities to support Block IIF satellites as well as the existing constellation of Block IIA/IIR/IIR-M satellites.

Funding will provide continued development upgrades for ground segment to include, but not limited to upgrades for the existing GPS Selective Availability Anti-Spoof Module (SAASM) capability and SAASM changes. AEP software changes needed to fly IIF 6-12 and Launch, Anomaly and Disposal operations (LADO) changes.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

Totals include funding for PRCP Program Number 166, Navstar GPS.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCS	50.527	34.471	17.893	-	17.893
Description: Development of GPS Block II Operational Control System (OCS).					
FY 2010 Accomplishments: Develop and deliver Selective Availability Anti-Spoofing Module (SAASM) capability for Block IIR/IIR-M/IIF satellites; System Engineering & Integration (SE&I) and Program Support.					
FY 2011 Plans: Operational Control Segment Ops Acceptance and Turnover; provide ground segment upgrades. System Engineering & Integration (SE&I) and Program Support.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>	PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue with ground segment upgrades, System Engineering & Integration (SE&I) and Program Support.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	50.527	34.471	17.893	-	17.893

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing
• MPAF PE 0305165F: <i>GPS Space & Control</i>	124.194	64.609	67.689	0.000	67.689	61.574	80.966	10.522	0.000	Continuing	Continuing
• OPAF PE 0305165F: <i>GPS Space & Control</i>	7.569	7.736	7.579	0.000	7.579	7.741	0.394	0.400	0.408	Continuing	Continuing

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 in 2002 as Engineering Change Proposals (ECPs).

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>	PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OCS Development & IIF Modernization	C/Various	Boeing:Seal Beach, CA	1,451.329	18.484	Nov 2010	11.404	Nov 2011	-		11.404	Continuing	Continuing	1,944.179
IIF Development	C/Various	Boeing:Seal Beach, CA	76.272	-		-		-		-	0.000	76.272	77.600
Control Segment Support	MIPR	Various:Various,	29.808	9.841	Nov 2010	-		-		-	Continuing	Continuing	TBD
Completed GPS Development Efforts	Various	Various:Various,	165.983	-		-		-		-	0.000	165.983	0.000
Subtotal			1,723.392	28.325		11.404		-		11.404			

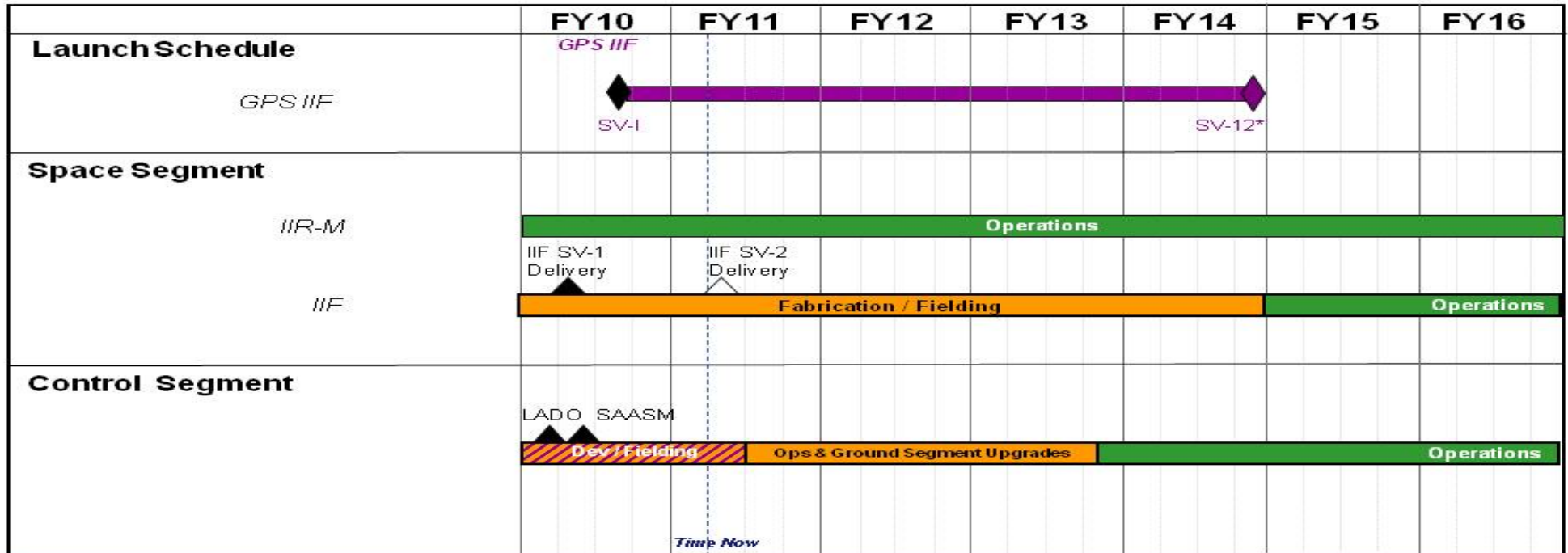
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Engineering/Support	C/CPAF	Various:Various,	71.177	2.580	Nov 2010	0.230	Nov 2011	-		0.230	Continuing	Continuing	TBD
FFRDC	Various	Aerospace:El Segundo, CA	1.630	1.140	Nov 2010	1.200	Nov 2011	-		1.200	0.000	3.970	0.000
Completed GPS Support Efforts	Various	Various:Various	-	-		-		-		-	0.000	0.000	0.000
Subtotal			72.807	3.720		1.430		-		1.430			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Completed GPS T&E Efforts	Various	Various:Various,	4.588	-		-		-		-	0.000	4.588	0.000
Subtotal			4.588	-		-		-		-	0.000	4.588	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>	PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>



*The GPS IIF launch schedule is based upon constellation sustainment needs as determined by HQ AFSPC, and may extend beyond FY14.
 LADO – Launch, Anomaly & Disposal Operations
 SAASM – Selective Availability Anti-Spoofing Module

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305165F: <i>NAVSTAR GPS (Space)</i>	PROJECT 673030: <i>NAVSTAR GPS (Space & Control)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Launch, Anomaly & Disposal Operations (LADO) Release 2 Complete	2	2010	2	2010
SAASM Capability Complete	1	2011	1	2011
Certification for SAASM Multi-Service Operational Test & Evaluation (MOT&E)	4	2011	4	2011
Critical Ops Modifications	4	2011	1	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	3.578	4.572	196.254	-	196.254	218.131	226.221	232.306	237.143	Continuing	Continuing
67A014: <i>R&D Space and Missile Operations</i>	3.578	4.572	196.254	-	196.254	218.131	226.221	232.306	237.143	Continuing	Continuing

Note

FY2012-FY2016: +\$1.0B for Acquisition workforce civilian pay.

The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$12.4M in FY12.

A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focus on the Multi-Mission Satellite Operations Center (MMSOC), which the Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY 2007. The main objective of MMSOC is to develop the capability to rapidly support R&D and operational systems and to transition R&D space vehicle technology with residual military utility to operational status for immediate war-fighter support. MMSOC is a multiple-mission operation system that uses standard software (1) to perform satellite command and control (C2) in support of launch requirements; (2) to develop and test tactics, techniques, procedures and concepts to conduct operations for R&D satellites; (3) to provide a satellite C2 incremental block evolution resource for RDT&E of new systems and concepts; and (4) to deliver operational flexibility for new and currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities of proven technologies currently in use in Air Force Space Development and Test Directorate facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources.

RDSMO develops and acquires systems to: operate experimental, demonstration, and operational 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 of 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 and MMSOC equipment installed in 1 SOPS at Schriever AFB, CO which operate R&D satellites; (2) the Space Test Operations organization at Kirtland AFB which is the focal point for small satellite tests, plans, programs, and policy and (3) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

The RDT&E effort also includes the development of a mobile test system, known as the Remote Tracking Station Block Change Transportable Space Test Resource (RBC TSTR), used to verify satellite compatibility with the Air Force Satellite Control Network (AFSCN) Remote Block Change architecture, currently being fielded worldwide. The system will be capable of being deployed around the world to perform compatibility testing in the factory as well as launch ranges to include Kodiak, Alaska, Wallops Island, Virginia, and Kwajalein Atoll where there is no other existing or planned capability. This was a new start in FY 2010.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>
BA 7: <i>Operational Systems Development</i>	

The Space and Missile Systems Center (SMC) equips US and allied forces with operational space and missile systems, launch systems, and command and control infrastructure in support of global military and national security operations. Product Center operates with over 6,300 people and an annual budget exceeding \$10B providing joint warfighters navigation, communication, weather, warning, force application, and space control capabilities.

This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	3.593	4.572	1.658	-	1.658
Current President's Budget	3.578	4.572	196.254	-	196.254
Total Adjustments	-0.015	-	194.596	-	194.596
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.015	-	194.596	-	194.596

Change Summary Explanation

FY10: The FY10 program funding includes reductions for FY10 actuals backout totaling \$0.015M.

FY12: +\$194.6M for Acquisition workforce civilian pay. Temporary placement for SMC Acquisition Workforce Civilian Pay. BPAC 676026 was created for this funding.

- The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$12.4M in FY12.
- The FY12 program funding includes reductions for civilian pay raises totaling \$6.973M.
- The FY12 program funding includes reductions for civilian manpower freeze totaling \$15.507M.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>				PROJECT 67A014: <i>R&D Space and Missile Operations</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A014: <i>R&D Space and Missile Operations</i>	3.578	4.572	196.254	-	196.254	218.131	226.221	232.306	237.143	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

FY2012-FY2016: +\$1.0B for Acquisition workforce civilian pay.

FY10 Actuals Backout: -\$0.015M

FY2012:
+\$194.596M for Acquisition workforce civilian pay. Temporary placement for SMC Acquisition Workforce Civilian Pay. BPAC 676026 has been requested for this funding.

The FY12 program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$12.4M in FY12.

Civilian pay raise reductions: -\$6.973M

Civilian hiring freeze: -\$15.507M

A. Mission Description and Budget Item Justification

The RDT&E efforts within this program focus on the Multi-Mission Satellite Operations Center (MMSOC), which the Research and Development (R&D) Space and Missile Operations (RDSMO) program started in FY 2007. The main objective of MMSOC is to develop the capability to rapidly support R&D and operational systems and to transition R&D space vehicle technology with residual military utility to operational status for immediate war-fighter support. MMSOC is a multiple-mission operation system that uses standard software (1) to perform satellite command and control (C2) in support of launch requirements; (2) to develop and test tactics, techniques, procedures and concepts to conduct operations for R&D satellites; (3) to provide a satellite C2 resource for RDT&E of new systems and concepts; and (4) to deliver operational flexibility for new and currently-flying assigned satellites. MMSOC leverages demonstrated RDT&E experience to expand the capabilities of proven technologies currently in use in Air Force Space Development and Test Directorate facilities. MMSOC also supports all RDSMO-sustained space vehicles through existing resources.

RDSMO develops and acquires systems to: operate experimental, demonstration, and operational 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 of 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 and MMSOC equipment installed in 1 SOPS at

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>	PROJECT 67A014: <i>R&D Space and Missile Operations</i>
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Schriever AFB, CO which operate R&D and operational satellites; (2) the Space Test Operations organization at Kirtland AFB which is the focal point for small satellite tests, plans, programs, and policy and (3) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

The RDT&E effort also includes the development of a mobile test system, known as the Remote Tracking Station Block Change Transportable Space Test Resource (RBC TSTR), used to verify satellite compatibility with the Air Force Satellite Control Network (AFSCN) Remote Block Change architecture, currently being fielded worldwide. The system will be capable of being deployed around the world to perform compatibility testing in the factory as well as launch ranges to include Kodiak, Alaska, Wallops Island, Virginia, and Kwajalein Atoll where there are no other existing or planned AFSCN compatibility test capabilities. This was a new start in FY 2010. Unified S-Band test capability will be incorporated into RBC TSTR in FY11.

The Space and Missile Systems Center (SMC) equips US and allied forces with operational space and missile systems, launch systems, and command and control infrastructure in support of global military and national security operations. Product Center operates with over 6,300 people and an annual budget exceeding \$10B providing joint warfighters navigation, communication, weather, warning, force application, and space control capabilities.

This effort is in Budget Activity 7, Operational System Development, and it supports research and development of space systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: MMSOC Development</p> <p>Description: Multi-Mission Satellite Operations Center (MMSOC) development/integration</p> <p>FY 2010 Accomplishments: Continue MMSOC development/integration efforts; Continue program office support and related support activities such as, but not limited to mission support, special studies, SETA, FFRDC, etc</p> <p>FY 2011 Plans: Continue MMSOC development/integration efforts; Continue program office support and related support activities such as, but not limited to mission support, special studies, SETA, FFRDC, etc</p> <p>FY 2012 Base Plans: Continue MMSOC development/integration efforts; Continue program office support and related support activities such as, but not limited to mission support, special studies, SETA, FFRDC, etc</p> <p>FY 2012 OCO Plans:</p>	3.578	3.572	1.658	-	1.658
<p>Title: RBC TSTR</p>	-	1.000	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>	PROJECT 67A014: <i>R&D Space and Missile Operations</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: Remote Tracking Station Block Change Transportable Space Test Resource (RBC TSTR). Used to verify satellite compatibility with the AFSCN RBC architecture.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans: Incorporate Unified S-band test capability.</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p> <p>Title: Acquisition Workforce Civilian Pay</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>					
Accomplishments/Planned Programs Subtotals	-	-	194.596	-	194.596
	3.578	4.572	196.254	-	196.254

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• OPAF: <i>Electronics & Telecom Equipment (BA 03, PE 0305173F, P-20)</i>	11.299	3.470	3.470	0.000	3.470	3.586	3.639	3.698	3.764	Continuing	Continuing

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 Directorate, to modernize and sustain MMSOC. The AF uses the competitively-awarded AFSCN RBC contract to develop RBC TSTR.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>	PROJECT 67A014: <i>R&D Space and Missile Operations</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering, Development, and Sustainment (EDS) Follow-on Contract	C/CPAF	Lockheed Martin:Kirtland, Schreiver AFB,	3.498	3.572		1.658		-		1.658	Continuing	Continuing	TBD
Subtotal			3.498	3.572		1.658		-		1.658			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Test and Engineering (STEC) Contract	C/CPAF	LINQUEST:Kirtland, AFB,	0.080	-		-		-		-	Continuing	Continuing	0.000
Subtotal			0.080	-		-		-		-			0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
RBC TSTR Contract	TBD	Honeywell:Colorado Springs, CO	-	1.000		-		-		-	0.000	1.000	3.923
SMC Acquisiton Civilian Workforce	TBD	Not specified.,	-	-		194.596		-		194.596	0.000	194.596	0.000
Subtotal			-	1.000		194.596		-		194.596	0.000	195.596	3.923

Remarks
FY12: +\$194.6M for Acquisition workforce civilian pay. Temporary placement for SMC Acquisition Workforce Civilian Pay. BPAC 676026 was created for this funding.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>	PROJECT 67A014: <i>R&D Space and Missile Operations</i>
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	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	3.578	4.572	196.254	-	196.254			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

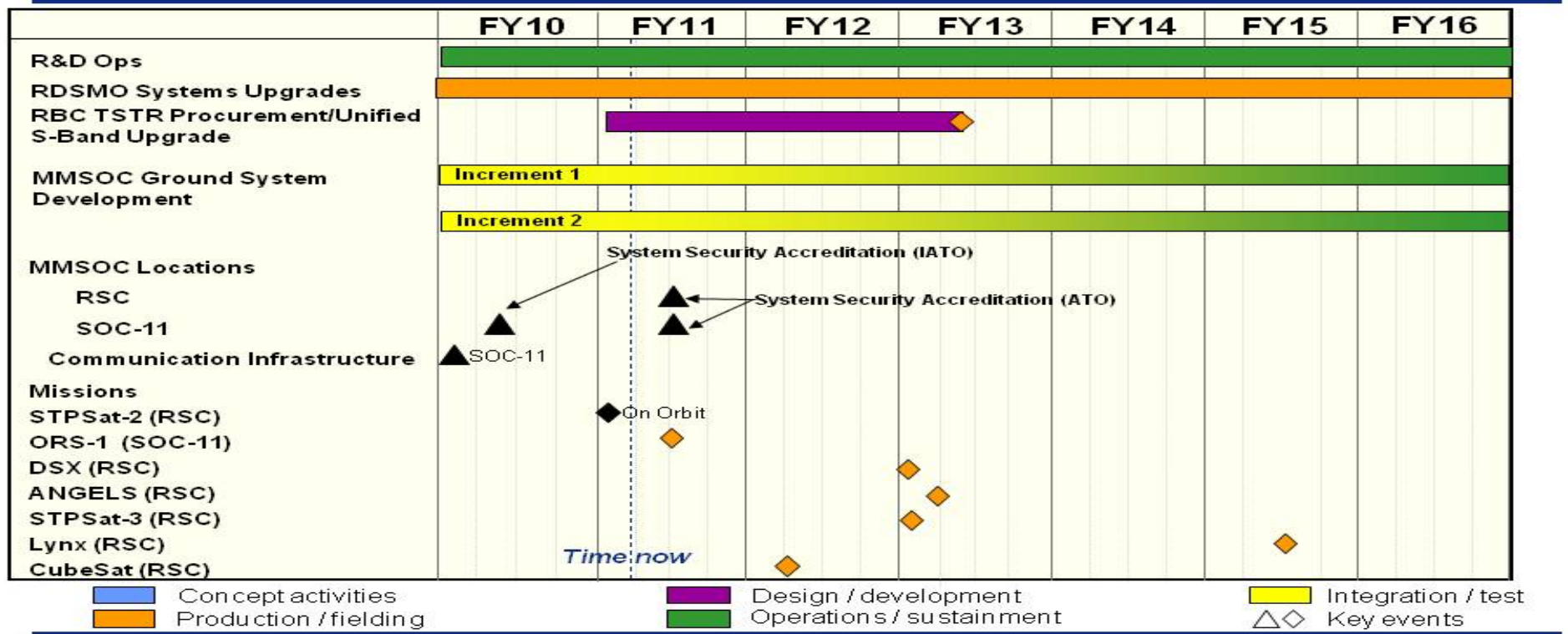
DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305173F: Space & Missile Test & Evaluation Center

PROJECT
 67A014: R&D Space and Missile Operations

RDSMO Schedule



FY11 Staffer Brief

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305173F: <i>Space & Missile Test & Evaluation Center</i>	PROJECT 67A014: <i>R&D Space and Missile Operations</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Remote Tracking Block Change Transportable Space Test Resource Contract Award	4	2010	4	2010

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	2.948	2.929	2.961	-	2.961	2.425	2.469	2.511	2.554	Continuing	Continuing
67A011: <i>Space Analysis and Application Development</i>	2.948	2.929	2.961	-	2.961	2.425	2.469	2.511	2.554	Continuing	Continuing

A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Innovation and Development Center develops, evaluates, tests, and integrates space application and utility concepts, as well as new technologies, while providing combat effects to warfighters, such as aid in mission planning of Global Positioning System (GPS) aided/guided munitions. 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.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	2.961	2.929	2.971	-	2.971
Current President's Budget	2.948	2.929	2.961	-	2.961
Total Adjustments	-0.013	-	-0.010	-	-0.010
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.013	-	-0.010	-	-0.010

Change Summary Explanation

FY 2011: No significant program changes.
FY 2012: No significant program changes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A011: <i>Space Analysis and Application Development</i>	2.948	2.929	2.961	-	2.961	2.425	2.469	2.511	2.554	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Innovation and Development Center develops, evaluates, tests, and integrates space application and utility concepts, as well as new technologies, while providing combat effects to warfighters, such as aid in mission planning of Global Positioning System (GPS) aided/guided munitions. 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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Model Development/Modification	1.361	1.353	1.367	-	1.367
Description: Develops, verifies, and validates new models for space mission areas and modifies existing models to portray new capabilities. Models used by the Air Force Space Command's (AFSPC) Space Analysis Center for military utility analyses, trade studies, and other evaluations of space programs supporting program offices at the Space and Missile Center, HQ AFSPC and other activities with a space focus.					
FY 2010 Accomplishments: Model modification.					
FY 2011 Plans: Model modification.					
FY 2012 Base Plans: Model modification.					
FY 2012 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Model Verification Description: Verification of model changes. FY 2010 Accomplishments: Verification of model changes. FY 2011 Plans: Verification of model changes. FY 2012 Base Plans: Verification of model changes. FY 2012 OCO Plans:	0.612	0.599	0.615	-	0.615
Title: Model Validation Description: Validation of model change results. FY 2010 Accomplishments: Validation of model change results. FY 2011 Plans: Validation of model change results. FY 2012 Base Plans: Validation of model change results. FY 2012 OCO Plans:	0.975	0.977	0.979	-	0.979
Accomplishments/Planned Programs Subtotals	2.948	2.929	2.961	-	2.961

C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• Other Procurement: <i>Air Force (Weapon System Code 832070, Intelligence Communications Equipment)*</i>	1.371	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Other Procurement (1): <i>Air Force</i> <i>(Weapon System Code 834010,</i> <i>General Information Technology</i>	0.000	1.383	1.410	0.000	1.410	1.432	1.453	1.313	1.503	Continuing	Continuing

D. Acquisition Strategy

Any new projects funded in this program will be awarded using competitive procedures to the maximum extent possible.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Develop/modify software tools/models	C/TBD	Various:Various,	4.450	1.035	Jan 2011	1.032	Jan 2012	-		1.032	Continuing	Continuing	TBD
Develop/modify software tools and models	C/CPAF	Scitor:Colorado Springs, CO	4.870	1.894	Oct 2009	1.929	Oct 2011	-		1.929	Continuing	Continuing	TBD
Subtotal			9.320	2.929		2.961		-		2.961			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			9.320	2.929		2.961		-		2.961			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>

	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Space Analysis Center <i>Modeling & simulation activities for space mission areas</i>	Modeling tool development, modification, verification, and validation						
	Operations using existing models						

- | | | |
|--|--|--|
|  Concept activities |  Design / development |  Integration / test |
|  Production / fielding |  Operations / sustainment |  Key events |

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305174F: <i>SPACE WARFARE CENTER</i>	PROJECT 67A011: <i>Space Analysis and Application Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Model development/modification, verification, and validation	1	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	10.973	9.933	9.940	-	9.940	9.976	10.157	10.307	10.430	Continuing	Continuing
674137: <i>Launch and Test Range System (LTRS) Modernization</i>	10.973	9.933	9.940	-	9.940	9.976	10.157	10.307	10.430	Continuing	Continuing

Note

The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.063M in FY12.

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), also known as the Launch and Test Range System (LTRS). The ER and WR provide tracking, telemetry, communications, flight safety, and other capabilities to enable: national security, civil, and commercial space launches; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems forces the AF to use redundant assets to ensure range availability, increasing operations and maintenance costs. The AF will address range deficiencies in FY12 via multiple contracts. The SLRS Contract (SLRSC) will complete modernization of several command, telemetry, and radar instrumentation sites; and provide depot level maintenance and logistics support until the follow-on contract takes over. As a follow-on to SLRSC, the AF will award a consolidated modernization, sustainment, operations, and maintenance contract, the LTRS Integrated Support Contract (LISC) in early FY12 (delayed from FY11 for extended contract preparations). The separate Systems Engineering and Integration (SE&I) contract will continue in FY12 to provide independent systems engineering and integration support complementing the SLRSC and LISC. Planned communications system upgrades will comply with OSD policies and standards for net centricity, global information grid interface, information assurance, and test/training enabling architecture. These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development. Associated Other Procurement, AF, funding is in Budget Activity 03, Electronics and Telecommunications Equipment, Item No. 44, Program Element 0305182F, Spacelift Range System Space.

B. Program Change Summary (\$ in Millions)

	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	9.915	9.933	10.061	-	10.061
Current President's Budget	10.973	9.933	9.940	-	9.940
Total Adjustments	1.058	-	-0.121	-	-0.121
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	1.100	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.042	-	-0.121	-	-0.121

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0305182F: <i>Spacelift Range System</i>

Change Summary Explanation

FY12: The program funding includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total -\$0.063M in FY12.

FY12: -\$0.058M for higher priorities.

Total FY12 Changes: -\$0.121M

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>				PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674137: <i>Launch and Test Range System (LTRS) Modernization</i>	10.973	9.933	9.940	-	9.940	9.976	10.157	10.307	10.430	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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), also known as the Launch and Test Range System (LTRS). The ER and WR provide tracking, telemetry, communications, flight safety, and other capabilities to enable: national security, civil, and commercial space launches; ballistic missile and missile defense evaluations; and aeronautical and guided weapons tests. Decreasing reliability of aging range systems forces the AF to use redundant assets to ensure range availability, increasing operations and maintenance costs. The AF will address range deficiencies in FY12 via multiple contracts. The SLRS Contract (SLRSC) will complete modernization of several command, telemetry, and radar instrumentation sites; and provide depot level maintenance and logistics support until the follow-on contract takes over. As a follow-on to SLRSC, the AF will award a consolidated modernization, sustainment, operations, and maintenance contract, the LTRS Integrated Support Contract (LISC) in early FY12 (delayed from FY11 for extended contract preparations). The separate Systems Engineering and Integration (SE&I) contract will continue in FY12 to provide independent systems engineering and integration support complementing the SLRSC and LISC. Planned communications system upgrades will comply with OSD policies and standards for net centricity, global information grid interface, information assurance, and test/training enabling architecture. These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development. Associated Other Procurement, AF, funding is in Budget Activity 03, Electronics and Telecommunications Equipment, Item No. 44, Program Element 0305182F, Spacelift Range System Space.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Range Modernization	8.746	6.603	6.625	-	6.625
Description: SLRSC and follow-on LISC conduct developmental testing, system security accreditations, system integration testing, and preparations for operational testing of instrumentation systems. Transition efforts to operational testing. Initiate proof of concept efforts for communications internet protocol and service oriented architecture upgrades. Continue central command upgrades and flight termination system enhancements.					
FY 2010 Accomplishments: SLRSC continued developmental testing, system security accreditations, system integration testing, and preparations for operational testing for instrumentation systems. Transitioned efforts to operational testing.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>		PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
<p>SLRSC continues developmental testing, system security accreditations, system integration testing, and preparations for operational testing of instrumentation systems. Transition efforts to operational testing. Upgrades central command and enhances flight termination systems.</p> <p>FY 2012 Base Plans: SLRSC will complete developmental testing, system security accreditations, and system integration testing under SLRSC to transition command destruct, radar, and telemetry systems to operational testing. Follow-on LISC will begin or continue integration and developmental testing leading up to operational testing for additional command destruct and telemetry instrumentation. Initiate proof of concept and design for internet protocol/ service oriented architecture. Continue central command upgrades and flight termination system enhancements.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: Systems Engineering and Integration</p> <p>Description: Initiate and conduct independent systems engineering and integration (SE&I) effort starting in FY10. Continue systems engineering efforts previously accomplished under SLRSC.</p> <p>FY 2010 Accomplishments: Initiated follow-on, separate systems engineering and integration effort.</p> <p>FY 2011 Plans: Continues follow-on, independent systems engineering and integration efforts. Supports completion of SLRSC and transition to follow-on LTRS Integrated Support Contract (LISC).</p> <p>FY 2012 Base Plans: Will continue independent systems engineering and integration effort. Will support completion of SLRSC and transition to follow-on LISC.</p> <p>FY 2012 OCO Plans:</p>					
	1.882	2.965	2.943	-	2.943
<p>Title: Program Support</p> <p>Description: Provide program support, to include System Program Office operations, SETA, and FFRDC.</p> <p>FY 2010 Accomplishments:</p>					
	0.345	0.365	0.372	-	0.372

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>	PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continued program support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).					
FY 2011 Plans: Continued program support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).					
FY 2012 Base Plans: Will continue program support, to include System Program Office operations, SETA, and engineering support from Aerospace (FFRDC).					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	10.973	9.933	9.940	-	9.940

C. Other Program Funding Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0305182F: <i>Spacelift Range System Space, OPAF</i>	74.372	91.004	125.947	0.000	125.947	111.149	99.772	100.507	106.131	Continuing	Continuing
• PE 0305182F (1): <i>Spares and Repair Parts, OPAF</i>	2.948	2.978	2.976	0.000	2.976	3.076	3.120	3.172	0.000	Continuing	Continuing

D. Acquisition Strategy
The AF will use three 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. The Spacelift Range System Contract (SLRSC) modernizes the ranges and provides sustainment and logistics support. The Systems Engineering and Integration (SE&I) contract provides independent systems engineering and integration efforts to guide and support the modernization efforts. The AF will competitively award the follow-on LTRS Integrated Support Contract (LISC) in FY12 to provide modernization, sustainment, operations, and maintenance of the ranges.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>	PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Spacelift Range System Contract	C/CPAF	ITT Industries:Cape Canaveral, FL	177.830	6.603	Oct 2010	-		-		-	0.000	184.433	TBD
LTRS Integrated Support Contract (LISC)	C/TBD	TBD:TBD,	-	-		6.625	Oct 2011	-		6.625	Continuing	Continuing	TBD
Systems Engineering and Integration Contract	C/CPIF	Booz Allen and Hamilton:McLean, VA	2.057	2.965	Oct 2010	2.943	Oct 2011	-		2.943	Continuing	Continuing	TBD
Subtotal			179.887	9.568		9.568		-		9.568			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various:Various,	0.345	0.365	Oct 2010	0.372	Oct 2011	-		0.372	Continuing	Continuing	TBD
Subtotal			0.345	0.365		0.372		-		0.372			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>			PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	180.232	9.933	9.940	-	9.940				

Remarks

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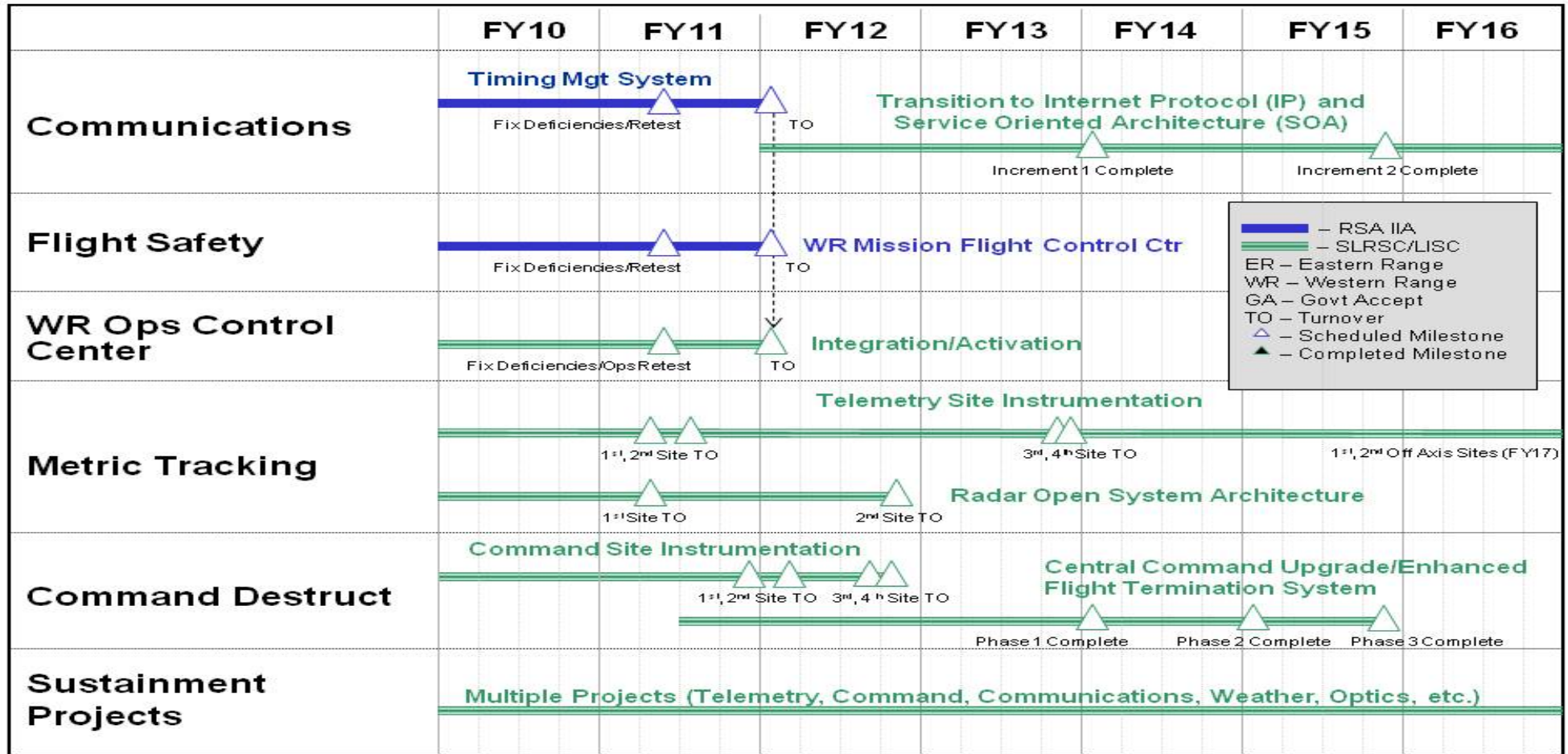
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305182F: Spacelift Range System

PROJECT
 674137: Launch and Test Range System (LTRS) Modernization



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305182F: <i>Spacelift Range System</i>	PROJECT 674137: <i>Launch and Test Range System (LTRS) Modernization</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
- WR Comm Timing Mgmt System Ops Fix, Retest, Acceptance, and Turnover	1	2010	1	2012
- WR Mission Flight Control Center Ops Fix, Retest, Acceptance, and Turnover	1	2010	1	2012
- WR Ops Control Center (WROCC) Ops Fix, Retest, Acceptance, and Turnover	1	2010	1	2012
- Metric Tracking (Telemetry) 1st Site Ops Testing, Acceptance, and Turnover	1	2010	2	2011
- Metric Tracking (Telemetry) 2nd Site Ops Testing, Acceptance, and Turnover	3	2010	3	2011
- Metric Tracking (Telemetry) 3rd Site Ops Testing, Acceptance, and Turnover	3	2010	4	2013
- Metric Tracking (Telemetry) 4th Site Ops Testing, Acceptance, and Turnover	3	2010	4	2013
- Metric Tracking (Radar Open System Architecture) 1st Site Ops Testing, Acceptance, and Turnover	1	2010	2	2011
- Metric Tracking (Radar Open System Architecture) 2nd Site Ops Testing, Acceptance, and Turnover	3	2010	4	2012
- Command Destruct (Vehicle Uplink) 1st Site Ops Testing, Acceptance, and Turnover	3	2010	4	2011
- Command Destruct (Vehicle Uplink) 2nd Site Ops Testing, Acceptance, and Turnover	4	2010	1	2012
- Command Destruct (Vehicle Uplink) 3rd Site Ops Testing, Acceptance, and Turnover	1	2011	3	2012
- Command Destruct (Vehicle Uplink) 4th Site Ops Testing, Acceptance, and Turnover	3	2011	4	2012
- Follow-on LTRS Integrated Support Contract (LISC) Initiation	1	2012	2	2012
- Phase 1 of Central Command Upgrade/Enhanced Flight Termination	3	2011	1	2014
- Increment 1 of transition to internet protocol and service oriented architecture	1	2012	1	2014

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	2.231	1.254	1.271	-	1.271	1.295	1.314	1.333	1.357	Continuing	Continuing
674871: <i>Information Operations Technology</i>	2.231	1.254	1.271	-	1.271	1.295	1.314	1.333	1.357	Continuing	Continuing

A. Mission Description and Budget Item Justification

The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating computer Computer Network Operations (CNO) capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans-regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (COCOMs) as directed.

This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

USCYBERCOM supports the Information Operations (IO) community by providing a cadre of experts on CNO technology use, and renders technical assistance in the development, review and coordination of CNO plans and operations.

USCYBERCOM coordinates CNO capability research and development in order to achieve global military objectives. USCYBERCOM specifically is responsible for advocating on behalf of the COCOMs for CNO capability development. It is also responsible for partnering with the CNO development community to seek resource advocacy from USSTRATCOM, and fund CNO capability development with service sponsorship and coordination. Additionally, USCYBERCOM focuses capability developer's efforts on addressing COCOM requirements, fosters collaboration between OCO/DCO developers, intelligence providers, and operational planners to shorten the development cycle, transfers end-result capabilities to service components, and supports research and development of OCO/DCO capabilities for the conduct operational planning activities.

USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305193F: <i>INTEL SPT TO INFO OPS</i>
BA 7: <i>Operational Systems Development</i>	

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	2.240	1.254	1.275	-	1.275
Current President's Budget	2.231	1.254	1.271	-	1.271
Total Adjustments	-0.009	-	-0.004	-	-0.004
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.009	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.004	-	-0.004

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 674871: *Information Operations Technology*

Congressional Add: *Open Source Research*

	FY 2010	FY 2011
	1.000	-
Congressional Add Subtotals for Project: 674871	1.000	-
Congressional Add Totals for all Projects	1.000	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>				PROJECT 674871: <i>Information Operations Technology</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674871: <i>Information Operations Technology</i>	2.231	1.254	1.271	-	1.271	1.295	1.314	1.333	1.357	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating computer Computer Network Operations (CNO) capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans-regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (COCOMs) as directed.

This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

USCYBERCOM supports the Information Operations (IO) community by providing a cadre of experts on CNO technology use, and renders technical assistance in the development, review and coordination of CNO plans and operations.

USCYBERCOM coordinates CNO capability research and development in order to achieve global military objectives. USCYBERCOM specifically is responsible for advocating on behalf of the COCOMs for CNO capability development. It is also responsible for partnering with the CNO development community to seek resource advocacy from USSTRATCOM, and fund CNO capability development with service sponsorship and coordination. Additionally, USCYBERCOM focuses capability developer's efforts on addressing COCOM requirements, fosters collaboration between OCO/DCO developers, intelligence providers, and operational planners to shorten the development cycle, transfers end-result capabilities to service components, and supports research and development of OCO/DCO capabilities for the conduct operational planning activities.

USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>	PROJECT 674871: <i>Information Operations Technology</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Joint Threat Incident (JTID) Global Network Ops (GNO) Analysis</p> <p>Description: Intelligence activities focused on the development, integration and assessment of systems or applications in support of non-traditional and contingency warfare.</p> <p>FY 2010 Accomplishments: Accomplished modifications to near real-time database that contains foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities. Continued development of tools for production of automated intelligence reports on computer network attacks against US systems in accordance with CJCSM 6510.03. Continued to develop better incident assessments and analysis modules to improve means of supplying appropriate response options and courses-of-action in defense of DoD networks. Activities also included studies and analysis to support both current program planning and execution and future program planning.</p> <p>FY 2011 Plans: Continue modifications to near real-time database that contains foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities. Continue development of tools for production of automated intelligence reports on computer network attacks against US systems in accordance with CJCSM 6510.03. Continue to develop better incident assessments and analysis modules to improve means of supplying appropriate response options and courses-of-action in defense of DoD networks. Activities also include studies and analysis to support both current program planning and execution and future program planning.</p> <p>FY 2012 Base Plans: Will continue modifications to near real-time database that contains foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities. Will continue development of tools for production of automated intelligence reports on computer network attacks against US systems in accordance with CJCSM 6510.03. Will continue to develop better incident assessments and analysis modules to improve means of supplying appropriate response options and courses-of-action in defense of DoD networks. Activities will also include studies and analysis to support both current program planning and execution and future program planning.</p> <p>FY 2012 OCO Plans:</p>	1.231	1.254	1.271	-	1.271

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>	PROJECT 674871: <i>Information Operations Technology</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals	1.231	1.254	1.271	-	1.271
	FY 2010	FY 2011			
Congressional Add: Open Source Research	1.000	-			
FY 2010 Accomplishments: Open source research in support of classified program.					
FY 2011 Plans:					
Congressional Adds Subtotals	1.000	-			

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The acquisition strategy is to provide continuous improvements to the Joint Threat Incident Database through incremental updates. Systems engineering, development, and testing is accomplished using a Time & Materials (T&M) contract through full and open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>	PROJECT 674871: <i>Information Operations Technology</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
JTID Global Network Ops Analysis	C/TBD	Northrop Grumman IT-TASC:Lorton, VA	1.231	1.254	Dec 2010	1.271	Dec 2011	-		1.271	Continuing	Continuing	TBD
Subtotal			1.231	1.254		1.271		-		1.271			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Congressional Add	Various	Not specified.;	1.000	-		-		-		-	0.000	1.000	1.000
Subtotal			1.000	-		-		-		-	0.000	1.000	1.000

Remarks
Contract Method & Type; Performing Activity & Location - Classified

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.231	1.254		1.271		-		1.271			

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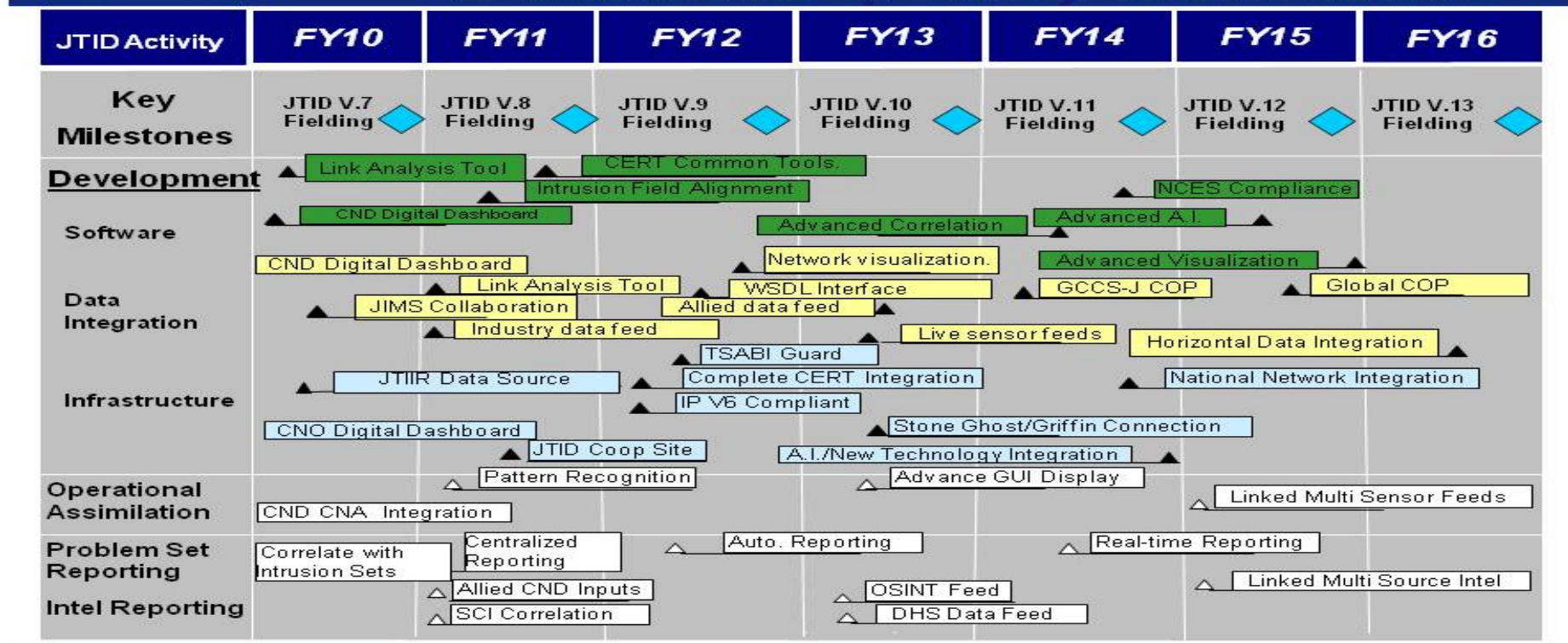
APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305193F: INTEL SPT TO INFO OPS

PROJECT
 674871: Information Operations Technology



Joint Threat Incident Database (JTID) Schedule



Current As Of: Jan 2011

Software Data Integration

Ops Impact Infrastructure

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305193F: <i>INTEL SPT TO INFO OPS</i>	PROJECT 674871: <i>Information Operations Technology</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Fielding of V.7	4	2010	4	2010
Fielding of V.8	4	2011	4	2011
Fielding of V.9	4	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	48.533	-	52.425	73.000	125.425	20.907	7.963	-	-	Continuing	Continuing
675372: <i>Integrated Sensor IS Structure</i>	48.533	-	52.425	-	52.425	20.907	7.963	-	-	Continuing	Continuing
676019: <i>Blue Devil</i>	-	-	-	73.000	73.000	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

This PE will focus USAF efforts on long endurance Remotely-Piloted Aircraft (RPAs), which allows days, months, or years of endurance as well as their associated sensors and communications suites. Efforts can include airships and more standard aircraft structures.

The Integrated Sensor IS Structure (ISIS) Program is developing a radar of unprecedented proportions that is fully integrated into a station-keeping stratospheric airship. The ISIS will support the nation's need for persistent wide-area surveillance, tracking, and engagement of time-critical air and ground targets. Automated surveillance and tracking includes air targets to the radar horizon of 600 km and all ground targets to a range of 300 km. The radar aperture also provides track data and other communications directly to users in-theater. The system is expected to be launched from CONUS locations with a multi-year operational life. No support personnel or facilities are required in-theater. Efforts will include work on the ground station and the corresponding Processing, Exploitation, and Dissemination (PED) connectivity.

The Blue Devil II system is an Air Force led single ship technology and concept demonstration of multi-intelligence, cross-platform tipping and cueing of fused SIGINT, wide area and high-definition (HD) EO/IR motion imagery on a persistent lighter-than-air (LTA) airship. Blue Devil II will employ a payload integration infrastructure (PII) with a Command and Control (C2) and Processing, Exploitation, and Dissemination (PED) Ground Station. This effort directly supports multiple validated CENTCOM urgent needs, and contributes directly to force protection and counter Improvised Explosive Device missions for coalition Forces.

Funds in both projects also cover activities to include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>
--	--

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	48.736	-	-	-	-
Current President's Budget	48.533	-	52.425	73.000	125.425
Total Adjustments	-0.203	-	52.425	73.000	125.425
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.203	-	52.425	73.000	125.425

Change Summary Explanation

The ISIS Program is currently being developed by DARPA. USAF began to cost share development beginning in FY10 with possible program transition from DARPA to the USAF following flight test in FY13.

Blue Devil II airship development began in FY10 using Army Rapid Equipping Force funds. The Air Force assumed management of the program when FY10 funds were placed in PE 0305206F and 0603203F to continue airship development and begin sensor integration. PE 0305205F will be used to manage the program for all FY12 and out funding. This program was listed as a new start in the FY10 OMNIBUS (FY 10-24 PA). The initiative is supported by the Joint Improvised Explosive Device Defeat Organization (JIEDDO).

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 675372: <i>Integrated Sensor IS Structure</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675372: <i>Integrated Sensor IS Structure</i>	48.533	-	52.425	-	52.425	20.907	7.963	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

FY12-14 funding was added to this AF-DARPA joint project to develop a prototype for flight test and a potential operational demo in FY14.

A. Mission Description and Budget Item Justification

This PE will focus USAF efforts on long endurance remotely-piloted aircraft (RPAs), which allow days, months, or years of endurance as well as their associated sensors and communications suites. Efforts can include airships and more standard aircraft structures.

The Integrated Sensor IS Structure (ISIS) Program is developing a radar that is fully integrated into a station-keeping stratospheric airship. ISIS will support the nation's need for persistent wide-area surveillance, tracking, and engagement of time-critical air and ground targets. Automated surveillance and tracking includes air targets to the radar horizon of 600 km and ground targets to a range of 300 km. The radar aperture also provides track data and other communications directly to users in-theater. The system is expected to be launched from CONUS locations with a multi-year operational life. No support personnel or facilities are required in-theater. Efforts will include work on the ground station and the corresponding Processing, Exploitation, and Dissemination (PED) connectivity.

DARPA is funding development of the prototype in FY11. Air Force funding is required in FY12-FY14 to complete development of the prototype and conduct a flight test and potential operation demonstration. This project includes completion of the designs for the radar, propulsion, power systems, and the airframe. The efforts also include development and testing of the hull materials, antenna design/production, calibration system design, software development for the radar and flight control systems, and integration of the radar into the hull structure.

Funds can also cover studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: ISIS	48.533	-	52.425	-	52.425
Description: Program development.					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 675372: <i>Integrated Sensor IS Structure</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Conducted studies on enabling technologies; provided Air Force share of program development costs. FY 2011 Plans: FY 2012 Base Plans: Fabricate prototype design; initial preparations for flight readiness review. FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	48.533	-	52.425	-	52.425

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• DARPA: <i>RDT&E, PE 0603287E</i>	27.850	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• DARPA (1): <i>RDT&E, PE 0603286E</i>	72.650	43.400	5.000	0.000	5.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
This is a Cost-Plus-Fixed-Fee contract with a total value of \$400M. The project is being funded with a 50/50 split by the Air Force and DARPA under a Memorandum of Agreement. Air Force funds intended for the contract are being provided to DARPA via a Military Interdepartmental Purchase Request (MIPR) for obligation. The Air Force Research Laboratory is acting as the Contracting Officer's Technical Representative for DARPA. The prime contractor is Lockheed Martin Aeronautics of Palmdale, CA and the radar sub is Raytheon Space and Airborne Systems, El Segundo, CA.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 675372: <i>Integrated Sensor IS Structure</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development	C/CPFF	Lockheed Martin:Palmdale, CA	48.533	-		52.425	Nov 2011	-		52.425	Continuing	Continuing	TBD
Subtotal			48.533	-		52.425		-		52.425			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

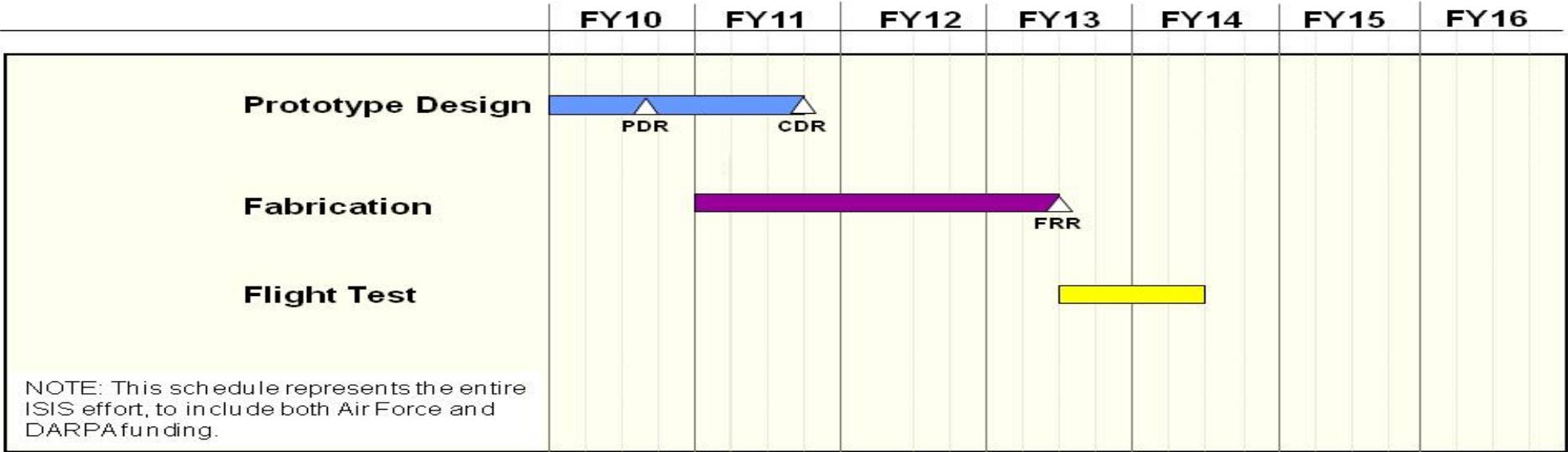
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			48.533	-		52.425		-		52.425			

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 675372: <i>Integrated Sensor IS Structure</i>

ISIS Demonstration Schedule



NOTE: This schedule represents the entire ISIS effort, to include both Air Force and DARPA funding.

PDR: Preliminary Design Review
CDR: Comprehensive Design Review
FRR: Flight Readiness Review

- Technology Maturation activities
- Design / development
- Integration / test
- Production / fielding
- Operations / sustainment
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 675372: <i>Integrated Sensor IS Structure</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Prototype Design	1	2010	3	2011
Fabrication	1	2011	2	2013
Flight Test	3	2013	2	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 676019: <i>Blue Devil</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676019: <i>Blue Devil</i>	-	-	-	73.000	73.000	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.

In FY12, this is a new project number. In FY12, Blue Devil II efforts are transferred from PE 352066f Airborne Reconnaissance Systems, and PE 063203f Advance Aerospace Sensors in order to consolidate program content.

A. Mission Description and Budget Item Justification

The Blue Devil II system is an Air Force led single ship technology and concept demonstration of multi-intelligence, cross-platform tipping and cueing of fused SIGINT, wide area and high-definition (HD) EO/IR motion imagery on a persistent lighter-than-air (LTA) airship. Blue Devil II will employ a payload integration infrastructure (PII) with a Command and Control (C2) and Processing, Exploitation, and Dissemination (PED) Ground Station. This effort directly supports multiple validated CENTCOM urgent needs, and contributes directly to force protection and counter Improvised Explosive Device missions for coalition Forces. FY12 OCO funds are required to support deployment of the Blue Devil II system for operational demonstration of the capability. Blue Devil II is a rapid acquisition technology demonstration that started in FY10 with funding detailed in the Other Program Funding Summary section. If FY12 funding is not provided, the Air Force will be unable to deploy the Blue Devil II system and meet current CENTCOM urgent needs for this type of technology.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Blue Devil II	-	-	-	73.000	73.000
Description: Develop and rapidly field an integrated multi-intelligence system on a persistent lighter-than-air airship with organic tipping and cueing of fused SIGINT to on-board wide field of view and narrow field of view EO/IR motion imagery systems.					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 676019: <i>Blue Devil</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue development and test of the Blue Devil II system that started with other program funding, and deploy Blue Devil II to CENTCOM for operationl demonstration of capability.					
Accomplishments/Planned Programs Subtotals	-	-	-	73.000	73.000

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Army: <i>RDT&E, PE M80101 Army Rapid Equipping Force (REF)</i>	14.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• AF: <i>RDT&E, PE 063203f Advanced Aerospace Sensors</i>	16.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• AF (2): <i>RDT&E, PE 35206f Airborne Reconnaissance System</i>	22.950	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
The Blue Devil II initiative is being executed by the 645 AESG (BIG SAFARI) to field this needed capability quickly to address COCOM urgent needs. Blue Devil II will be executed as a rapid acquisition program in order to field the capability as quickly as possible.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 676019: <i>Blue Devil</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Operational Demonstration Support	TBD	MAV-6:Vicksburg, MS	-	-		-		70.000		70.000	0.000	70.000	0.000
Subtotal			-	-		-		70.000		70.000	0.000	70.000	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Services	TBD	645 AESG:Dayton, OH	-	-		-		3.000		3.000	0.000	3.000	0.000
Subtotal			-	-		-		3.000		3.000	0.000	3.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		-		73.000		73.000	0.000	73.000	0.000

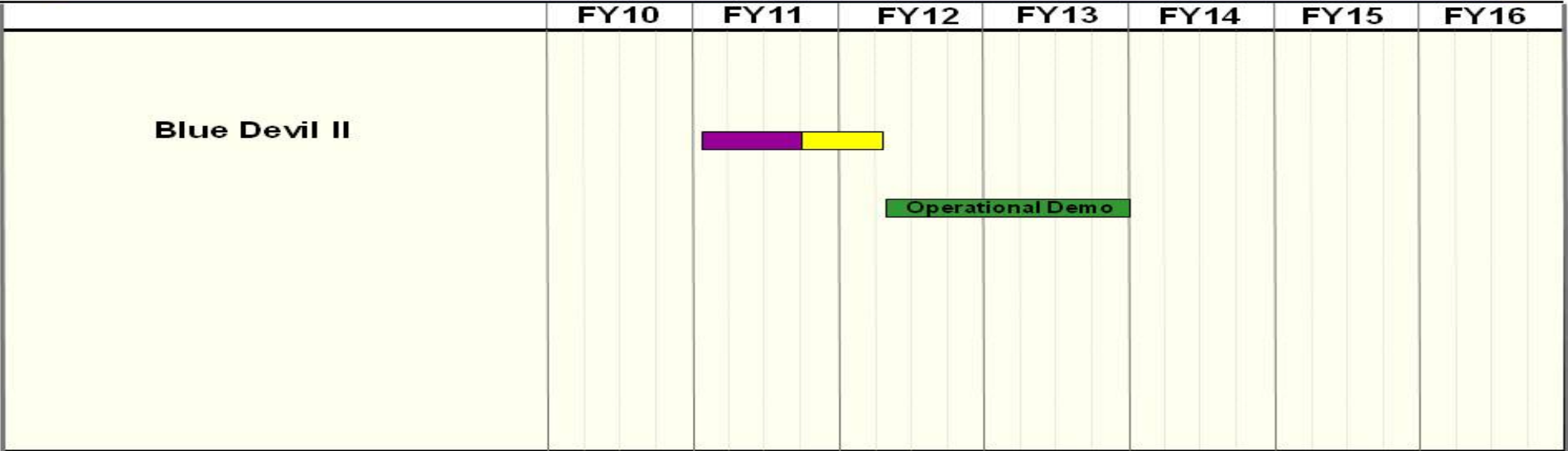
Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 676019: <i>Blue Devil</i>

Blue Devil II Schedule



 Integration & Testing

 Design & Development

 Operations & Sustainment

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305205F: <i>Endurance Unmanned Aerial Vehicles</i>	PROJECT 676019: <i>Blue Devil</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Blue Devil II Design, Development, Test	1	2011	2	2012
Operational Demo	2	2012	4	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	169.206	168.963	106.877	-	106.877	135.159	111.591	92.478	105.496	Continuing	Continuing
674818: <i>Imaging and Targeting Support</i>	13.930	13.345	30.609	-	30.609	58.942	44.723	13.323	13.516	Continuing	Continuing
674819: <i>Common Data Link (CDL)</i>	37.752	37.806	36.001	-	36.001	38.022	38.503	39.350	40.109	Continuing	Continuing
675092: <i>JTC/SIL MUSE</i>	3.470	3.374	3.235	-	3.235	3.458	3.472	3.373	3.387	Continuing	Continuing
675291: <i>Gorgon Stare</i>	45.984	31.833	16.047	-	16.047	16.328	13.040	16.419	17.408	Continuing	Continuing
675292: <i>Hyperspectral Sensors</i>	6.415	3.894	2.760	-	2.760	2.839	2.870	2.741	2.755	Continuing	Continuing
675382: <i>Broad Area Surveillance Sensors</i>	61.655	78.711	18.225	-	18.225	15.570	8.983	17.272	28.321	Continuing	Continuing

Note

The program funding includes reductions for Overhead Reduction and 4th Estate Baseline Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.488M and \$.017M, respectively, in FY12.

In FY12, project 675292, is renamed from Airborne Cueing & Exploitation System-Hyperspectral (ACES HY) to Hyperspectral Sensors to better reflect the depth of development efforts and operational need for hyperspectral airborne sensors.

In FY12, project 675382 is renamed from Wide Area Airborne Surveillance Program of Record (WAAS PoR) to Broad Area Surveillance Sensors to better reflect the WAAS PoR termination and continued technical development of Broad Area Surveillance Sensors.

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. In addition, it provides for modeling/simulation, training and systems engineering. This program also coordinates the development of common collection, processing, and dissemination solutions for near-real time intelligence, surveillance, and reconnaissance (ISR). Funds in any project can also cover activities to include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	145.413	168.963	152.123	-	152.123
Current President's Budget	169.206	168.963	106.877	-	106.877
Total Adjustments	23.793	-	-45.246	-	-45.246
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	23.793	-	-45.246	-	-45.246

Change Summary Explanation

In FY10, project 675382, Broad Area Surveillance Sensors, increased due to a \$22.95M Blue Devil II (SECDEF directed) initiative. Beginning in FY12, the Blue Devil II effort will be transferred to PE 0305205F, project 676019 (High Endurance UAVs, project Blue Devil II) in order to consolidate program content.

The \$62.086M reduction across the PE from FY11 to FY12 is primarily due to the termination of Wide Area Airborne Surveillance as a formal Program of Record (WAAS PoR)(project 675382) and subsequent reprogramming of funds to develop additional GORGON STARE QRC pod sets (project 675291) and improved broad area surveillance technical development (project 675382).

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>				PROJECT 674818: <i>Imaging and Targeting Support</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674818: <i>Imaging and Targeting Support</i>	13.930	13.345	30.609	-	30.609	58.942	44.723	13.323	13.516	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The Wide Area Airborne Surveillance Program of Record (WAAS PoR) originated in this project line in FY09, then moved to project 675382 in FY10.

This project has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact project content.

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, persistent, wide area surveillance and common imagery reconnaissance sensor capabilities (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 [GMTI], 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) and associated Tasking Processing Exploitation and Dissemination (TPED) 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 areas: Development and integration of common radar and electro-optical sensors (Synthetic Aperture Radar [SAR], Low Frequency SAR, and antennas, Electro-Optical [EO], Infrared [IR], HSI, Low Light, Laser Radar [LADAR], dismount detection radar [DDR], and their operational modes (High Resolution Imagery, Moving Target Indication, Persistent Surveillance, Wide Area Surveillance, Spectral Identification) for multiple airborne platforms. Development and demonstration of advanced airborne tactical sensor and associated TPED processing and tools (including automatic registration, automatic and assisted target detection, network centric warfare). Development of integrated multi-sensor capabilities to detect and identify obscured targets (OT). Development and implementation of imagery standards (Common GMTI and 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. Provides for monitoring and enhancement of Imagery Intelligence (IMINT) product quality (radar and EO/IR imagery, GMTI data, and spectral information) and timeliness throughout the image chain (from sensor to user). Supports the development of a sensor testbed platform for technological and integration risk reduction.

Activities also include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: I&TS</p> <p>Description: Develop/demonstrate next-generation Hyperspectral (HSI), Foliage/Ground Penetration (FOPEN/GPEN), Obscured Target (OT), advanced laser radar (LADAR) and dismount detection radar (DDR) technologies.</p> <p>FY 2010 Accomplishments: Developed advanced hyperspectral detection algorithms for SPIRITT sensor, continued development of advanced SAR technologies in support of OT detection, completed annual update of sensor library.</p> <p>FY 2011 Plans: Continue development of advanced hyperspectral detection algorithms including long-wave and mid-way infrared ranges (LWIR/MWIR), advanced SAR technology development in support of OT detection, sensor library update, complete stand-off imaging analysis of alternatives (SOI AoA) draft report.</p> <p>FY 2012 Base Plans: Begin advanced SAR sensor demonstration supporting OT and C-IED detection, continue development of LWIR hyperspectral detection algorithms, update sensor library, complete SOI AOA final report, begin development of a large scale dismount detection radar.</p> <p>FY 2012 OCO Plans:</p>	13.930	13.345	30.609	-	30.609
Accomplishments/Planned Programs Subtotals	13.930	13.345	30.609	-	30.609

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Other Government Agency: (Proc)	0.000	10.800	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SPIRITT	C/CPFF	BAE Systems:Greenlawn, NY	44.165	3.800	Nov 2010	-		-		-	0.000	47.965	TBD
Advanced SAR	C/CPFF	Essex:Columbia, MD	15.997	3.020	Feb 2011	0.891	Feb 2012	-		0.891	Continuing	Continuing	TBD
SOI AoA	C/CPFF	BAH:Norfolk, VA	0.200	3.280	Dec 2010	2.000	Jan 2012	-		2.000	0.000	5.480	TBD
Sensor Library	SS/CPFF	GTRI:Atlanta, GA	0.985	1.518	Dec 2010	1.100	Dec 2011	-		1.100	Continuing	Continuing	TBD
Advanced Hyperspectral Technologies	Various	Not specified.:	4.440	0.967	Dec 2010	1.780	Dec 2011	-		1.780	Continuing	Continuing	TBD
Dismount Detection Radar	TBD	TBD:TBD,	-	-		23.238	Dec 2011	-		23.238	Continuing	Continuing	TBD
Subtotal			65.787	12.585		29.009		-		29.009			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ASC (I&TS)	Various	Various:Dayton, OH	0.943	0.760	Oct 2010	1.600	Oct 2011	-		1.600	Continuing	Continuing	TBD
Subtotal			0.943	0.760		1.600		-		1.600			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>

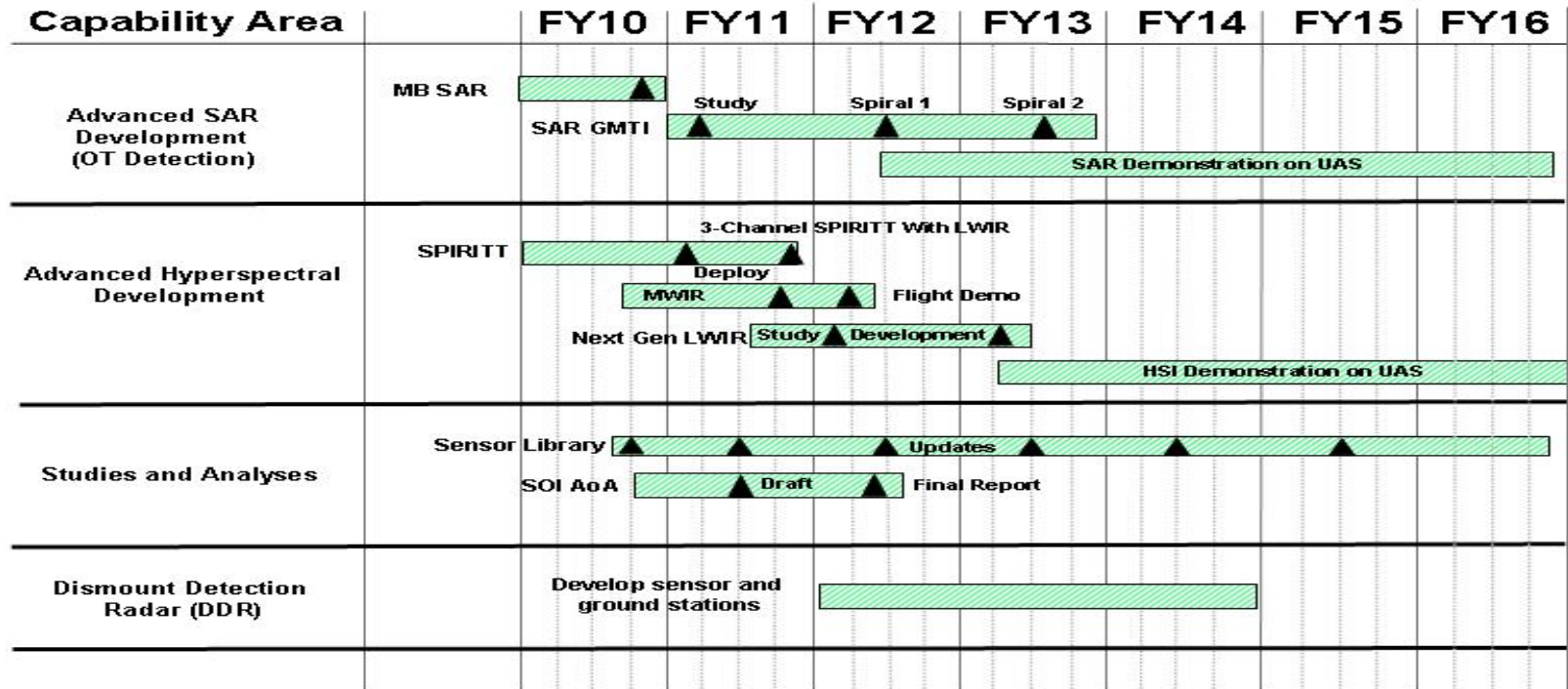
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	66.730	13.345	30.609	-	30.609			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>

Imaging & Targeting Support



OT: Obscured Target **MB SAR:** Multi-Band SAR **LWIR:** Long-Wave InfraRed **MWIR:** Mid-Wave InfraRed
GMTI: Ground Moving Target Indication **SPIRITT:** Spectral Infrared Remote Imaging Transition Testbed
SOI: Stand-Off Imaging **AoA:** Analysis of Alternatives **DDR:** Dismount Detection Radar

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674818: <i>Imaging and Targeting Support</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Advanced SAR Development (OT Detection)	1	2010	4	2016
Advanced Hyperspectral Development	1	2010	4	2016
Studies & Analysis	3	2010	4	2016
Dismount Detection Radar (DDR)	1	2012	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674819: <i>Common Data Link (CDL)</i>	37.752	37.806	36.001	-	36.001	38.022	38.503	39.350	40.109	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content. The efficiencies reductions total \$0.448M in FY12.

A. Mission Description and Budget Item Justification

Common Data Link (CDL) provides the DoD standard for interoperable, multi-service, multi-agency, wideband datalinks for manned/unmanned platforms performing Intelligence, Surveillance, and Reconnaissance (ISR) missions. As the CDL Executive Agent (EA), the Air Force is responsible for cross-service application of CDL RDT&E funds facilitating compliance to Congressional and DoD mandates. Military Intelligence Program (MIP) funds are used to maintain, distribute, and upgrade the CDL specifications while ensuring design configuration, commonality, and interoperability among ISR platforms. Additionally, funds are used for the management of resources allocated for development and migration of CDL technologies. Updates to the CDL specification and developmental systems impact 10,000+ DoD airborne and ground ISR systems. The CDL program enables compliance with OSD and Congressional mandates to minimize spectrum usage, use of cryptographic equipment, and direct support to current operations. The CDL specifications permit current and future ISR assets to operate worldwide by providing sensor data directly via point-to-point broadcast to ground sites, airborne platforms and dismounted users. CDL is a vital link in DoD's emerging communication architectures. CDL provides the capability to relay data via air-to-air or compatible satellite links when the asset and ground site are not in line-of-sight. CDL provides the largest bandwidth datalink in DoD, accommodating numerous sensors collecting Signals Intelligence (SIGINT), Imagery Intelligence (IMINT), and video data. Research and development activities include high data rate CDL, operations in other spectral bands, and support of large area surveillance missions, while supporting continuous improvements and implementation of line-of-sight platform and CDL terminal Command and Control, plus increased Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities. CDL terminal designs provide for future technology insertion and reduce non-recurring engineering and life-cycle costs to the user. Activities also include studies and analysis to support current and future program planning and execution. This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: CDL evolutionary terminal development	14.826	9.109	7.963	-	7.963
Description: Utilize MIP funds for CDL evolutionary terminal development per CDL IPT direction to the CDL Executive Agent (CDL EA)					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Continued development of Mini-CDL, completed Increment 2 Mini-CDL terminals from both vendors. Finished MIP development of MR-TCDL terminal. Continued Team-Portable CDL pathfinder for future Video Scout terminals.</p> <p>FY 2011 Plans: Completes development and testing of Increment 3 Mini-CDL terminals from multiple vendors. Completes development of Team Portable CDL terminal. Starts development of High Data Rate terminal and additional Size, Weight and Power (SWaP) improvements.</p> <p>FY 2012 Base Plans: Will continue development and testing of High Data Rate terminal and additional Size, Weight and Power (SWaP) improvements.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: CDL specification maintenance, development and distribution</p> <p>Description: Utilize MIP funds for CDL specification maintenance, development, and distribution per CDL IPT direction to CDL EA.</p> <p>FY 2010 Accomplishments: Released Revision H of Standard-CDL. Started review of specification upgrades meeting current and projected employment profiles including bandwidth efficiency and spectrum flexibility. Continued to maintain configuration control of the CDL architecture, standards, specifications, modules, and the Capstone overarching specification.</p> <p>FY 2011 Plans: Continue maintenance and configuration control of the CDL architecture, standards, specifications, and modules. Continue updating the Capstone specification and exploring upgrades to support current and future employment profiles. Start High Data Rate specification development. Complete testing and initial release of bandwidth efficient waveform specification.</p> <p>FY 2012 Base Plans: Will continue researching and/or developing upgrades to support current and future specification employment profiles including High Data Rate. Will enhance spectrally efficient CDL waveform specification. Will continue to maintain configuration control of the CDL architecture, standards, specifications, and modules.</p> <p>FY 2012 OCO Plans:</p>	8.934	8.094	7.885	-	7.885

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: CDL advanced technology insertion and studies</p> <p>Description: Utilize MIP funds for CDL advanced technology insertion, demonstrations, and studies per CDL WIPT direction to CDL EA.</p> <p>FY 2010 Accomplishments: Completed advanced technology insertion efforts including second-vendor capability to build CDL waveforms and new equipment development, coordinated networking capabilities with other data link programs, studied CDL over phased array antennas, and demonstrated CDL waveforms in other portions of the radio frequency spectrum.</p> <p>FY 2011 Plans: Technology developments increase; begin development of a High Data Rate capability for CDL. Begin adapting phased array and/or portable antennas, continue development of multispectral flexibility, spectrum efficiency, and integration of improved transmission components. Will begin enhanced CDL-based ISR communications developments, including rapid prototyping and validation that leverage warfighter lessons learned.</p> <p>FY 2012 Base Plans: Technology developments increase as efforts continue on High Data Rate CDL terminal advancement, adapting/testing phased array and portable antennas, continuation of multispectral flexibility, increased spectrum efficiency, and integration of improved transmission components. Will continue development of enhanced, CDL-based ISR communications capabilities and prototyping. Will begin supporting emerging communication backbone architecture development across space, air, and terrestrial layers including agile high capacity data transport.</p> <p>FY 2012 OCO Plans:</p>	13.992	20.603	20.153	-	20.153
Accomplishments/Planned Programs Subtotals	37.752	37.806	36.001	-	36.001

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A: None	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The CDL Executive Agent, supported by the Aerial Networking Division (ESC/HNA) and in concert with other program offices and laboratories, provides for development of interoperable wideband ISR data links as mandated by Assistant Secretary of Defense (Networks and Information Integration) (ASD(NII)) policy. Once CDL technology development matures, platforms are responsible for program CDL procurement, NSA/JITC certifications, integration, and installation. Acquisition strategy varies by contract. When possible, contracts are awarded under full and open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>
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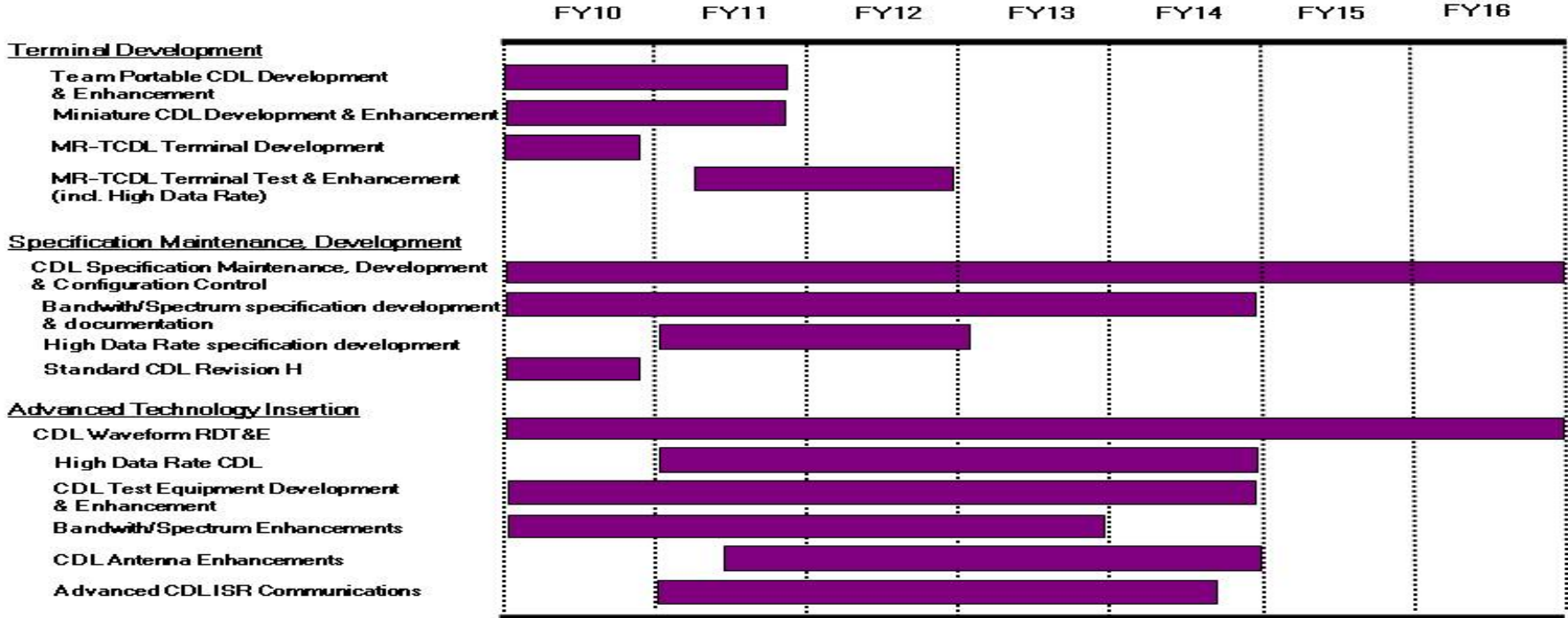
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mini-CDL, Multi Spectral, AF High Data Rate, Army VHR	C/CPFF	L-3 Communications:Salt Lake City, UT	15.598	13.018	Dec 2010	12.000	Dec 2010	-		12.000	Continuing	Continuing	TBD
Mini-CDL	SS/CPFF	Rockwell Collins:Cedar Rapids, IA	5.066	-		-		-		-	Continuing	Continuing	TBD
CDL Spec Support Team	SS/CPFF	Centech Group:Salt Lake City, UT	3.187	-		-		-		-	0.000	3.187	3.187
Team Portable, Advanced Waverform Verification, Phased Array (AESAs) Demo, Spectrum Diversity, TDLA	C/CPFF	Cubic:San Diego, CA	12.408	7.700	Jan 2011	8.000	Jan 2012	-		8.000	Continuing	Continuing	TBD
CDL Waveform Compliance Tester	C/TBD	LSI:Shrewsbury, NJ	3.842	-		-		-		-	Continuing	Continuing	TBD
CDL Waveform Compliance Tester 2	SS/FFP	AVTEC:Chantilly, VA	3.000	-		-		-		-	0.000	3.000	3.000
Navy LPD/Modem Burst	TBD	TBD:,	-	1.100	Mar 2011	1.100	Mar 2012	-		1.100	Continuing	Continuing	TBD
Under Threshold Combined	Various	Various:Various,	6.085	5.136	Jan 2011	3.762	Jan 2012	-		3.762	Continuing	Continuing	TBD
Subtotal			49.186	26.954		24.862		-		24.862			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Service tech assist & Spec development	MIPR	Various:Various,	9.015	4.684	Nov 2010	4.825	Nov 2012	-		4.825	Continuing	Continuing	TBD
Subtotal			9.015	4.684		4.825		-		4.825			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>

Common Data Link



As-of 1 Jan 11

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 674819: <i>Common Data Link (CDL)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Team Portable CDL Development & Enhancement	1	2010	4	2011
Miniature CDL Development & Enhancement	1	2010	4	2011
MR-TCDL Development	1	2010	1	2013
MR-TCDL Test & Enhancement (incl. High Data Rate)	2	2011	4	2012
CDL Specification Maintenance, Development, & Control	1	2010	4	2016
Bandwith/Spectrum spec development/documentation	1	2010	4	2014
High Data Rate Spec development	1	2011	1	2013
Standard CDL Revision H	1	2010	4	2010
CDL Waveform RDT&E	1	2010	4	2016
High Data Rate CDL	1	2011	4	2014
CDL Test Equipment Development/Enhancement	1	2010	4	2014
Bandwith/Spectrum Enhancements	1	2010	4	2013
CDL Antenna Enhancements	2	2011	4	2014
Advanced CDL ISR Communications	1	2011	3	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675092: <i>JTC/SIL MUSE</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675092: <i>JTC/SIL MUSE</i>	3.470	3.374	3.235	-	3.235	3.458	3.472	3.373	3.387	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program has been funded to latest cost estimate, less efficiencies. The reductions for efficiencies are not intended to impact program content.

A. Mission Description and Budget Item Justification

The Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a center of technical excellence to support Unmanned Aircraft Systems (UAS) programs within the services. The mission includes Service-specific and Joint Command, Control, Communications, Computers and Intelligence, Surveillance, and Reconnaissance (C4ISR) programs throughout DoD. The JTC/SIL provides a Government test bed for interoperability, rapid prototyping, technology insertion and transition, systems engineering, modeling/simulation, training and C4ISR optimization. The cornerstone of JTC/SIL's diverse tool set is the Multiple Unified Simulation Environment (MUSE), which is the DoD simulation/training system of choice for many UAS and ISR systems. The MUSE is also known as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) in its Air Force application. The MUSE/AFSERS simulates Air Vehicles, Sensors, Datalinks, Takeoff and Landing Systems, and to some degree, surrogate UAS ground stations, when actual UAS ground stations are unavailable.

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 CONOPS development, and Tactics, Techniques, and Procedures (TTP) refinement; conduct emerging concepts experimentation; and optimize C4ISR within warfighting exercises and experiments. It is the preferred simulation system used by the Combat Commanders and Joint Services to support command and battle staff C4ISR training.

The MUSE/AFSERS also creates a realistic operational environment that supports: an embedded training capability for multiple Program Managers; tools to minimize acquisition and life cycle cost and schedule impacts; the ability to conduct emerging concepts experimentation, future systems exploration, systems integration, and technology insertion; applications for Joint and Service-specific warfighting exercises; and C4ISR optimization.

MUSE/AFSERS is currently in use within all services and most unified commands simulating Predator, Global Hawk (RQ-4), ERMP, Hunter, and RQ-7 Shadow, national and commercial satellite collectors, P-3, JSTARS, and the U-2. During warfighting exercises, the JTC/SIL integrates imagery simulations with associated C4ISR systems to support execution of critical imagery processes. 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 military combat operations.

The JTC/SIL is supporting the OSD Task Force Staff and the Standards and Interoperability IPT, as well as the joint team working the Ground Segment Interface (GSI). The JTC/SIL is the primary custodian of this interface and in that role performs various supporting tasks including development of tools for helping the definition and

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675092: <i>JTC/SIL MUSE</i>
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execution of open architecture for joint service ground control systems, developing and maintaining STANAG 45 joint interoperability tasks to be defined on an annual basis.

Activities also include studies and analysis supporting current and future program planning and project execution. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: AFSERS Development</p> <p>Description: DoD's simulation/training system of choice for ISR systems, sensors, and platforms. Includes AFSERS, Common Ground Station Interface, and infrastructure support.</p> <p>FY 2010 Accomplishments: Continued AFSERS development for new ISR platforms and sensors.</p> <p>FY 2011 Plans: Continue AFSERS Development for new ISR platforms and sensors.</p> <p>FY 2012 Base Plans: Will continue AFSERS Development and OSD Interoperability Support.</p> <p>FY 2012 OCO Plans:</p>	1.470	1.374	1.235	-	1.235
<p>Title: OSD Interoperability Support</p> <p>Description: JTC/SIL support to OSD interoperability requirements. Air Force portion of joint funding requirement.</p> <p>FY 2010 Accomplishments: Continued Air Force support to OSD interoperability efforts.</p> <p>FY 2011 Plans: Continue Air Force support to OSD interoperability efforts.</p> <p>FY 2012 Base Plans: Will continue Air Force support to OSD interoperability efforts.</p> <p>FY 2012 OCO Plans:</p>	2.000	2.000	2.000	-	2.000
Accomplishments/Planned Programs Subtotals	3.470	3.374	3.235	-	3.235

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675092: <i>JTC/SIL MUSE</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• Army: <i>RDT&E, PE 0305204A, Tactical Unmanned Aerial Vehicles</i>	4.388	6.698	4.341	0.000	4.341	4.294	4.212	4.250	0.000	Continuing	Continuing
• Navy: <i>RDT&E, PE 0603261N, Tactical Airborne Reconnaissance</i>	3.715	3.661	3.685	0.000	3.685	3.720	3.758	3.796	0.000	Continuing	Continuing

D. Acquisition Strategy

All contracts are awarded after full and open competition and when situations dictate, via sole source.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675092: <i>JTC/SIL MUSE</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
AFSERS Development	MIPR	Redstone Arsenal:Huntsville, AL	11.729	0.969	Jan 2011	0.829	Jan 2012	-		0.829	Continuing	Continuing	TBD
Subtotal			11.729	0.969		0.829		-		0.829			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OSD Interoperability Support	Allot	Redstone Arsenal:Huntsville, AL	6.000	2.000	Jan 2011	2.000	Jan 2012	-		2.000	Continuing	Continuing	TBD
Subtotal			6.000	2.000		2.000		-		2.000			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
JTC/SIL	Allot	Redstone Arsenal:Huntsville, AL	4.416	0.405	Jan 2011	0.406	Jan 2012	-		0.406	Continuing	Continuing	TBD
Subtotal			4.416	0.405		0.406		-		0.406			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			22.145	3.374		3.235		-		3.235			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force						DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>			PROJECT 675092: <i>JTC/SIL MUSE</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

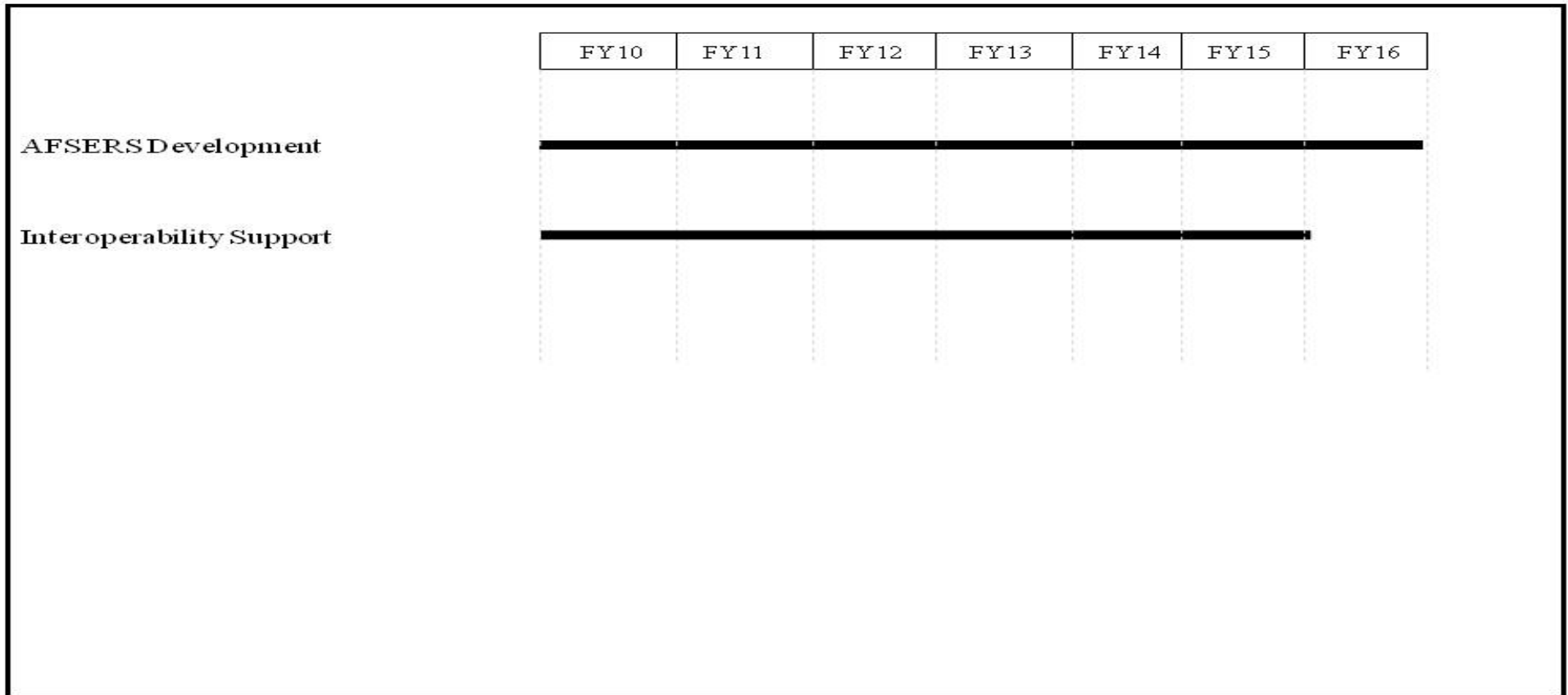
R-1 ITEM NOMENCLATURE

PE 0305206F: *Airborne Reconnaissance Systems*

PROJECT

675092: *JTC/SIL MUSE*

JTC/SIL Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675092: <i>JTC/SIL MUSE</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AFSERS Development	1	2010	4	2016
Interoperability Support	1	2010	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675291: <i>Gorgon Stare</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675291: <i>Gorgon Stare</i>	45.984	31.833	16.047	-	16.047	16.328	13.040	16.419	17.408	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.

A. Mission Description and Budget Item Justification

Gorgon Stare Quick Reaction Capability (QRC) supports the Combatant Commander (COCOM) urgent operational need for wide area airborne surveillance and is managed by the Air Force through the 645th Aeronautical Systems Group (AESG), aka BIG SAFARI, Intelligence, Surveillance, and Reconnaissance and Special Operations Forces (ISR&SOF) Directorate, Aeronautical Systems Center, Air Force Material Command. Develops a podded wide area airborne sensor suite to provide city-sized and similar broad area surveillance capability for the COCOMs. The Joint Requirements Oversight Council Memorandum (JROCM 106-08, dated 27 May 08) approved the Air Force concept for a program plan to address Service requirements for broad area airborne sensors on existing manned and unmanned aircraft system platforms. This plan evolved into the current Gorgon Stare QRC to be followed by a formal program of record beginning near the end of the FYDP. Funding will be allocated to meet COCOM current operational needs. The acquisition strategy for this Air Force QRC includes delivery of capability in multiple increments, with development of each increment expanding the capabilities of previous increments.

Activities also include studies and analysis to support both current program planning and execution as well as future program planning. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Gorgon Stare	45.984	31.833	16.047	-	16.047
Description: Gorgon Stare development including Airborne System, C2, Tactical Dissemination, and Fixed Site processing elements.					
FY 2010 Accomplishments: Completed development, test and delivery of Increment 1 capability. Began development of Increment 2 capability expanding on the Increment 1 capability.					
FY 2011 Plans: Continue development and test of Increment 2 capability. Support Increment 1 deployment needs.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675291: <i>Gorgon Stare</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Will begin pre-planned product improvement (P3I) development to airborne system, C2, tactical dissemination, and fixed site processing elements. Increment 3 capability development, leveraging P3I initiatives. <i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	45.984	31.833	16.047	-	16.047

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: <i>PE 0305206F, Airborne Reconnaissance Systems</i>	19.550	115.383	74.866	0.000	74.866	106.186	112.365	76.837	81.717	Continuing	Continuing
• AF: <i>O&M, PE 0305206F, Airborne Reconnaissance Systems</i>	11.810	23.010	19.301	0.000	19.301	20.849	19.017	11.863	11.410	Continuing	Continuing

D. Acquisition Strategy
In response to a COCOM urgent operational need, the wide area surveillance need will be delivered via the Gorgon Stare QRC program and executed by the 645 AESG (BIG SAFARI Program Office) using an incremental acquisition strategy to mitigate risk, find affordable end-to-end architecture solutions and field needed capabilities quickly. Addresses Service requirements for broad area surveillance using existing manned and unmanned aircraft system platforms.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675291: <i>Gorgon Stare</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Sensor Development	SS/CPFF	L3:Rockwall, TX	13.361	4.280	Nov 2010	3.560	Dec 2011	-		3.560	Continuing	Continuing	TBD
Sensor Development (Prime)	SS/FFP	Sierra Nevada Corporation:Sparks, NV	55.056	17.875	Oct 2010	7.040	Dec 2011	-		7.040	Continuing	Continuing	TBD
Sensor Integration	SS/CPFF	GA:Grey Butte, CA	3.065	3.800	Jan 2011	2.447	Dec 2011	-		2.447	Continuing	Continuing	TBD
Subtotal			71.482	25.955		13.047		-		13.047			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various:Various,	2.594	4.203	Mar 2011	1.200	Jan 2012	-		1.200	Continuing	Continuing	0.000
Subtotal			2.594	4.203		1.200		-		1.200			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
645 AESG, AFRL	SS/Various	SNC:Multiple locations,	9.408	1.675	Mar 2011	1.800	Apr 2012	-		1.800	Continuing	Continuing	TBD
Subtotal			9.408	1.675		1.800		-		1.800			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			83.484	31.833		16.047		-		16.047			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

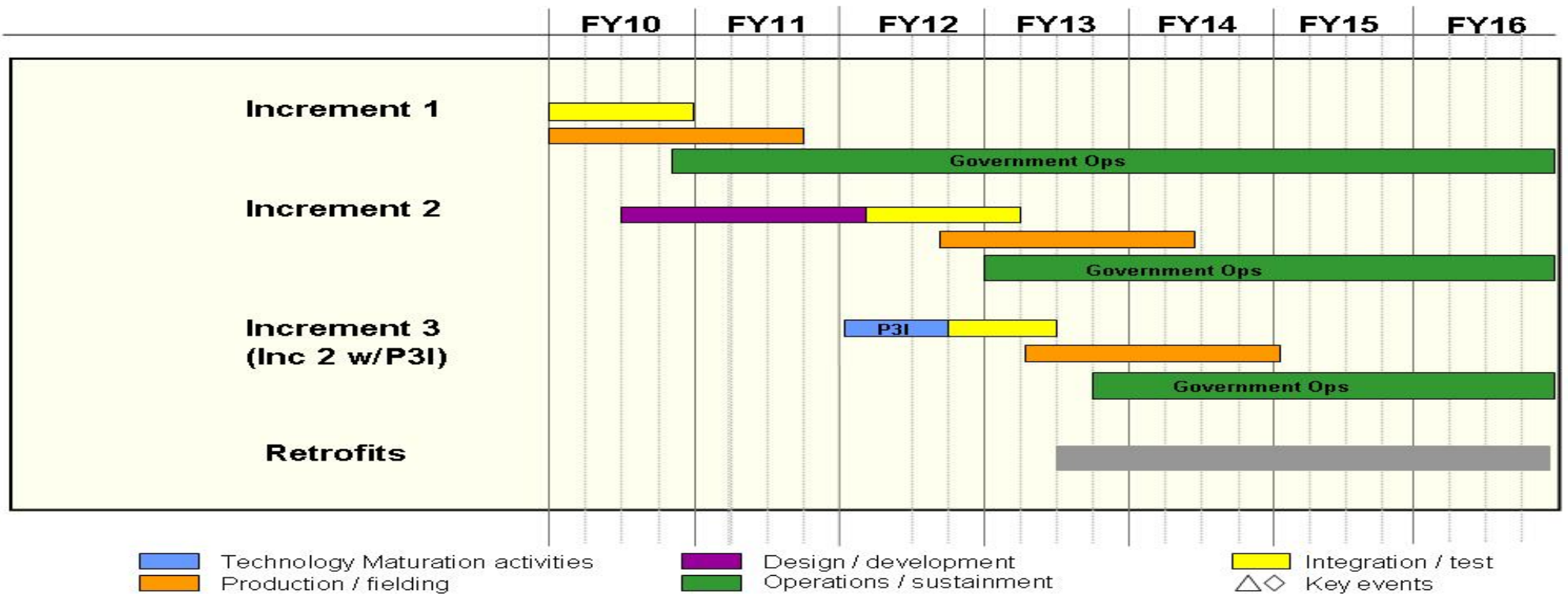
DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305206F: Airborne Reconnaissance
 Systems

PROJECT
 675291: Gorgon Stare

Gorgon Stare QRC Schedule



- Technology Maturation activities
- Design / development
- Production / fielding
- Operations / sustainment
- Integration / test
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675291: <i>Gorgon Stare</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment 1	1	2010	3	2011
Increment 2	3	2010	2	2014
Increment 3 (Increment 2 w/P3I)	1	2012	1	2015
Retrofits	3	2013	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675292: <i>Hyperspectral Sensors</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675292: <i>Hyperspectral Sensors</i>	6.415	3.894	2.760	-	2.760	2.839	2.870	2.741	2.755	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY12, project 675292, changed names from Airborne Cueing & Exploitation System-Hyperspectral (ACES HY) to Hyperspectral Sensors to better reflect the breadth of the development efforts and operational need for hyperspectral airborne sensors. The project has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact project content.

A. Mission Description and Budget Item Justification

The Hyperspectral Sensors project develops Hyperspectral Imagery (HSI) sensors and capabilities for MQ-1/MQ-9 Unmanned Aircraft System (UAS) and other manned or unmanned aircraft. Within this project, the Airborne Cueing & Exploitation System-Hyperspectral (ACES HY) program helps to fulfill a portion of the sponsoring combatant command and Central Command (CENTCOM) current HSI requirements. The ACES HY program develops sensors with a target platform of MQ-1B Predator Block 15 and develops the necessary training, maintenance and fielding plans to support a working architecture. Activities within this project also include studies and analysis supporting current and future program planning and tech development for advanced HSI sensors and capabilities.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: ACES HY	6.415	3.894	2.760	-	2.760
Description: Develop ACES HY sensor with a targeted platform of MQ-1B Predator Block 15. Provide training and support data to accompany sensors. Tech development for future HSI sensors.					
FY 2010 Accomplishments: Completed development of 3 ACES HY prototype sensors. Began preparation for sensor integration on MQ-1.					
FY 2011 Plans: Integrate 3 prototype ACES HY sensors onboard MQ-1. Prepare for ACES HY initial deployment.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675292: <i>Hyperspectral Sensors</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Support ACES HY initial deployment. Develop processing improvements for 3 prototype ACES HY sensors. Begin hyperspectral tech development for future HSI capabilities.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	6.415	3.894	2.760	-	2.760

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• APAF: <i>PE 0305219F, MQ-1 Predator A UAV</i>	48.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Develop industry partners that procure improved, baseline deployable, supportable HSI sensor systems. The systems should support the joint warfighter and ensure spiral upgrade capability. Utilize the Advanced Technology Support Program process developed by OSD DMEA at McClellan, CA. The contractors should provide a disciplined design process that is the lowest risk solution (cost, schedule, and performance) and ensures logistics support with initial test spares and associated source data to support training and TO development. The MQ-1 and MQ-9 developers will be included for interface control and planning for MQ-1B Predator Block 15 integration prior to fielding for ACES HY and other sensor technology efforts as they mature. ACES HY utilizes a competitively selected, cost plus fixed fee prime contract to Raytheon (McKinney TX) for sensor development and leverages the sole source, cost plus fixed fee General Atomics (San Diego, CA) integration contract for sensor integration.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675292: <i>Hyperspectral Sensors</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Sensor Development	C/CPFF	Raytheon:McKinney, TX	28.792	0.651	Dec 2010	1.118	Dec 2011	-		1.118	Continuing	Continuing	TBD
Sensor Integration	SS/CPFF	General Atomics:San Diego, CA	-	2.501	Jan 2011	0.953	Jan 2012	-		0.953	0.000	3.454	3.918
Subtotal			28.792	3.152		2.071		-		2.071			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

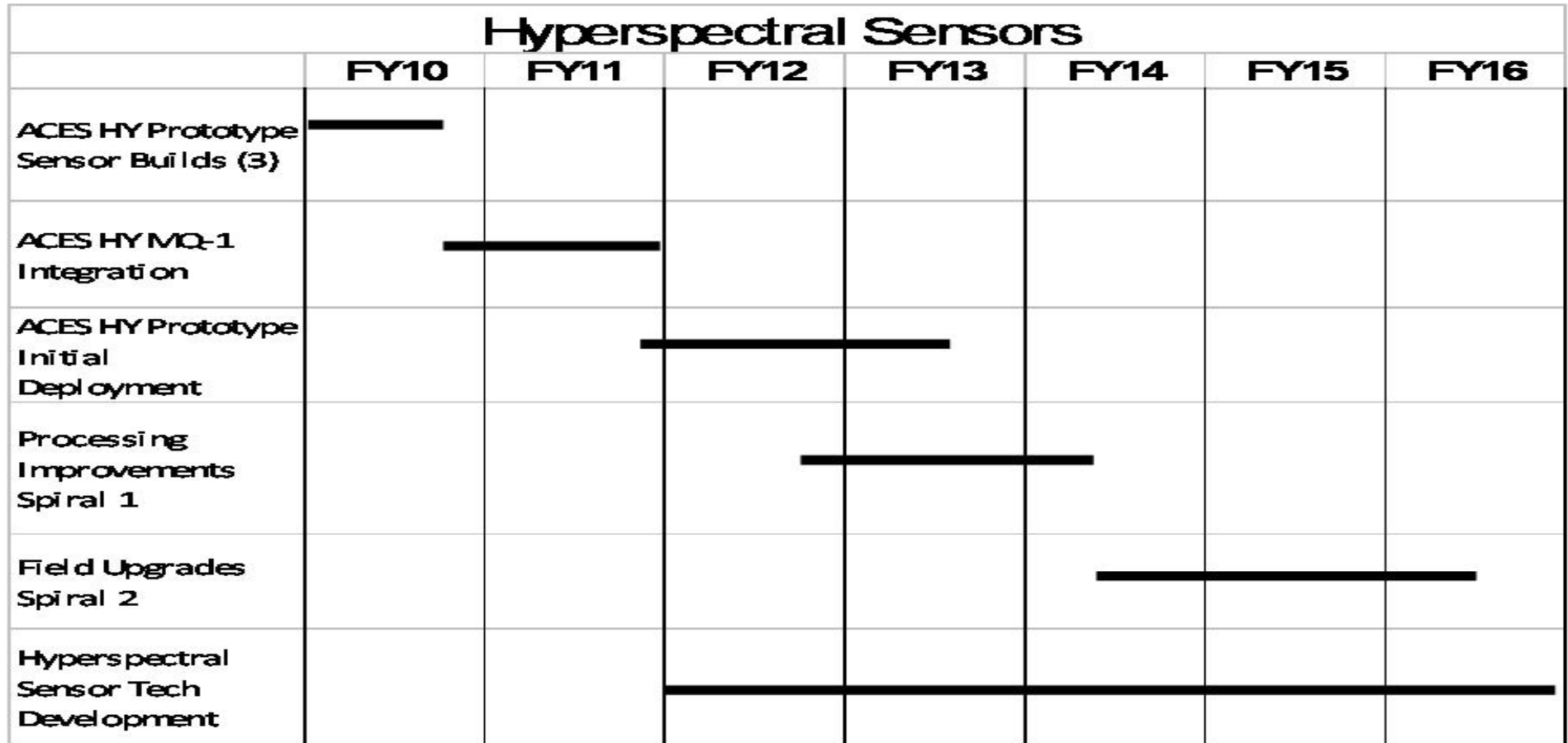
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Management	SS/TBD	Bevilacqua Research Corporation:Huntsville, AL	2.055	0.742	Jan 2011	0.689	Jan 2012	-		0.689	Continuing	Continuing	TBD
Subtotal			2.055	0.742		0.689		-		0.689			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			30.847	3.894		2.760		-		2.760			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675292: <i>Hyperspectral Sensors</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675292: <i>Hyperspectral Sensors</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ACES HY Prototype Sensor Builds (3)	1	2010	4	2010
ACES HY MQ-1 Integration	4	2010	4	2011
ACES HY Prototype Initial Deployment	4	2011	3	2013
Processing Improvements Spiral 1	4	2012	3	2014
Field Upgrades Spiral 2	2	2014	3	2016
Hyperspectral Sensor Tech Development	1	2012	4	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675382: <i>Broad Area Surveillance Sensors</i>	61.655	78.711	18.225	-	18.225	15.570	8.983	17.272	28.321	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY10, project 675382 increased due to a \$22.95M Blue Devil II (SECDEF directed) initiative. Beginning in FY12, the Blue Devil II effort will be transferred to PE 0305205F, project 676019 (High Endurance UAVs, project Blue Devil II) to better align the effort within the proper PE.

In FY12, project 675382 was renamed from Wide Area Airborne Surveillance Program of Record (WAAS PoR) to Broad Area Surveillance Sensors to better reflect the WAAS PoR termination and continued technical development of Broad Area Surveillance Sensors.

In FY12, Blue Devil II efforts are transferred to PE0305205F, Endurance Unmanned Aerial Vehicles, in order to consolidate program content.

The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.

A. Mission Description and Budget Item Justification

The Broad Area Surveillance Sensors project develops capabilities in support of Combatant Commands' requirements for end-to-end persistent surveillance to provide broad area airborne sensor suites, data links, and associated ground support elements for city-sized and similar broad area surveillance capabilities on manned and unmanned aircraft. Funding was initiated in FY08 to meet OSD direction (Nov 07) and COCOM urgent needs addressing service requirements for broad area surveillance capability on manned and unmanned aircraft system platforms.

Program aligned to respond to COCOM's greater need for broad area surveillance in current operations and congressional guidance. The restructure delivers more Quick Reaction Capabilities (QRC) capability in the near term while allowing time for the services to incorporate lessons learned from previously initiated QRC activities into a future program of record. Continued development of critical broad area surveillance technologies will feed existing QRCs supporting various aircraft size, weight, and power configurations; sensor performance attributes; Processing, Exploitation, and Dissemination (PED) architectures and operational missions. Pre-program planning activities will continue while incorporating QRC lessons learned into a normalized acquisition program. Funding has been redistributed between project 675291 (GORGON STARE) and project 675382 (Broad Area Surveillance Sensors) to support this program realignment.

Activities also include studies, analysis, and technology development, maturation, and demonstration to support current and future program planning and execution. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Broad Area Surveillance</p> <p>Description: Broad area surveillance sensors technology development, maturation, and capability demonstrations for manned and unmanned aircraft system platforms.</p> <p>FY 2010 Accomplishments: Advanced EO/IR sensor technology maturation. Improved sensor processing algorithms and working to streamline processing, exploitation, and dissemination (PED) tools and architectures.</p> <p>FY 2011 Plans: Develop and mature broad area surveillance technologies including advanced on-board imaging processing, advanced night sensor capabilities, improved data fusion algorithms, and improved PED tools.</p> <p>FY 2012 Base Plans: Continue broad area surveillance sensor processing and data fusion technology development and maturation efforts.</p> <p>FY 2012 OCO Plans:</p>	38.705	78.711	18.225	-	18.225
<p>Title: Blue Devil II</p> <p>Description: Develop Blue Devil II lighter-than-air (LTA) airship and develop, integrate and test payload integration, infrastructure and sensor suite.</p> <p>FY 2010 Accomplishments: Initiated Blue Devil II development of LTA airship, and began development, integration and test of payload infrastructure and sensor suite.</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	22.950	-	-	-	-
Accomplishments/Planned Programs Subtotals	61.655	78.711	18.225	-	18.225

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Acquisition strategy for broad area surveillance tech development efforts maximizes commercial and national development efforts and investment through multiple contracts and contracting methods, including the use of Engineering Change Proposals to modify existing contracts and new contracts that were awarded both competitively or on a sole source basis. A formal program of record, once initiated, will be executed by the Air Force using an incremental acquisition strategy to mitigate risk, find affordable end-to-end architecture solutions and field needed capabilities quickly to satisfy service requirements for broad area surveillance sensors on manned and unmanned aircraft platforms.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IR Image Resolution (AFRL-SAFEGUARD)	C/CPFF	Lockheed Martin:Orlando, FL	6.198	14.871	Jun 2011	3.696	Jun 2012	-		3.696	Continuing	Continuing	TBD
Integration (AFRL-SAFEGUARD)	C/CPFF	Northrop Grumman:Baltimore, MD	5.927	14.800	Jun 2011	2.107	Jan 2012	-		2.107	Continuing	Continuing	TBD
Data Links/Fusion (AFRL-SAFEGUARD)	C/CPFF	L-3 Comm:Salt Lake City, UT	5.436	7.600	May 2011	1.200	Jan 2012	-		1.200	Continuing	Continuing	TBD
PED Forward (AFRL-SAFEGUARD)	C/CPFF	BAE:Arlington, VA	2.610	6.802	May 2011	0.800	Jan 2012	-		0.800	Continuing	Continuing	TBD
IR Image Resolution (Office of Naval Research)	C/CPFF	Cincinnati Electronics:Mason, OH	2.950	5.760	Jul 2011	1.200	Jan 2012	-		1.200	Continuing	Continuing	TBD
EO Image Resolution (Office of Naval Research)	C/CPFF	Logos Technology:Arlington, VA	2.815	6.370	Jul 2011	1.000	Jan 2012	-		1.000	Continuing	Continuing	TBD
PED Forward (Office of Naval Research)	C/CPFF	Sarnoff Corporation:Princeton, NJ	1.650	4.780	Jul 2011	0.730	Jan 2012	-		0.730	Continuing	Continuing	TBD
Blue Devil II Payload Development	C/CPFF	MAV-6:Vicksburg, MS	20.950	-		-		-		-	0.000	20.950	0.000
Subtotal			48.536	60.983		10.733		-		10.733			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GFE Hardware	RO	USAF:,	1.384	2.978	May 2011	-		-		-	0.000	4.362	0.000
ARGUS Demo- Data Links	C/CPFF	L-3 Comm:Salt Lake City, UT	0.729	0.900	May 2011	-		-		-	0.000	1.629	0.000
ARGUS Demo- Platform	C/CPFF	Northrop Grumman:Baltimore, MD	0.624	2.500	May 2011	1.000	May 2012	-		1.000	0.000	4.124	0.000
Test Support	Various	Other Govt Agencies:,	0.500	0.850	Mar 2011	0.267	Feb 2012	-		0.267	Continuing	Continuing	TBD

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>
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Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			3.237	7.228		1.267		-		1.267			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
ASC/WINPD Program Management Services	Various	Govt/Contractors:,	4.917	6.800	Mar 2011	3.800	Nov 2011	-		3.800	Continuing	Continuing	TBD
AFRL	Various	Govt/Contractors:,	2.580	3.100	Mar 2011	1.625	Nov 2011	-		1.625	Continuing	Continuing	TBD
Office of Naval Research (ONR)	RO	ONR:,	0.385	0.600	Apr 2011	0.800	Apr 2012	-		0.800	Continuing	Continuing	TBD
Blue Devil II Program Management Services	Various	Govt/Contractors:,	2.000	-		-		-		-	0.000	2.000	0.000
Subtotal			9.882	10.500		6.225		-		6.225			

	Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
		Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Project Cost Totals		61.655		78.711		18.225		18.225			

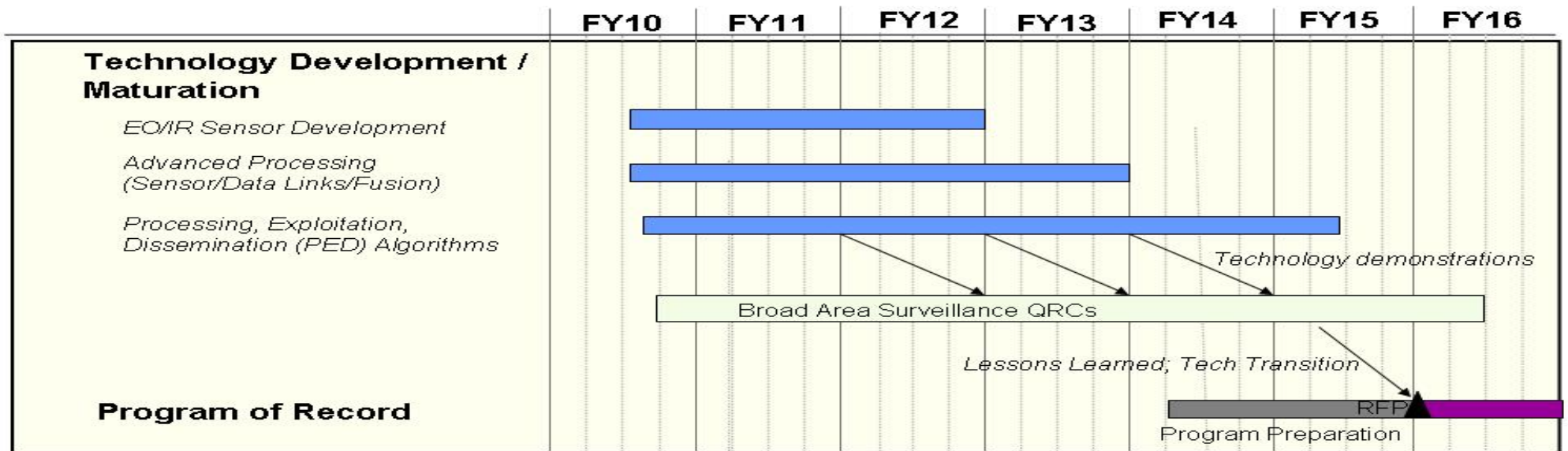
Remarks

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305206F: Airborne Reconnaissance
 Systems

PROJECT
 675382: Broad Area Surveillance Sensors

Broad Area Surveillance Sensors



Technology Maturation activities
 Production / fielding

Design / development
 Operations / sustainment

Integration / test
 Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305206F: <i>Airborne Reconnaissance Systems</i>	PROJECT 675382: <i>Broad Area Surveillance Sensors</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
EO/IR Sensor Development	3	2010	4	2012
Advanced Processing (Sensor/Data Links/Fusion)	3	2010	4	2013
Processing, Exploitation, Dissemination (PED) Algorithms	3	2010	2	2015
Program of Record - Program Preparation	2	2014	4	2015

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	18.884	15.337	13.049	-	13.049	13.291	13.491	13.685	13.926	Continuing	Continuing
674754: COBRA BALL	18.884	15.337	13.049	-	13.049	13.291	13.491	13.685	13.926	Continuing	Continuing

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 programs and their specialized 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 diminishing manufacturing sources (DMS)/vanishing vendor items (VVI) 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 (645 AESG, a.k.a. BIG SAFARI Program Office), Aeronautical Systems Center, Air Force Materiel Command, Wright Patterson AFB, OH. 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 engineering planned for FY12 include support for two distinct RC-135V/W RIVET JOINT configurations [Baselines 10 & 11], two distinct RC-135U COMBAT SENT configurations [Baselines 4 & 5] and two distinct RC-135S COBRA BALL configurations [Baselines 4 & 5]. 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. Obsolescence and DMS/VVI are addressed with each baseline upgrade as well as annually as part of the sustainment responsibilities. Activities also include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational Systems Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production fielding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	14.846	15.337	13.092	-	13.092
Current President's Budget	18.884	15.337	13.049	-	13.049
Total Adjustments	4.038	-	-0.043	-	-0.043
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	4.100	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.062	-	-0.043	-	-0.043

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>
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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 674754: *COBRA BALL*

Congressional Add: *Communications Systems Development*

Congressional Add Subtotals for Project: 674754

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	1.938	-
	1.938	-
	1.938	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>	PROJECT 674754: <i>COBRA BALL</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674754: <i>COBRA BALL</i>	18.884	15.337	13.049	-	13.049	13.291	13.491	13.685	13.926	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 programs and their specialized 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 diminishing manufacturing sources (DMS)/vanishing vendor items (VVI) 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 (645 AESG, a.k.a. BIG SAFARI Program Office), Aeronautical Systems Center, Air Force Materiel Command, Wright Patterson AFB, OH. 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 engineering planned for FY12 include support for two distinct RC-135V/W RIVET JOINT configurations [Baselines 10 & 11], two distinct RC-135U COMBAT SENT configurations [Baselines 4 & 5] and two distinct RC-135S COBRA BALL configurations [Baselines 4 & 5]. 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. Obsolescence and DMS/VVI are addressed with each baseline upgrade as well as annually as part of the sustainment responsibilities. Activities also include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational Systems Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production fielding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Baseline Configuration Development	12.846	15.337	13.049	-	13.049
Description: Non-recurring engineering (NRE) for Baseline system developments and enhancements to improve mission capabilities					
FY 2010 Accomplishments: Supported design studies, engineering analysis, NRE and other efforts associated with the development and integration of electronic signals collection/processing (CORVUS) and suite of core communications exploitation applications (Digital Multi-thread Collection Architecture or DMCA), and those avionics and communication					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>	PROJECT 674754: <i>COBRA BALL</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
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subsystems requiring DMS/VVI mitigations as a result of MOD/PDM efforts for the following RC-135 variants: RIVET JOINT Baseline 10, COBRA BALL and COMBAT SENT Baseline 4 configurations.

FY 2011 Plans:
Continue to support design studies, engineering analysis, NRE and other efforts associated with the integration and modification of the RC-135 programs (RJ BL-10, CS BL-4, and CB BL-4) and their specialized mission systems for the collection of both air and ground signals.

FY 2012 Base Plans:
Will support design studies, engineering analysis, NRE and other efforts associated with the integration and modification of the RC-135 programs (RJ BL-11, CS BL-5, and CB BL-5) and their specialized mission systems for the collection of both air and ground signals

FY 2012 OCO Plans:

<p>Title: Collection Systems Development</p> <p>Description: Liquid cooling NRE and CORVUS development</p> <p>FY 2010 Accomplishments: Initiated the non-recurring engineering for a liquid cooling system on the RC-135S COBRA BALL mission system and development of the CORVUS digital sensor analysis system initially slated for the RC-135V/W RIVET JOINT mission system and will eventually migrate to the other two RC-135 variants.</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	4.100	-	-	-	-
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Accomplishments/Planned Programs Subtotals	16.946	15.337	13.049	-	13.049
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	FY 2010	FY 2011			
Congressional Add: Communications Systems Development	1.938	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>	PROJECT 674754: <i>COBRA BALL</i>
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	FY 2010	FY 2011
FY 2010 Accomplishments: Initiate the development of a Service Oriented Architecture which allows for data sharing between AF DCGS and the RC-135 platforms		
FY 2011 Plans:		
Congressional Adds Subtotals	1.938	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• APAF: <i>PE 0305207F, Manned Reconnaissance Systems</i>	161.649	149.582	202.080	0.000	202.080	210.722	218.112	221.462	225.694	Continuing	Continuing
• OPAF: <i>PE 0305207F, Manned Reconnaissance Systems</i>	23.062	23.296	23.341	0.000	23.341	24.176	24.528	24.929	25.376	Continuing	Continuing
• O&M: <i>PE 0305207F, Manned Reconnaissance Systems</i>	477.261	269.198	358.037	114.767	472.804	329.753	335.764	350.514	357.365	Continuing	Continuing

D. Acquisition Strategy

The RC-135 RIVET JOINT, COBRA BALL, and COMBAT SENT aircraft are maintained and baseline / incremental upgrades and quick reaction capabilities (QRC) developments are acquired through the 645th Aeronautical Systems Group (BIG SAFARI Program Office) in accordance with the BIG SAFARI Program Management Directive (PMD), and the BIG SAFARI Class Justification and Approval (J&A) document for acquisition of supplies and services using other than full and open competition criteria. The supplies and services procured by 645 AESG under their J&A to satisfy National Security (FAR 6.302-6) requirements are supported by the BIG SAFARI Life Cycle Management Plan (LCMP) across the full spectrum of system life cycle management from developmental engineering to system retirement ("cradle to grave" support). Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>	PROJECT 674754: <i>COBRA BALL</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
L-3 Communications	SS/Various	L-3 Com:Greenville, TX	18.884	15.337	Dec 2010	13.049	Dec 2011	-		13.049	Continuing	Continuing	TBD	
Subtotal			18.884	15.337		13.049		-		13.049				

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. Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal			-	-		-		-		-	0.000	0.000	0.000	

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal			-	-		-		-		-	0.000	0.000	0.000	

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Subtotal			-	-		-		-		-	0.000	0.000	0.000	

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			18.884	15.337		13.049		-		13.049				

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

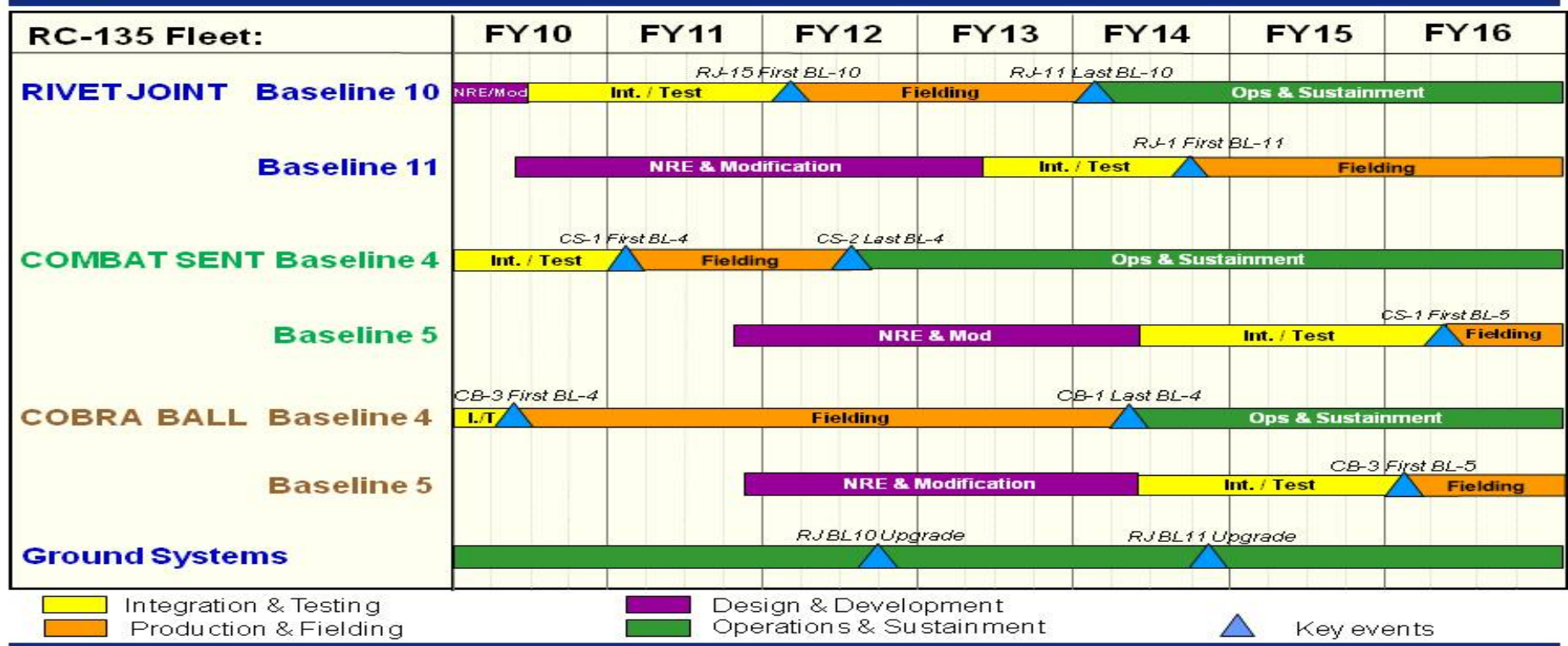
APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305207F: Manned Reconnaissance
 System

PROJECT
 674754: COBRA BALL



Manned Reconnaissance Systems (RC-135) Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305207F: <i>Manned Reconnaissance System</i>	PROJECT 674754: <i>COBRA BALL</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development, integration and test of RIVET JOINT Baseline 10	1	2010	1	2012
Development, integration and test of RIVET JOINT Baseline 11	2	2010	3	2014
Integration and test of COMBAT SENT Baseline 4	1	2010	1	2011
Development, integration and test of COMBAT SENT Baseline 5	4	2011	2	2016
Integration and test of COBRA BALL Baseline 4	1	2010	2	2010
Development, integration and test of COBRA BALL Baseline 5	4	2011	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	82.059	93.398	90.724	-	90.724	88.457	61.748	56.051	55.892	Continuing	Continuing
674826: <i>Common Imagery Ground / Surface Systems</i>	69.912	82.509	57.215	-	57.215	47.786	41.399	42.010	43.190	Continuing	Continuing
675265: <i>Common Imagery Processor (CIP)</i>	12.147	10.889	10.709	-	10.709	10.427	10.664	10.851	11.252	Continuing	Continuing
676025: <i>Data Compression</i>	-	-	22.800	-	22.800	30.244	9.685	3.190	1.450	Continuing	Continuing

Note

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.513M in FY12.

In FY 2012, Project Number 676025, Data Compression, includes new start efforts.

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 Airborne SIGINT Architecture (JASA) 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 by DoD 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. 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 multiple core locations, CONUS and OCONUS based. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support Joint Task Force commanders and Air Operations Centers (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors. AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with the integration of software tools and data interfaces to process and exploit data from new/upgraded sensors, by the demonstration and integration of enhanced fusion/exploitation aid technologies and by the transformation of AF DCGS to a net centric, service oriented architecture construct. 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

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305208F: <i>Distributed Common Ground Systems</i>
BA 7: <i>Operational Systems Development</i>	

information with the AOC's combat objectives to improve the TST process and reduce timelines. Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This modernization effort, implemented on the fielded baseline, will deliver a net centric DCGS capability for the Air Force. AF DCGS will modernize through sustainment by integrating the necessary technologies and tools to provide increased capabilities and meet emerging and urgent user operational needs. These efforts will also integrate commercial and government fact-of-life version upgrades to provide current technologies and achieve necessary application and services. The next series of upgrades will meet the operational need to integrate new and/or improved sensor capabilities and enhance interoperability by migrating to a service oriented architecture and improving data sharing ability in compliance with DoD direction. AF DCGS will continue to modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements. The program will also provide a capability to efficiently compress and decompress airborne ISR sensor data and transmit real/near-real time over existing data/communications links to tactical users. The DCGS Imagery (DCGS-I) Testbed is an integration and test environment, which is used by the Services and Agency program offices to conduct integration of DCGS components and 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 current with DCGS standards and architecture. AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	82.765	93.398	72.137	-	72.137
Current President's Budget	82.059	93.398	90.724	-	90.724
Total Adjustments	-0.706	-	18.587	-	18.587
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.706	-	18.587	-	18.587

Change Summary Explanation

In FY12, funding increased for further integration of sensors/platforms into AF DCGS.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>				PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674826: <i>Common Imagery Ground / Surface Systems</i>	69.912	82.509	57.215	-	57.215	47.786	41.399	42.010	43.190	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 Airborne SIGINT Architecture (JASA) 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 by DoD 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. 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 multiple core locations: CONUS and OCONUS based. Several other AF DCGS systems are distributed among Air Force operational units at Numbered Air Force and Air National Guard locations, to support Joint Task Force commanders and Air Operations Centers (AOC). The CONUS based systems are capable of reach back operations via data link relay and satellite relay connectivity to forward operating sensors. AF DCGS provides critical data and significant support for Time Sensitive Targeting (TST) operations. This support will be enhanced with the integration of software tools and data interfaces to process and exploit data from new/upgraded sensors, by the demonstration and integration of enhanced fusion/exploitation aid technologies, and by the transformation of AF DCGS to a net centric, service oriented architecture construct. 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 TST process and reduce timelines. Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary system to a net centric service oriented architecture. This modernization effort, implemented on the fielded baseline, will deliver a net centric DCGS capability for the Air Force. AF DCGS will modernize through sustainment by integrating the necessary technologies and tools to provide increased capabilities and meet emerging and urgent user operational needs. These efforts will also integrate commercial and government fact-of-life version upgrades to provide current technologies and achieve necessary application and services. The next series of upgrades will meet the operational need to integrate new and/or improved sensor capabilities and enhance interoperability by migrating to a service oriented architecture and improving data sharing ability in compliance with DoD direction. AF DCGS will continue to modernize its network management and interface capabilities by upgrading and migrating its network to a standardized interface configuration which is easy to expand and adapt to new technologies while growing capacity requirements. Efforts will also focus on network management systems and the ability to manage critical bandwidths to meet operational surges and distributed ops requirements. The DCGS-I Testbed is an integration and test environment, which is used by the Services and Agency program offices to conduct integration of DCGS components and test interoperability interfaces with new sensors, applications, and net centric

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>
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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 current with DCGS standards and architecture. AF DCGS participates in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Capabilities Upgrade</p> <p>Description: Integrate new/improved sensors and increase capacity and data availability.</p> <p>FY 2010 Accomplishments: Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct.</p> <p>FY 2011 Plans: Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct.</p> <p>FY 2012 Base Plans: Continue development efforts to meet operational need to integrate new and improved sensors, increase capacity and data availability, and comply with DoD direction to improve interoperability through migration to a service oriented architecture construct.</p> <p>FY 2012 OCO Plans:</p>	49.968	63.351	37.912	-	37.912
<p>Title: DCGS Integration Backbone (DIB)</p> <p>Description: Upgrade, improve and manage the DCGS Integration Backbone (DIB).</p> <p>FY 2010 Accomplishments: Upgrade, improve and manage the DIB.</p> <p>FY 2011 Plans: Upgrade, improve and manage the DIB.</p> <p>FY 2012 Base Plans:</p>	7.800	7.100	7.170	-	7.170

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Upgrade, improve and manage the DIB. FY 2012 OCO Plans:					
Title: Network Communications Description: Continue upgrade of AF DCGS communications network. FY 2010 Accomplishments: Continue upgrade of AF DCGS communications network. FY 2011 Plans: Continue upgrade of AF DCGS communications network. FY 2012 Base Plans: Continue upgrade of AF DCGS communications network. FY 2012 OCO Plans:	2.400	2.500	2.500	-	2.500
Title: DCGS Enterprise Description: Continue to evolve DCGS architectures and standards and manage DCGS IPT effort for USD(I) FY 2010 Accomplishments: Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) FY 2011 Plans: Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) FY 2012 Base Plans: Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS IPT effort for USD(I) FY 2012 OCO Plans:	2.888	2.644	2.552	-	2.552
Title: DCGS-I Testbed Description: Continue DCGS-I Testbed development and upgrades.	3.956	4.014	4.111	-	4.111

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><i>FY 2010 Accomplishments:</i> Continue DCGS-I Testbed development and upgrades.</p> <p><i>FY 2011 Plans:</i> Continue DCGS-I Testbed development and upgrades.</p> <p><i>FY 2012 Base Plans:</i> Continue DCGS-I Testbed development and upgrades.</p> <p><i>FY 2012 OCO Plans:</i></p>					
<p><i>Title:</i> Commercial Imagery</p> <p><i>Description:</i> Continue to integrate commercial imagery capability into AF DCGS.</p> <p><i>FY 2010 Accomplishments:</i> Continue commercial imagery integration.</p> <p><i>FY 2011 Plans:</i> Continue commercial imagery integration.</p> <p><i>FY 2012 Base Plans:</i> Continue commercial imagery integration.</p> <p><i>FY 2012 OCO Plans:</i></p>	2.900	2.900	2.970	-	2.970
Accomplishments/Planned Programs Subtotals	69.912	82.509	57.215	-	57.215

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0305208F: <i>Distributed Common Ground System OPAF</i>	376.862	271.015	212.146	0.000	212.146	167.265	161.562	206.480	162.937	Continuing	Continuing
	630.870	357.067	493.029	0.000	493.029	407.475	450.231	455.029	464.489	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0305208F (1): <i>Distributed Common Ground System O&M</i>											

D. Acquisition Strategy

The Air Force has changed the AF DCGS acquisition strategy from a single block upgrade to incremental modifications during sustainment integrating mature advanced technologies and multi-intelligence exploitation tools while meeting emerging operational requirements and integrating new/upgraded sensors.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Modernization/modification efforts and integration of new sensors and operational capabilities	C/Various	Various:Various,	49.968	63.351	Oct 2010	37.912	Oct 2011	-		37.912	Continuing	Continuing	TBD
Network Communications Upgrade	C/Various	Various:Various,	2.400	2.500	May 2011	2.500	May 2012	-		2.500	Continuing	Continuing	TBD
DCGS IPT for USD(I)	C/Various	Science Applications Int'l:Mclean, VA	2.888	2.644	Mar 2011	2.552	Mar 2012	-		2.552	Continuing	Continuing	TBD
Testbed Modernization and Licenses	C/Various	Various:Various,	3.956	4.014	Mar 2011	4.111	Mar 2012	-		4.111	Continuing	Continuing	TBD
DIB Management, Migration & Interoperability	C/Various	Various:Various,	7.800	7.100	Feb 2011	7.170	Feb 2012	-		7.170	Continuing	Continuing	TBD
Commercial Satellite Imagery	C/Various	AR Gov't Systems Group:Thousand Oaks, CA	2.900	2.900	Jan 2011	2.970	Jan 2012	-		2.970	0.000	8.770	0.000
Subtotal			69.912	82.509		57.215		-		57.215			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>
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Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000
Project Cost Totals			69.912	82.509		57.215		-		57.215			


Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>



AF DCGS Program Element Schedule

Program	FY10				FY11				FY12				FY13				FY14				FY15				FY16			
	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
AF DCGS Modernization	Emerging Sensors																											
	Combat Support – 1067's																											
Network Comm.	Network Comms: mods fielded to support operational upgrades																											
DCGS Integration Backbone (DIB)	<div style="text-align: center;">  Continued DIB Modernization </div>																											
DCGS-I Testbed	[Active in all quarters from FY10 to FY16]																											
Commercial Satl Imagery	[Active in all quarters from FY10 to FY16]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 674826: <i>Common Imagery Ground / Surface Systems</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AF DCGS Modernization: Emerging sensor integration and Combat Support modifications	1	2010	4	2016
Network Communications upgrades	1	2010	4	2016
DIB Version Release (3.0)	4	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 675265: <i>Common Imagery Processor (CIP)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675265: <i>Common Imagery Processor (CIP)</i>	12.147	10.889	10.709	-	10.709	10.427	10.664	10.851	11.252	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Common Imagery Processor (CIP) is a major interoperability initiative to develop a common sensor processing element within DCGS-Imagery 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 are underway to augment the CIP baseline to process data from upgraded/new sensors.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Common Imagery Processor	12.147	10.889	10.709	-	10.709
Description: Continue to develop the CIP to keep pace with growing sensor baseline. (Baseline includes Global Hawk, F/A-18, and U-2 sensors).					
FY 2010 Accomplishments: Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools.					
FY 2011 Plans: Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools.					
FY 2012 Base Plans: Continue to evolve the CIP and its associated architecture to keep pace with growing sensor baseline to include new and upgraded sensors. Continue to investigate and implement advanced processing tools.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	12.147	10.889	10.709	-	10.709

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 675265: <i>Common Imagery Processor (CIP)</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

For the CIP, the Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 675265: <i>Common Imagery Processor (CIP)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
CIP Software Development	C/CPFF	Northrop Grumman: Baltimore, MD	11.647	10.389	Oct 2010	10.209	Oct 2011	-		10.209	Continuing	Continuing	TBD
Subtotal			11.647	10.389		10.209		-		10.209			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ISR&SOF Directorate	C/Various	ASC/WI: Wright-Patterson AFB, OH	0.500	0.500	Dec 2010	0.500	Dec 2011	-		0.500	Continuing	Continuing	TBD
Subtotal			0.500	0.500		0.500		-		0.500			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			12.147	10.889		10.709		-		10.709			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305208F: *Distributed Common Ground Systems*

PROJECT
 675265: *Common Imagery Processor (CIP)*



CIP Program Schedule

	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	
CIP Software Baseline Release	▲ 8.0	▲ 8.1	▲ 9.0	▲ 9.1	▲ FY12 Rel 1	▲ FY12 Rel 2	▲	▲	▲
Sensors	Evolutionary Development								
Processors	Evolutionary Development								
Standards	Evolutionary Development								
Architecture	Evolutionary Development								

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 675265: <i>Common Imagery Processor (CIP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CIP 8.0 Software Release	2	2010	2	2010
CIP 8.1 Software Release	4	2010	4	2010
CIP 9.0 Software Release	1	2011	1	2011
CIP 9.1 Software Release	3	2011	3	2011
CIP Software Release 1 FY12	1	2012	1	2012
CIP Software Release 2 FY12	3	2012	3	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 676025: <i>Data Compression</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676025: <i>Data Compression</i>	-	-	22.800	-	22.800	30.244	9.685	3.190	1.450	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This initiative will provide the warfighter a capability to efficiently compress and decompress airborne ISR sensor data and transmit real/near-real time over existing data/communications links to tactical users. The program will develop and test model-based compression algorithms and build sensor specific circuit boards for on-board compression of ISR sensor data. Correspondingly, the program develops compression/decompression capabilities for Remotely Piloted Aircraft (RPA) ground stations and DCGS.

Outputs will meet standard certification for use within the DoD Imagery Intelligence (IMINT)/Measurement and Signatures (MASINT) architecture.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Data Compression	-	-	22.800	-	22.800
Description: Develop data compression/decompression capabilities for Global Hawk Complex Synthetic Aperture Radar (SAR) data to facilitate real/near-real communications to a ground station. Investigate application of model-based compression to other DoD IMINT/MASINT sensor data (i.e., detected SAR, GMTI, Spectral, EO/IR, LIDAR, Video) and ground architecture.					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: Develop, test and implement new data compression techniques to enable new and emerging unencrypted/uncompressed airborne ISR platforms/sensors to off-load airborne data through band-width limited commercial SATCOM or Wideband Global Satellite (WGS).					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	-	22.800	-	22.800

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 676025: <i>Data Compression</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing Continuing

D. Acquisition Strategy

The Data Compression acquisition approach will be to design and develop compression technology hardware and software components, interfaces and standards for various ISR platforms and ground stations utilizing existing contracts along with full and open competition where appropriate.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 676025: <i>Data Compression</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Not specified.	TBD	TBD:TBD,	-	-		21.300	Feb 2012	-		21.300	Continuing	Continuing	TBD
Subtotal			-	-		21.300		-		21.300			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Not specified.	TBD	TBD:TBD,	-	-		1.500	Nov 2011	-		1.500	Continuing	Continuing	TBD
Subtotal			-	-		1.500		-		1.500			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		22.800		-		22.800			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0305208F: *Distributed Common Ground Systems*

PROJECT

676025: *Data Compression*



Data Compression Program Schedule

FY11	FY12	FY13	FY14	FY15	FY16	FY17
	Compression/Module Development					
			Testing/Eval			
				Standard Compliance		

PB12 R-Docs

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305208F: <i>Distributed Common Ground Systems</i>	PROJECT 676025: <i>Data Compression</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Compression/Module Development	1	2012	4	2015
Test and Evaluation	1	2014	2	2016
Standard Compliance Implementation	1	2015	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/FIELDING</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	23.661	28.913	14.112	-	14.112	9.105	6.752	2.866	2.892	Continuing	Continuing
675143: <i>Predator</i>	23.661	28.913	14.112	-	14.112	9.105	6.752	2.866	2.892	Continuing	Continuing

Note

FY 2010 funding totals include \$1.4M appropriated for Overseas Contingency Operations.

Prior Years funding estimate is \$267.8M. The To Complete funding estimate is to be determined.

Totals include funding for PRCP Program Number 271, "MQ-1 Predator".

The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.086M in FY12.

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. This funding supports development and enhancements to the Predator weapon system to include: aircraft, Ground Control Stations (GCS), sensors, communication equipment, training systems and support elements. 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 aircraft vehicle, UAV) designed to operate over-the-horizon for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack capability to aggressively prosecute Time Sensitive Targets (TSTs). The aircraft is configured to carry Hellfire laser-guided missiles. The MQ-1 operates 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 full motion video (FMV) imagery throughout the operational theater. The Department's plan is to transition to the Common Sensor Payload (CSP) EO/IR sensor for commonality with the Army Extended Range/Multi-Purpose (ERMP) MQ-1C Gray Eagle. Predator will develop and incorporate encryption for its data links.

Major changes will be classified as distinct blocks or Mission Design Series (MDS) updates. The overarching MQ-1 modernization activity is known as the Critical Capabilities Integration Program (CCIP). The first CCIP increment is Block 25 which includes the integration development of the Primary Predator Data Link, and Differential GPS. Integration development for additional features (Hellfire R Software, Digital Video, VORTEX FMV encrypted data link, and ACES HY hyperspectral sensor) will be performed also, but are listed separately.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305219F: <i>PREDATOR DEVELOPMENT/FIELDING</i>
BA 7: <i>Operational Systems Development</i>	

Planned activities also include studies and analysis to support both current program planning and execution and future program planning. The program will take steps to integrate a high-definition (HD) turret and transmit HD video.

The GCS, common with the MQ-9 Reaper, 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 control; 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 a common operational picture; and provide support functions. Additionally, GCS 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 is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	23.661	28.913	14.841	-	14.841
Current President's Budget	23.661	28.913	14.112	-	14.112
Total Adjustments	-	-	-0.729	-	-0.729
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.729	-	-0.729

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 675143: *Predator*

 Congressional Add: *Sense & Avoid (FY10 Cong. Add)*

 Congressional Add: *Predator C (FY10 Cong. Add)*

Congressional Add Subtotals for Project: 675143

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	3.173	-
	1.300	-
	4.473	-
	4.473	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/FIELDING</i>
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Change Summary Explanation

Decrease from FY 2011 to FY 2012 is due to completion of Digital Video and IP Migration efforts, and nearing completion of Common Sensor Payload and Critical Capabilities Integration development.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675143: <i>Predator</i>	23.661	28.913	14.112	-	14.112	9.105	6.752	2.866	2.892	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

FY 2010 funding totals include \$1.4M appropriated for Overseas Contingency Operations.

Prior Years funding estimate is \$267.8M. The To Complete funding estimate is to be determined.

Totals include funding for PRCP Program Number 271, "MQ-1 Predator".

The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.086M in FY12.

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. This funding supports development and enhancements to the Predator weapon system to include: aircraft, Ground Control Stations (GCS), sensors, communication equipment, training systems and support elements. 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 aircraft vehicle, UAV) designed to operate over-the-horizon for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack capability to aggressively prosecute Time Sensitive Targets (TSTs). The aircraft is configured to carry Hellfire laser-guided missiles. The MQ-1 operates 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 full motion video (FMV) imagery throughout the operational theater. The Department's plan is to transition to the Common Sensor Payload (CSP) EO/IR sensor for commonality with the Army Extended Range/Multi-Purpose (ERMP) MQ-1C Gray Eagle. Predator will develop and incorporate encryption for its data links.

Major changes will be classified as distinct blocks or Mission Design Series (MDS) updates. The overarching MQ-1 modernization activity is known as the Critical Capabilities Integration Program (CCIP). The first CCIP increment is Block 25 which includes the integration development of the Primary Predator Data Link, and Differential GPS. Integration development for additional features (Hellfire R Software, Digital Video, VORTEX FMV encrypted data link, and ACES HY hyperspectral sensor) will be performed also, but are listed separately.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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Planned activities also include studies and analysis to support both current program planning and execution and future program planning. The program will take steps to integrate a high-definition (HD) turret and transmit HD video.

The GCS, common with the MQ-9 Reaper, 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 control; 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 a common operational picture; and provide support functions. Additionally, GCS 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 is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: OGC and Urgent Services</p> <p>Description: Other Government Costs (OGC) and Urgent Services.</p> <p>FY 2010 Accomplishments: Continued OGC and Urgent Services.</p> <p>FY 2011 Plans: Continue OGC and Urgent Services.</p> <p>FY 2012 Base Plans: Will continue OGC and Urgent Services.</p> <p>FY 2012 OCO Plans:</p>	1.503	0.989	1.894	-	1.894
<p>Title: ST&E</p> <p>Description: Systems Test & Evaluation (ST&E)</p> <p>FY 2010 Accomplishments: Continued ST&E.</p> <p>FY 2011 Plans:</p>	0.752	0.744	0.227	-	0.227

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>		PROJECT 675143: <i>Predator</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue ST&E. FY 2012 Base Plans: Will continue ST&E. FY 2012 OCO Plans:					
Title: GCS Description: Ground Control Station (GCS) FY 2010 Accomplishments: Continued development of the MQ-1 Ground Control Station (GCS) communication architecture retrofit that supports the encrypted delivery requirement for the GCS PPDL Kit and Surface Terminal Subsystem (STSS). Follow-on development funded in MQ-9, PE 0205219F. FY 2011 Plans: FY 2012 Base Plans: FY 2012 OCO Plans:	4.000	-	-	-	-
Title: PPDL Description: Predator Primary Data Link (PPDL) FY 2010 Accomplishments: Completed development of PPDL Secure Communications Upgrade which delivers enhanced capabilities to the Beyond Line-Of-Sight (BLOS) and Line-Of-Sight (LOS) communication systems, encryption, increased throughput data rates, IP networking and interoperable/MIL-STD waveforms capabilities to the MQ-1 Predator aircraft. FY 2011 Plans: FY 2012 Base Plans: FY 2012 OCO Plans:	0.626	-	-	-	-
Title: PMATS	0.251	-	1.977	-	1.977

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
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<p>Description: Predator Mission Aircrew Training System (PMATS)</p> <p>FY 2010 Accomplishments: Continued development to modernize PMATS.</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: Will continue development to modernize PMATS.</p> <p>FY 2012 OCO Plans:</p>					
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<p>Title: VORTEX</p> <p>Description: Video Oriented Transceiver for Exchange of Information (VORTEX)</p> <p>FY 2010 Accomplishments: Continued development of VORTEX Phase 2, a system which enables encrypted line of sight data transmission across multiple frequencies, channels, and waveforms. Incrementally funded and includes aircraft integration and software development.</p> <p>FY 2011 Plans: Continue development of VORTEX Phase 2, a system which enables encrypted line of sight data transmission across multiple frequencies, channels, and waveforms. Incrementally funded and includes aircraft integration and software development.</p> <p>FY 2012 Base Plans: Will complete development of VORTEX Phase 2, a system which enables encrypted line of sight data transmission across multiple frequencies, channels, and waveforms. Incrementally funded and includes aircraft integration and software development.</p> <p>FY 2012 OCO Plans:</p>	2.000	1.494	0.206	-	0.206
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<p>Title: CCI</p> <p>Description: Critical Capabilities Integration (CCI)</p> <p>FY 2010 Accomplishments:</p>	3.856	8.241	5.357	-	5.357
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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continued development of the overarching integration strategy as well as development for the integration of PPDL and dGPS. Incrementally funded. FY 2011 Plans: Continue development of the overarching integration strategy as well as development for the integration of PPDL and dGPS. Incrementally funded. FY 2012 Base Plans: Will continue development of the overarching integration strategy as well as development for the integration of PPDL and dGPS. Incrementally funded. FY 2012 OCO Plans:					
Title: Hellfire Software Description: Hellfire Software FY 2010 Accomplishments: FY 2011 Plans: Initiate development required to integrate the next generation Hellfire missile (AGM-114R) on the Predator platform. Incrementally funded over three years. FY 2012 Base Plans: Will continue development required to integrate the next generation Hellfire missile (AGM-114R) on the Predator platform. Incrementally funded over three years. FY 2012 OCO Plans:	-	2.674	1.981	-	1.981
Title: Digital Video Description: Digital Video FY 2010 Accomplishments: Initiated development of Digital Video. FY 2011 Plans:	1.200	4.043	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Complete development of Digital Video. FY 2012 Base Plans: FY 2012 OCO Plans:					
Title: CSP Description: Common Sensor Payload (CSP) FY 2010 Accomplishments: FY 2011 Plans: Initiate development required to integrate the Common Sensor Payload on the Predator. Incrementally funded. FY 2012 Base Plans: Will continue development required to integrate the Common Sensor Payload on the Predator. Incrementally funded. FY 2012 OCO Plans:	-	7.228	2.470	-	2.470
Title: IP Migration Description: IP Migration FY 2010 Accomplishments: Initiated development of the IP Migration effort to transition the RSO architecture from an ATM standard to an IP standard in both terms of hardware and data service. FY 2011 Plans: Complete development of the IP migration effort will transition the RSO architecture from an ATM standard to an IP standard in both terms of hardware and data service. FY 2012 Base Plans: FY 2012 OCO Plans:	5.000	3.500	-	-	-
Accomplishments/Planned Programs Subtotals	19.188	28.913	14.112	-	14.112

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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	FY 2010	FY 2011
Congressional Add: Sense & Avoid (FY10 Cong. Add) FY 2010 Accomplishments: Completed development of Sense & Avoid. FY 2011 Plans:	3.173	-
Congressional Add: Predator C (FY10 Cong. Add) FY 2010 Accomplishments: Completed flight test and demonstrated the interoperability of the MQ-1/MQ-9 Block 50 Advanced Cockpit open architecture through command and control of a Predator C aircraft. FY 2011 Plans:	1.300	-
Congressional Adds Subtotals	4.473	-

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• APAF: <i>PE 0305219F, Predator Development/Fielding</i>	190.826	245.457	163.436	0.000	163.436	63.942	73.776	44.119	44.529	Continuing	Continuing

D. Acquisition Strategy

The MQ-1 Predator system will be acquired via sole-source acquisition strategies with General Atomics-ASI and Raytheon as the prime contractors.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
GCS	SS/CPFF	General Atomics-ASI:Poway, CA	46.519	-		-		-		-	0.000	46.519	47.919
PPDL	SS/CPFF	General Atomics - ASI:Poway, CA	26.029	-		-		-		-	0.000	26.029	26.029
PMATS	SS/CPIF	L3 Comm:Binghamton, NY	28.028	-		1.977	Dec 2011	-		1.977	12.187	42.192	42.192
VORTEX	SS/CPIF	General Atomics - ASI:Poway, CA	3.700	1.494	May 2011	0.206	Jan 2012	-		0.206	0.000	5.400	5.400
CCI	SS/CPIF	General Atomics - ASI:Poway, CA	6.838	8.241	Jan 2011	5.357	Jan 2012	-		5.357	0.801	21.237	21.237
Hellfire Software	SS/CPIF	General Atomics - ASI:Poway, CA	-	2.674	Aug 2011	1.981	Dec 2011	-		1.981	0.775	5.430	5.430
Digital Video	SS/CPAF	Raytheon & General Atomics ASI:McKinney & Poway, TX	1.200	4.043	Mar 2011	-		-		-	0.000	5.243	5.243
CSP	SS/CPAF	Raytheon & General Atomics - ASI:McKinney & Poway, TX	-	7.228	Dec 2010	2.470	Dec 2011	-		2.470	7.989	17.687	17.687
Sense & Avoid	MIPR	Sierra Nevada Corp.:Sparks, NV	15.010	-		-		-		-	0.000	15.010	15.010
Predator C	SS/CPFF	General Atomics - ASI:Poway, CA	1.300	-		-		-		-	0.000	1.300	1.300
IP Migration	SS/CPFF	General Atomics - ASI:Poway, CA	5.000	3.500	Jan 2011	-		-		-	0.000	8.500	8.500
Prior Year Completed Projects	TBD	Not specified.:Location not provided.	125.337	-		-		-		-	0.000	125.337	0.000
Subtotal			258.961	27.180		11.991		-		11.991	21.752	319.884	195.947

Remarks
 Digital Video and CSP - These projects will be performed by two vendors: General Atomics ASI and Raytheon. The fields in IDECS will only hold information on one vendor. Therefore, the Performing Activity, City, State and per company cost information is listed here. The values listed below are the break of the FY11 and FY12 budgets for the requirements identified.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Digital Video: General Atomics - ASI, Poway CA FY10 - \$0.834M; FY11 - \$2.811M Raytheon, McKinney TX FY10 - \$0.366M; FY11 - \$1.232M CSP: General Atomics - ASI, Poway CA FY11 - \$1.952M; FY12 - \$0.667M Raytheon, McKinney TX FY11 - \$5.276M; FY12 - \$1.803M Sense & Avoid: This contract is also funded with Global Hawk and other DoD funding.													

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
OGC and Urgent Services	Various	Various:Various,	25.695	0.989	Dec 2010	1.894	Dec 2011	-		1.894	Continuing	Continuing	TBD
Subtotal			25.695	0.989		1.894		-		1.894			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Support	Various	Various:Various,	6.805	0.744	Jan 2011	0.227	Jan 2012	-		0.227	Continuing	Continuing	TBD
Subtotal			6.805	0.744		0.227		-		0.227			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0305219F: PREDATOR DEVELOPMENT/
FIELDING

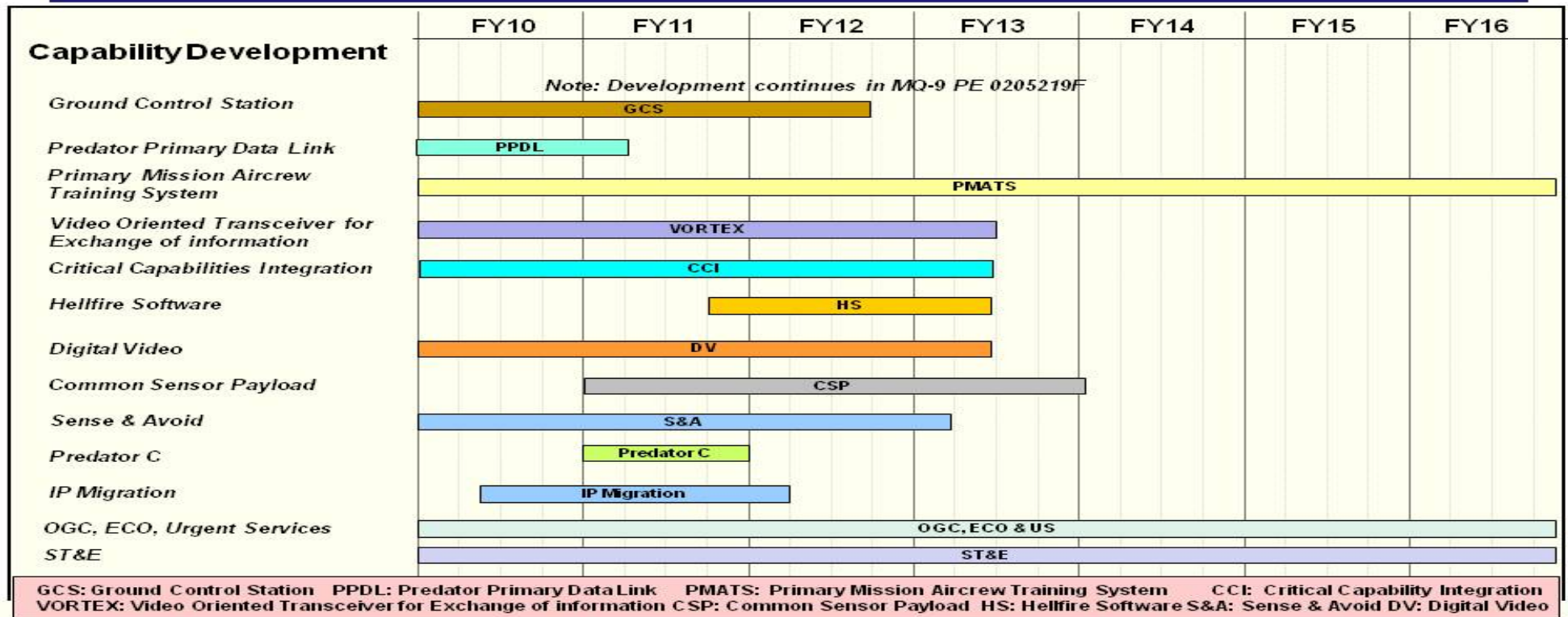
PROJECT

675143: Predator

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MQ-1 Predator Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305219F: <i>PREDATOR DEVELOPMENT/ FIELDING</i>	PROJECT 675143: <i>Predator</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GCS	1	2010	3	2012
PPDL	1	2010	2	2011
PMATS	1	2010	4	2016
VORTEX	1	2010	3	2013
CCI	1	2010	3	2013
Hellfire Software	4	2011	2	2013
Digital Video	1	2010	2	2013
CSP	1	2011	1	2014
Sense & Avoid	1	2010	1	2013
Predator C	1	2011	4	2011
IP Migration	2	2010	2	2012
OGC, ECO, Urgent Services	1	2010	4	2016
ST&E	1	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	309.158	251.318	423.462	-	423.462	365.137	447.920	571.226	505.190	Continuing	Continuing
675144: <i>Global Hawk</i>	237.257	224.091	300.269	-	300.269	264.253	255.547	307.931	307.267	Continuing	Continuing
676001: <i>NATO AGS</i>	-	-	82.906	-	82.906	83.210	180.795	251.423	185.915	Continuing	Continuing
67RTIP: <i>MP-RTIP</i>	71.901	27.227	40.287	-	40.287	17.674	11.578	11.872	12.008	Continuing	Continuing

Note

NOTES:

1. This program element funds three related Air Force efforts sharing the Global Hawk platform in common: Global Hawk program, the Multi-Platform Radar Technology Insertion Program (MP-RTIP), and U.S participation and support of the North Atlantic Treaty Organization (NATO) Alliance Ground Surveillance (AGS) program.
2. The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.
3. In FY 2012, P018, NATO AGS efforts transfer from PE 1001018D8Z, NATO AGS, to PE 0305220F, Project 676001, NATO AGS, in order to transfer control of this effort from OSD to the USAF.

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.
Totals include funding for PRCP Program Number (PNO) 293, MP-RTIP.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.651M in FY12.

GLOBAL HAWK

The Global Hawk Unmanned Aircraft System (UAS) provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding supports the development of Global Hawk aircraft, payloads and ground and support segments. The RQ-4B RPA is designed to employ 3000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. The Block 20 employs upgraded SAR and EO/IR sensors known as the Enhanced ISS (EISS) in imagery intelligence (IMINT) - only configuration. The Block 30 employs the same EISS sensors as the

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
PE 0305220F: GLOBAL HAWK DEVELOPMENT/FIELDING

Block 20. The Block 30 also integrates a wide spectrum signals intelligence (SIGINT) sensor - the Airborne Signals Intelligence Program (ASIP), used simultaneously to create a multi-INT platform. The Block 40 will only integrate the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar sensor. The ground segment 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 operation of the Global Hawk System.

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. Likewise, when feasible and affordable, studies and activities may be initiated to explore the utility of incorporating the Common Mission Control Center UAS Command and Control Standards Initiative (UCI) into Global Hawk.

MP-RTIP

The MP-RTIP was established to develop a family of modular, scalable next generation sensors for multiple platforms to support network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk Block 40 aircraft advanced synthetic aperture radar (SAR) and ground moving target indicator (GMTI) sensor capabilities.

Future MP-RTIP studies/development insertion includes concept exploration, program definition/risk reduction, and sensor technology insertion/development. FY2012 funding continues improvement and implementation of C2ISR capabilities, enabling the joint air and missile defense architecture, joint decisive operations, and the AEF Task Force CONOPS. It also conducts limited risk reduction activities on Battle Management Command and Control (BMC2) Mission Execution and BMC2 Kill Chain, and MP-RTIP Wide Area Surveillance (WAS) Radar Hardware Verification.

NATO AGS

In FY2012, OSD transfers the NATO AGS project to the USAF for management and execution. These funds represent the US share of the cost for NATO to develop an air-to-ground surveillance capability based on the Global Hawk Block 40 aircraft configuration.

The NATO AGS project funds the U.S. support activity and the U.S. share of the cost for NATO to acquire a ground surveillance capability similar to what the NATO owned and operated Airborne Warning and Control System (AWACS) provides for air surveillance.

U.S. participation was ratified by SECDEF signature of the NATO AGS Program Memorandum of Understanding (PMOU) in June 2009. The PMOU went into effect in Sept 2009. As the alliance implements this new core capability for critically short support to airborne surveillance, this program will mitigate requests for US forces to support these demands.

The NATO AGS Program includes an air segment consisting of Global Hawk Block 40, its planning and control capability, and the MP-RTIP radar; a ground segment for data exploitation and distribution; establishment and operation of a management organization; development of operations and support concepts; and definition and establishment of an initial support capability. The program is composed of: design, development and demonstration, as well as production and initial in-service support

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>
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(ISS). Operations and continuing ISS will be funded through a NATO Military Commanders' Capability Package funded within the NATO Security Investment Program (NSIP).

Resources include direct funding of US proportional shares to the NATO AGS Management Agency, which is the NATO acquisition authority, US development activity to support international acquisition of a US system, foreign military sales of US-unique materiel, cooperative program activities, and Advisory and Assistance Services.

Activities also include studies and analysis supporting current and future program planning and project execution.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	317.268	251.318	238.447	-	238.447
Current President's Budget	309.158	251.318	423.462	-	423.462
Total Adjustments	-8.110	-	185.015	-	185.015
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.324	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-6.386	-			
• SBIR/STTR Transfer	-0.400	-			
• Other Adjustments	-	-	185.015	-	185.015

Change Summary Explanation

FY2012 increases in base are for ramp-up or initiation of Ground Station Rearchitecture (GSRA), Block 20/30 Recorder, Communications Rearchitecture, Communications Diminishing Manufacturing Sources, Sense and Avoid integration, RQ-4 Reliability and Maintainability(R&M) and Block 40 RTIP mode development.

Also, for FY2012, funds previously located in PE 1001018D8Z, NATO AGS, are now located in project code 676001 of PE 0305220F.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675144: <i>Global Hawk</i>	237.257	224.091	300.269	-	300.269	264.253	255.547	307.931	307.267	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program has been funded to latest cost estimate, less efficiencies. The reduction for efficiencies are not intended to impact program content.

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number (PNO) 252, Global Hawk.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.199M in FY12.

The Global Hawk Unmanned Aircraft System (UAS) provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that compliments space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

RDT&E funding in this BPAC supports design, development, integration, and testing of items needed to replace Diminishing Materiel Source (DMS) components. This funding is also used to revise Global Hawk capabilities, particularly ground station and communications capabilities, in order to meet required Key Performance Parameters (KPPs) for Blocks 30 and 40. Without this effort, Global Hawk would not meet required KPPs and would enter a condition of deteriorating capability and inability to meet mission needs beginning in FY15.

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. Activities will also include studies and analysis to support both current program planning and execution and future program planning which may also include wideband SATCOM studies and integration. Additionally, funds may be used when feasible and affordable, to initiate studies and activities to explore the utility of incorporating the Common Mission Control Center UAS Command and Control Standards Initiative (UCI) into the Global Hawk system.

Activities also include studies and analysis supporting current and future program planning and project execution.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Global Hawk Development and Demonstration (SDD) Description: Global Hawk Development and Demonstration (SDD)</p> <p>FY 2010 Accomplishments: Continued Aircraft/Comm system modernization. Development and integration of sensors, payload integration, test and training capability, Auto-takeoff and Landing, encrypted data link and technical data. Completed Block 20/30 IOT&E.</p> <p>FY 2011 Plans: Continuing Aircraft/Comm system modernization, BAMS Synergies, and Anti-icing processes and procedures. Continuing testing of software blocks 3.0 and 3.1. Finishing/addressing deficiencies identified in IOT&E report.</p> <p>FY 2012 Base Plans: Will continue Aircraft/Comm system modernization. Will continue development of test and training capability, data compression, net ready program, and encrypted data link. Will continue BAMS Synergy development efforts. Begin Sense and Avoid integration. Further anti-icing development. Will definitize efforts in support of Block 40 IOT&E flight test and sensor integration.</p> <p>FY 2012 OCO Plans:</p>	211.053	179.625	252.933	-	252.933
<p>Title: Ground Segment Description: Ground Segment</p> <p>FY 2010 Accomplishments: Conducted a successful Ground Station Rearchitecture Systems Requirements Review (SRR). Conducted BAMS synergy studies.</p> <p>FY 2011 Plans: Continuing upgrade of current ground station with the beginning of Ground station Rearchitecture Phase 1. Developing an improved RPA C2 capability. Introducing BAMS Synergy study recommendations into Ground Station development, including consideration of UCI/UCS standards.</p> <p>FY 2012 Base Plans:</p>	11.153	30.225	35.800	-	35.800

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Will continue Ground Station Rearchitecture Phase 1 efforts, including development of new mission and sensor collection planning capabilities. FY 2012 OCO Plans:					
Title: Support Segment Description: Support Segment FY 2010 Accomplishments: Developed and integrated logistics support, including conducting IOT&E of electronic technical orders. FY 2011 Plans: Continuing to develop and integrate logistics support. FY 2012 Base Plans: Will continue to develop and integrate logistics support, including development and delivery of technical data. FY 2012 OCO Plans:	2.387	2.831	2.086	-	2.086
Title: Other Government Costs Description: Other Government Costs FY 2010 Accomplishments: Mission Support FY 2011 Plans: Mission Support FY 2012 Base Plans: Mission Support FY 2012 OCO Plans:	12.664	11.410	9.450	-	9.450
Accomplishments/Planned Programs Subtotals	237.257	224.091	300.269	-	300.269

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>

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

Line Item	FY 2010	FY 2011	FY 2012			FY 2013	FY 2014	FY 2015	FY 2016	Cost To	
			Base	OCO	Total					Complete	Total Cost
• PE 0304260F: <i>Airborne SIGINT Enterprise RDT&E</i>	22.596	15.083	3.608	0.000	3.608	0.996	4.066	5.968	7.063	Continuing	Continuing
• PE 0305220F: <i>Global Hawk MILCON</i>	31.300	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0305220F (2): <i>Global Hawk O&M</i>	86.109	178.479	244.798	0.000	244.798	317.963	359.668	343.003	314.241	Continuing	Continuing
• PE 0305220F (3): <i>Global Hawk MILPERS</i>	81.620	101.635	114.765	0.000	114.765	129.905	138.779	142.971	148.393	Continuing	Continuing
• PE 0305220F (4): <i>Global Hawk APAF</i>	800.746	859.244	689.943	0.000	689.943	603.846	551.881	456.596	351.681	Continuing	Continuing

D. Acquisition Strategy

The Global Hawk program uses an evolutionary acquisition strategy to provide the warfighter with a near-term, combat capability with increased, time-phased capability improvements as technology and risk achieve satisfactory levels. Northrop Grumman Corporation is the prime contractor.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Manufacturing & Development	SS/CPAF	Northrop Grumman Integrated Systems:San Diego, CA	1,343.797	192.437	Oct 2010	258.448	Jan 2012	-		258.448	Continuing	Continuing	TBD
Wide Band Comm Studies	Various	TBD:,	-	2.500	Jan 2011	7.500	Jan 2012	-		7.500	0.000	10.000	0.000
Subtotal			1,343.797	194.937		265.948		-		265.948			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Contractor Program Support	SS/CPFF	Northrop Grumman Integrated Systems:San Diego, CA	26.310	-	Jan 2011	6.871	Jan 2012	-		6.871	Continuing	Continuing	TBD
Government Program Support	Various	Various:Various,	30.610	4.108	Dec 2010	3.950	Jan 2012	-		3.950	Continuing	Continuing	TBD
Subtotal			56.920	4.108		10.821		-		10.821			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Flight Test & Evaluation	PO	AFFTC:Edwards, AFB,	75.943	17.744	Nov 2010	18.000	Nov 2011	-		18.000	Continuing	Continuing	TBD
Subtotal			75.943	17.744		18.000		-		18.000			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A&AS	Various	Various:Dayton, OH	50.655	7.302	Oct 2010	5.500	Oct 2011	-		5.500	Continuing	Continuing	TBD
Subtotal			50.655	7.302		5.500		-		5.500			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>			PROJECT 675144: <i>Global Hawk</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	1,527.315	224.091	300.269	-	300.269				

Remarks

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

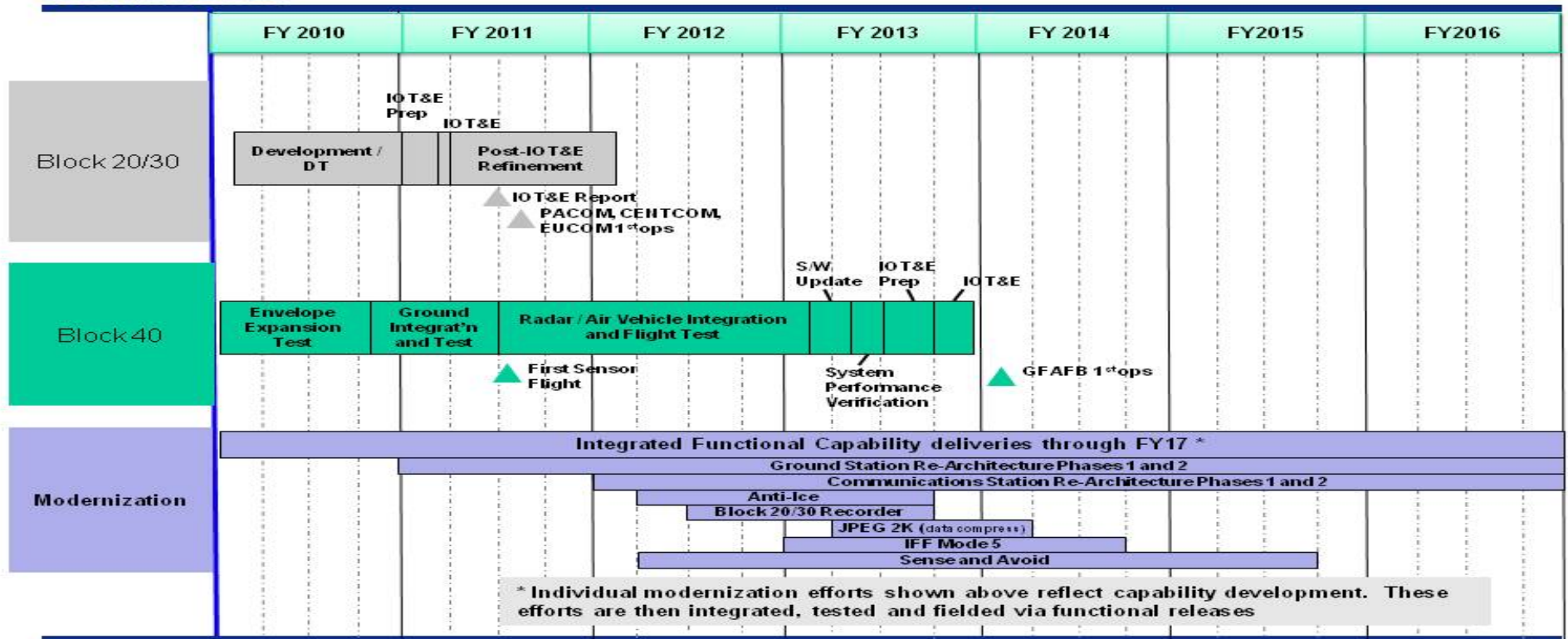
R-1 ITEM NOMENCLATURE
 PE 0305220F: GLOBAL HAWK
 DEVELOPMENT/FIELDING

PROJECT
 675144: Global Hawk



U.S. AIR FORCE

Global Hawk Development and Modernization Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 675144: <i>Global Hawk</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 20/30 DT	1	2010	1	2011
Block 20/30 IOT&E	1	2011	1	2011
Block 20/30 IOT&E Refinement	2	2011	1	2012
IOT&E Report	2	2011	2	2011
Block 30 First Operations	3	2011	3	2011
Block 40 Envelope Expansion Test	1	2010	4	2010
Block 40 Ground Integration and Test	4	2010	2	2011
Block 40 First Sensor Flight	3	2011	3	2011
Block 40 Radar Air Vehicle Integration and Flight Test	3	2011	1	2013
Block 40 System Performance Verification	1	2013	3	2013
Block 40 IOT&E Prep	3	2013	3	2013
Block 40 IOT&E	4	2013	4	2013
GFAFB 1st Ops	1	2014	1	2014
Integrated Functional Capability Deliveries	1	2010	4	2016
Ground Station Rearchitecture Phases 1 and 2	4	2010	4	2016
Communications Station Rearchitecture	1	2012	4	2016
Anti-ice	2	2012	3	2013
Block 20/30 Recorder	3	2012	3	2013
JPEG 2K (data Compression)	2	2013	1	2014
IFF Mode 5	1	2013	3	2014
Sense and Avoid	2	2012	3	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676001: <i>NATO AGS</i>	-	-	82.906	-	82.906	83.210	180.795	251.423	185.915	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

b. In FY 2012, PR 0305220F, BPAC 676001, NATO AGS, efforts transferred from PE 1001018D8Z, NATO AGS, P018, in order to transfer control of this effort from OSD to the USAF. It is intended to transfer these efforts to a new PE in FY13.

A. Mission Description and Budget Item Justification

The Alliance Ground Surveillance (AGS) system will be a NATO-owned and operated airborne ground surveillance capability that provides continuous, wide area surveillance information in all weather conditions for use at the strategic, operational and tactical levels of command. Interoperable with other national assets, AGS will provide NATO decision makers with near real time, continuous information and situational awareness concerning friendly, neutral, and opposing ground forces to support mission planning and execution to include force protection and targeting. The NATO Staff Requirements (NSR), serving as the basis for the AGS acquisition was approved in 1997. After a series of studies, including options for a mixed fleet composed of manned and unmanned platforms, a decision was reached to pursue the acquisition of a UAV-only capability based on an off-the-shelf (OTS) Global Hawk (GH) Block 40 equipped with the U.S. Multi-Platform Radar Technology Insertion Program (MP-RTIP) sensor. The AGS system will include six (6) OTS GH, ground-based aircraft control equipment, and fixed and deployable data exploitation elements.

In September 2009, fifteen nations, including the United States, signed the Program Memorandum of Understanding (PMOU) financially committing each participant to the procurement and delivery to the war fighter of the NATO Commander's number one priority. [note: subsequent to PMOU signature Denmark announced its intention to withdraw from program.]

The Request for Proposal (RFP) was issued to Northrop Grumman International Systems Sector Inc. (NGISSII), Melbourne, the prime contractor in the consortia composed of NG Systems Corp. (USA), EADS (DEU), GDC (CAN), and GAV Selex (ITA). Upon delivery the NATO AGS fleet will operate from its Main Operating Base (MOB) at Sigonella Italy.

This funding is the U.S. cost share for the acquisition of the NATO airborne ground surveillance capability as well as the cost share associated with the initial In-Service Support (ISS).

In-Service Support will be contracted under separate action. It is anticipated that ISS costs will be commonly funded, using the NATO Security Investment Program (NSIP)

Activities also include studies and analysis supporting current and future program planning and project execution.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Design/develop NATO AGS</p> <p>Description: To provide US Government NATO AGS development funding.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: To provide US Government NATO AGS development funding.</p> <p>FY 2012 OCO Plans:</p>	-	-	74.985	-	74.985
<p>Title: Support the NATO AGS Management Agency (NAGSMA)</p> <p>Description: Establish and support a program office within NATO for AGS development and initial fielding. Serve as interface and US program office to the prime contractor for NATO AGS capability.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: United States contribution to NATO for AGS development acquisition and initial fielding.</p> <p>FY 2012 OCO Plans:</p>	-	-	7.921	-	7.921
Accomplishments/Planned Programs Subtotals	-	-	82.906	-	82.906

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The US signed a multi-national Program Memorandum of Understanding (PMOU) committing the US government to NATO-derived cost shares of the AGS prime contract for design, development, demonstration, and initial production of the NATO AGS system. The supporting contract will be fixed price.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NATO AGS PMOU/Prime Contract	Various	Northrop Grumman Corp:Melbourne, FL	-	-		76.710		-		76.710	704.103	780.813	TBD
NATO AGS Mission Security	SS/FFP	Northrop Grumman Corp:Melbourne, FL	-	-		-		-		-	0.000	0.000	0.000
NATO AGS Interoperability	SS/CPAF	US Air Force:Hanscom AFB, MA	-	-		-		-		-	0.000	0.000	0.000
NATO AGS Maritime Modes	SS/CPAF	Northrop Grumman Corp:Melbourne, FL	-	-		-		-		-	0.000	0.000	0.000
Subtotal			-	-		76.710		-		76.710	704.103	780.813	

Remarks
All data prior to FY12 is reported under PE 1001018D8Z, NATO AGS

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NATO AGS Management Support	C/CPFF	TBD,;	-	-		6.196		-		6.196	8.000	14.196	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>
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Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total		Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost				
Subtotal			-	-		6.196		-		6.196	8.000	14.196	0.000	

Remarks
All data prior to FY12 is reported under PE 1001018D8Z, NATO AGS

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-	82.906	-	82.906	712.103	795.009	

Remarks
In FY 2012, P018, NATO AGS, efforts were transferred from PE 1001018D8Z, NATO AGS, to PE 0305220F, project 676001, NATO AGS, in order to transfer control of this effort from OSD to the USAF.

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

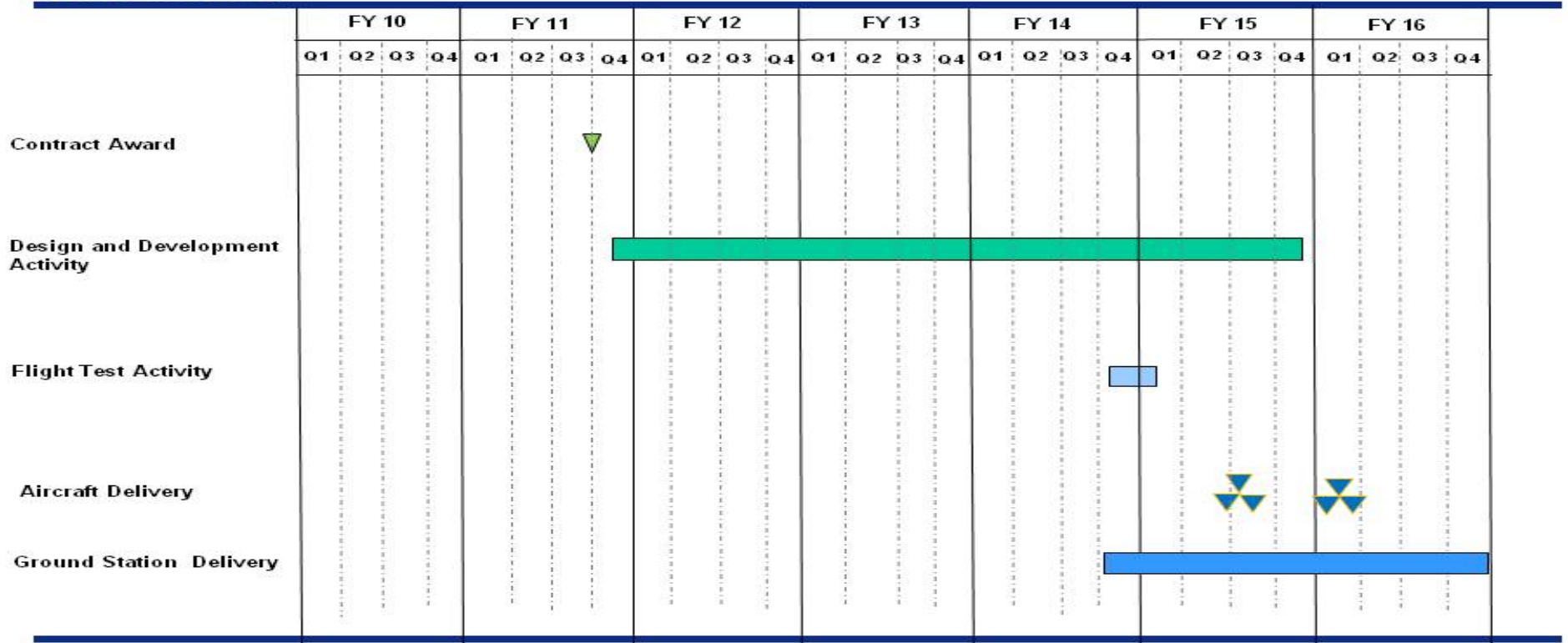
R-1 ITEM NOMENCLATURE
 PE 0305220F: GLOBAL HAWK
 DEVELOPMENT/FIELDING

PROJECT
 676001: NATO AGS



U.S. AIR FORCE

NATO AGS Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 676001: <i>NATO AGS</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contract Award	4	2011	4	2011
Design/Development	4	2011	3	2015
Flight Test	4	2014	1	2015
Aircraft Delivery	3	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67RTIP: <i>MP-RTIP</i>	71.901	27.227	40.287	-	40.287	17.674	11.578	11.872	12.008	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Total include funding for PRCP Program Number (PNO) 293, MP-RTIP.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.452M in FY12.

The Multi Platform-Radar Technology Insertion Program (MP-RTIP) sensor was designed as a family of modular, scalable sensors that provide next generation capabilities to support sustainable network centric operations with integrated Command and Control Intelligence, Surveillance and Reconnaissance (C2ISR) capability. MP-RTIP provides the Global Hawk Block 40 aircraft advanced systematic aperture radar and moving target indicator sensor capabilities.

This project includes all MP-RTIP design, development, and integration efforts onto the Global Hawk Block 40. Integration activities include platform integration of the MP-RTIP sensor and sustainment support structures including logistics planning support. Future MP-RTIP studies and development insertion includes the implementation of maritime modes, airborne modes, electronic protection, technical refresh, product improvements and other advanced capabilities.

The Global Hawk Block 40 development schedule was extended in Oct 09, moving IOT&E to FY13. The MP-RTIP program realigned workload under FY10 and 11 funding to accommodate the extension. The FY12 funding request reflects the movement of planned radar software releases and Radar System Level Performance Verification (RSLPV) support activities to FY12. FY2012 funding continues improvement and implementation of MP-RTIP capabilities, enabling the joint air and missile defense architecture, joint decisive operations, and the AEF Task Force CONOPS. It also conducts limited risk reduction activities on Battle Management Command and Control (BMC2) Mission Execution and BMC2 Kill Chain, and MP-RTIP Wide Area Surveillance (WAS) Radar Hardware Verification.

Activities also include studies and analysis supporting current and future program planning and project execution.

This program is in Budget Activity 7, Operational System Development. It supports integration and testing of a developed sensor onto an operational platform.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Development and integration	60.840	15.267	29.784	-	29.784
Description: MP-RTIP development and integration					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>		PROJECT 67RTIP: <i>MP-RTIP</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p><i>FY 2010 Accomplishments:</i> Continue Contractor Development Test and Evaluation (CDT&E) Concurrent Modes and Dedicated Modes Flight Testing on Proteus platform. Continue Functional configuration Audit (FCA).</p> <p><i>FY 2011 Plans:</i> Initiate MP-RTIP RADAR integration on Global Hawk platform, continue incremental Functional Configuration Audit (FCA). Perform Physical Configuration Audit (PCA).</p> <p><i>FY 2012 Base Plans:</i> Continue Sensor platform integration of MP-RTIP on Global Hawk (GH) platform for Ground Moving Target Indicator(GMTI)/Synthetic Aperture Radar (SAR)/ Concurrent modes, plan software releases to GH, incremental FCA/PCA.</p> <p><i>FY 2012 OCO Plans:</i></p>					
<p><i>Title:</i> Test & Evaluation</p> <p><i>Description:</i> MP-RTIP Test & Evaluation</p>					
<p><i>FY 2010 Accomplishments:</i> Continue MP-RTIP sensor Test and Evaluation effort on Proteus including but not limited to ground and flight integration of sensor and air vehicle, test force support, range support, interoperability compliance and third-party performance reviews.</p> <p><i>FY 2011 Plans:</i> Complete Proteus testing. Initiate MP-RTIP sensor Test and Evaluation effort on Global Hawk including but not limited to ground and flight integration of sensor and air vehicle, test force support, range support, interoperability compliance and third-party performance reviews.</p> <p><i>FY 2012 Base Plans:</i> Continue MP-RTIP sensor Test and Evaluation effort on Global Hawk including but not limited to ground and flight integration of sensor and air vehicle, Radar System Level Performance Verification (RSLPV), test force support, range support, interoperability compliance and third-party performance reviews.</p> <p><i>FY 2012 OCO Plans:</i></p>					
<p><i>Title:</i> IRT Study</p>					
	2.443	2.019	2.000	-	2.000
	0.105	0.015	0.005	-	0.005

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: Independent Review of total MP-RTIP program FY 2010 Accomplishments: Initiate Independent Review of total MP-RTIP program FY 2011 Plans: Continue Independent Review of total MP-RTIP program FY 2012 Base Plans: Complete Independent Review of total MP-RTIP program FY 2012 OCO Plans:					
Title: Logistics Planning Description: Depot Logistics Planning FY 2010 Accomplishments: Initiate Depot Logistics Planning FY 2011 Plans: Continue Depot Logistics Planning FY 2012 Base Plans: Continue Depot Logistics Planning FY 2012 OCO Plans:	-	1.762	1.503	-	1.503
Title: MP-RTIP government support costs Description: Other Government Costs and Support FY 2010 Accomplishments: Continue MP-RTIP Government Support FY 2011 Plans: Continue MP-RTIP Government Support FY 2012 Base Plans:	8.513	8.164	6.995	-	6.995

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue MP-RTIP Government Support					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	71.901	27.227	40.287	-	40.287

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Continue to fund sole source CPFF with performance incentive fee multi-year development contract to continue integration and testing on Global Hawk Block 40 platform.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
MP-RTIP	SS/CPFF	Northrop Grumman Integrated Systems:El Segundo, CA	91.920	15.267	Apr 2011	29.784	Nov 2011	-		29.784	Continuing	Continuing	TBD
Subtotal			91.920	15.267		29.784		-		29.784			

Remarks
FY11 Prime contract: planning to negotiate primarily CPFF with partial performance incentive clause.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
IRT Study	Various	Various:,	0.105	0.015	Jul 2011	0.005	Jan 2012	-		0.005	0.000	0.125	0.000
Logistics Planning	SS/CPFF	Northrop Grumman Integrated Systems:El Segundo, CA	-	1.762	Jun 2011	1.503	Jun 2012	-		1.503	0.000	3.265	0.000
Subtotal			0.105	1.777		1.508		-		1.508	0.000	3.390	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Test Force, Edward AFB, Joint Interoperability Test Center, Navy, & IV&V	MIPR	Various:Various,	5.808	2.019	Jan 2011	2.000	Dec 2011	-		2.000	Continuing	Continuing	TBD
Subtotal			5.808	2.019		2.000		-		2.000			

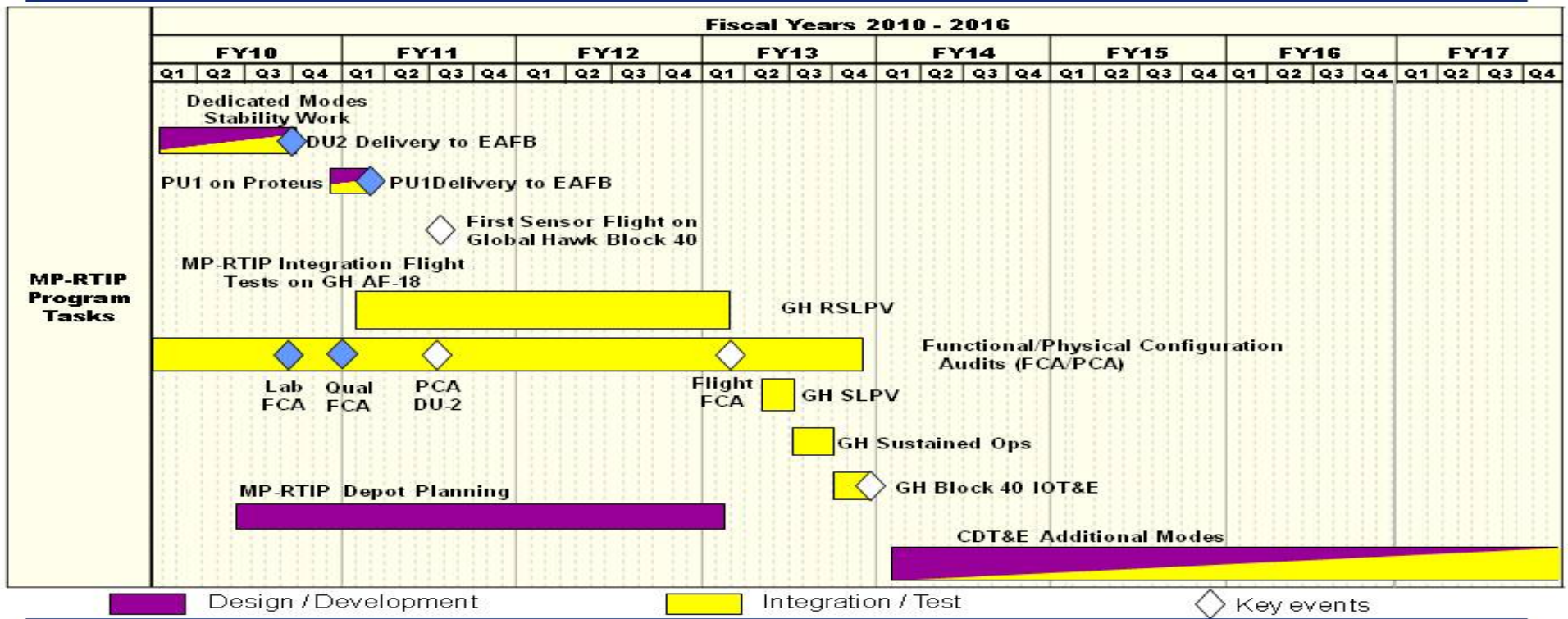
APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305220F: GLOBAL HAWK
 DEVELOPMENT/FIELDING

PROJECT
 67RTIP: MP-RTIP



MP-RTIP Schedule



PB12 R-Docs

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305220F: <i>GLOBAL HAWK</i> <i>DEVELOPMENT/FIELDING</i>	PROJECT 67RTIP: <i>MP-RTIP</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
RTIP First Sensor Flight on Global Hawk	3	2011	3	2011
MP-RTIP Integration Flight Test on GH AF-18	1	2011	1	2013
Global Hawk Radar System Level Performance Verification	3	2011	1	2013
MP-RTIP Depot Planning	2	2010	1	2013
Global Hawk Block 40 Initial Operation Test Evaluation	4	2013	4	2013
Functional Configuration Audit	2	2013	4	2013
Global Hawk System Level Performance Verification	2	2013	2	2013
Global Hawk Sustained Ops	3	2013	3	2013
CDT&E Additional Modes	1	2014	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	8.126	13.367	7.348	-	7.348	7.526	7.636	7.743	7.879	Continuing	Continuing
675197: <i>NCCT Core Technology</i>	8.126	13.367	7.348	-	7.348	7.526	7.636	7.743	7.879	Continuing	Continuing

Note
FY 2011 funding totals include \$6.1M requested for Overseas Contingency Operations (OCO).

A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record responsible for developing core technologies to horizontally and vertically integrate Service, Joint, and Coalition ISR sensor systems both within and across intelligence disciplines (for example SIGINT to SIGINT or GMTI to SIGINT). NCCT software applications employ machine-to-machine interfaces and Internet Protocol (IP) communications to coordinate sensor cross-cues and collection activities. NCCT correlation and fusion services ingest collection data to produce a single, composite track (geolocation and ID) for high-value targets. NCCT Research and Development funding supports evolutionary development of the NCCT message set and network management systems (Operations Interface, Network Controller, Fusion Engine, Data Guard, Interface to Command and Control and the Interface to Airborne Overhead Cooperative Operations), the migration of the NCCT technologies to emerging network centric technologies (e.g. service-oriented architectures and web services), and satisfying DoD standards and information assurance requirements.

Current NCCT-enabled systems and programmed development efforts include RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130H COMPASS CALL, U2/DCGS (SIGINT components), AOC (baseline workstations and Joint Automated Deep Operations Coordination System (JADOCS) interface), Vehicle and Dismount Exploitation Radar (VADER), Gorgon Stare QRC, MC-12W, EP-3C, P-3C, and Airborne Overhead Cooperative Operations. Any prospective NCCT-enabled Coalition, Joint, or Service system is required to fund its respective integration, core technology improvements/upgrades to support system integration, and the infrastructure to support the system's NCCT operational employment.

The NCCT Program Manager will promote and facilitate the planning, demonstration and prototyping of capabilities, systems, and platforms in the approved Capabilities Production Document or designated by the Requirements Review Board toward the objective of inclusion and full participation in NCCT. In addition, FY 2011 OCO funding was provided for the development of a Core Technology GMTI / SIGINT Correlator. A GMTI / SIGINT Correlator will enhance on going efforts to address current GMTI operational needs by providing multi-source GMTI to GMTI and GMTI to SIGINT correlation services within the Network Centric Collaborative Targeting (NCCT) architecture. The result will be NCCT composite tracks with both SIGINT (ID) and GMTI (moving track/Doppler characteristics) components which will improve the find-fix-finish timelines against mobile and dismounted forces the Joint Force is encountering in current OCO. A GMTI / SIGINT correlator for the NCCT fusion engine supports OCO real-time and forensic operations, accelerates High-Side (classified) message architecture to network OCO relevant sensor systems, and directly supports tactics, techniques and procedures (TTP) development for rapid operator use. The network service will accept and process network data from NCCT-enabled GMTI and SIGINT sources. These transactions will take place automatically in a machine-to-machine construct based on operator specified rule-sets. Activities also included studies and analysis supporting current and future program planning and project execution.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0305221F: <i>Network Centric Collaborative Targeting</i>
BA 7: <i>Operational Systems Development</i>	

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	8.160	7.267	7.372	-	7.372
Current President's Budget	8.126	13.367	7.348	-	7.348
Total Adjustments	-0.034	6.100	-0.024	-	-0.024
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.034	6.100	-0.024	-	-0.024

Change Summary Explanation

FY 2011 funding totals include \$6.1M of Overseas Contingency Operations (OCO) supplemental funding to develop a Core Technology GMTI / SIGINT Correlator.

The program has been funded to latest cost estimate, less efficiencies. The reductions for efficiencies in FY12 are not intended to impact program content. Reductions for efficiencies may be spread to other Air Force programs at a later date. Amounts of the reductions are: \$.024M in FY12.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675197: <i>NCCT Core Technology</i>	8.126	13.367	7.348	-	7.348	7.526	7.636	7.743	7.879	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
FY 2011 funding totals include \$6.1M requested for Overseas Contingency Operations (OCO).

A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) is the Air Force program of record responsible for developing core technologies to horizontally and vertically integrate Service, Joint, and Coalition ISR sensor systems both within and across intelligence disciplines (for example SIGINT to SIGINT or GMTI to SIGINT). NCCT software applications employ machine-to-machine interfaces and Internet Protocol (IP) communications to coordinate sensor cross-cues and collection activities. NCCT correlation and fusion services ingest collection data to produce a single, composite track (geolocation and ID) for high-value targets. NCCT Research and Development funding supports evolutionary development of the NCCT message set and network management systems (Operations Interface, Network Controller, Fusion Engine, Data Guard, Interface to Command and Control and the Interface to Airborne Overhead Cooperative Operations), the migration of the NCCT technologies to emerging network centric technologies (e.g. service-oriented architectures and web services), and satisfying DoD standards and information assurance requirements.

Current NCCT-enabled systems and programmed development efforts include RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130H COMPASS CALL, U2/DCGS (SIGINT components), AOC (baseline workstations and Joint Automated Deep Operations Coordination System (JADOCS) interface), Vehicle and Dismount Exploitation Radar (VADER), Gorgon Stare QRC, MC-12W, EP-3C, P-3C, and Airborne Overhead Cooperative Operations. Any prospective NCCT-enabled Coalition, Joint, or Service system is required to fund its respective integration, core technology improvements/upgrades to support system integration, and the infrastructure to support the system's NCCT operational employment.

The NCCT Program Manager will promote and facilitate the planning, demonstration and prototyping of capabilities, systems, and platforms in the approved Capabilities Production Document or designated by the Requirements Review Board toward the objective of inclusion and full participation in NCCT. In addition, FY 2011 OCO funding was provided for the development of a Core Technology GMTI / SIGINT Correlator. A GMTI / SIGINT Correlator will enhance on going efforts to address current GMTI operational needs by providing multi-source GMTI to GMTI and GMTI to SIGINT correlation services within the Network Centric Collaborative Targeting (NCCT) architecture. The result will be NCCT composite tracks with both SIGINT (ID) and GMTI (moving track/Doppler characteristics) components which will improve the find-fix-finish timelines against mobile and dismounted forces the Joint Force is encountering in current OCO. A GMTI / SIGINT correlator for the NCCT fusion engine supports OCO real-time and forensic operations, accelerates High-Side (classified) message architecture to network OCO relevant sensor systems, and directly supports tactics, techniques and procedures (TTP) development for rapid operator use. The network service will accept and process network data from NCCT-enabled GMTI and SIGINT sources. These transactions will take place automatically in a machine-to-machine construct based on operator specified rule-sets. Activities also included studies and analysis supporting current and future program planning and project execution.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Core Technology	8.126	13.367	7.348	-	7.348
Description: Accomplishments and planned efforts include development and update of NCCT Core Technology software; technical support to users, and management activities					
FY 2010 Accomplishments: Continued core technology development for system version 4.2 and began initial development efforts for version 5.0. Also continued end user technical support efforts.					
FY 2011 Plans: Complete development efforts for version 4.2 and begin development of version 4.3. Begin development of GMTI/SIGINT Correlator. Continue core technology development version 5.0 and end user technical support efforts					
FY 2012 Base Plans: Will continue to develop version 5.0 and complete development of version 4.3 of the core technology systems and maintain technical support efforts					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	8.126	13.367	7.348	-	7.348

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0305221F: <i>NCCT, O&M</i>	19.799	15.140	9.346	0.000	9.346	6.176	6.849	6.616	6.728	Continuing	Continuing

D. Acquisition Strategy

The NCCT capability is maintained and sustained with baseline / incremental upgrades plus any quick reaction capabilities (QRC) developments acquired through the 645th Aeronautical System Group (BIG SAFARI Program Office) in accordance with the BIG SAFARI Program Management Directive (PMD) and the BIG SAFARI Class Justification and Approval (J&A) documents for acquisition of supplies and services. The procured supplies and services are supported by the BIG SAFARI Life Cycle Management Plan (LCMP) across the full spectrum of system life cycle management -- developmental engineering to system retirement ("cradle to grave" support). Due to the rapidly changing threat environment encountered during our prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Commander requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>

645 AESG, Wright Patterson AFB OH, manages the Cost Plus Fixed Fee (CPFF) contract used to develop the NCCT Core Technology. 645 AESG will develop NCCT software and common hardware to systems and platforms designated to field this ISR capability. Individual program management offices may contract directly with their prime contractors or through the 645 AESG for integration of this ISR capability on their respective systems and platforms. Current NCCT-enabled and programmed development systems include RC-135 RIVET JOINT, C-130 SENIOR SCOUT, EC-130 COMPASS CALL, AF DCGS/U2, AOC, Gorgon Stare QRC, MC-12W Liberty Project Aircraft, Vehicle and Dismounted Exploitation Radar (VADER), EP-3E, P-3C, and national systems.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Core Technology	SS/CPFF	L-3ComCept:Rockwall, TX	41.450	11.803	Dec 2010	5.940	Dec 2011	-		5.940	Continuing	Continuing	TBD
Subtotal			41.450	11.803		5.940		-		5.940			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Security Certification	Various	Riverside Research Institute:Dayton, OH	1.949	0.504	Dec 2010	0.540	Dec 2011	-		0.540	Continuing	Continuing	TBD
Subtotal			1.949	0.504		0.540		-		0.540			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office	Various	Riverside Research Institute:Dayton, OH	3.835	1.060	Dec 2010	0.868	Dec 2011	-		0.868	Continuing	Continuing	TBD
Subtotal			3.835	1.060		0.868		-		0.868			

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			47.234	13.367		7.348		-		7.348			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>
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	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
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Remarks

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

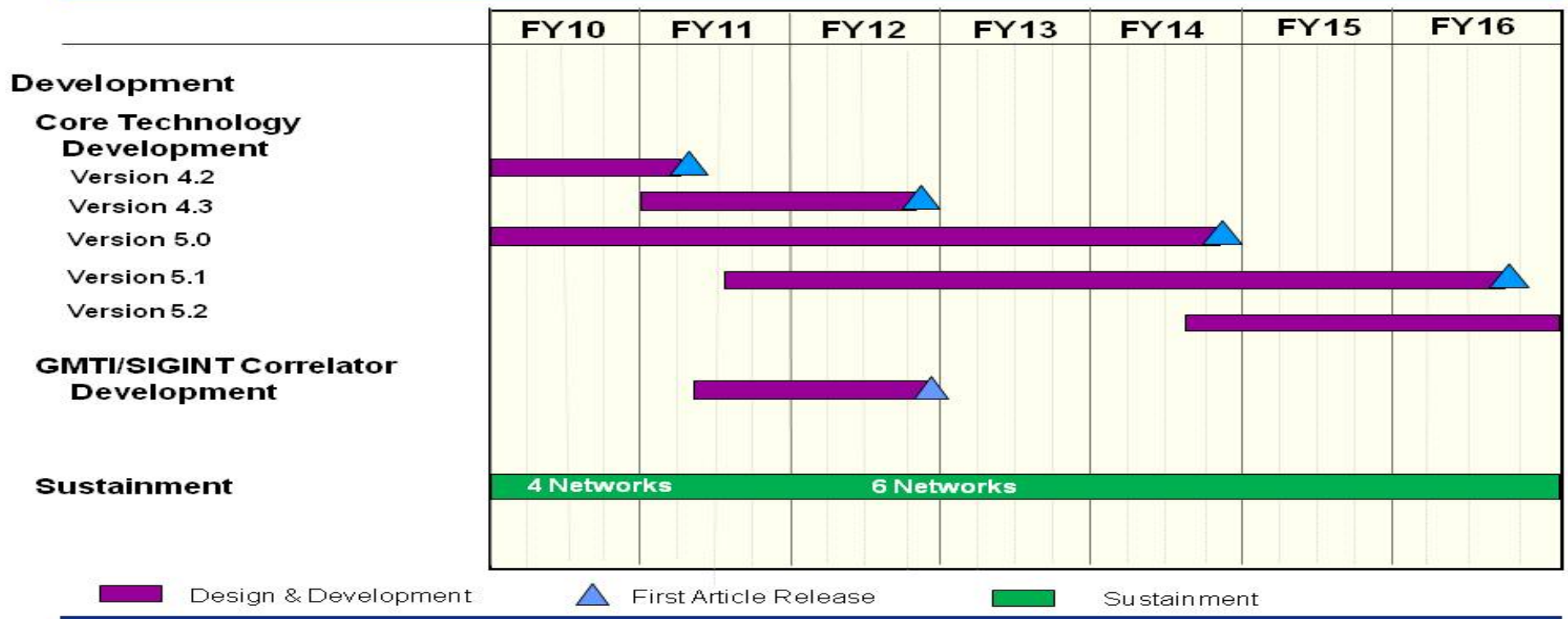
PE 0305221F: Network Centric Collaborative Targeting

PROJECT

675197: NCCT Core Technology



Network Centric Collaborative Targeting Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305221F: <i>Network Centric Collaborative Targeting</i>	PROJECT 675197: <i>NCCT Core Technology</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Core Technology Baseline Version 4.2 Development & Test	1	2010	2	2011
Core Technology Baseline Version 4.3 Development & Test	1	2011	4	2012
Core Technology Baseline Version 5.0 Development & Test	1	2010	4	2014
Core Technology Baseline Version 5.1 Development & Test	1	2014	3	2016
Core Technology GMTI / SIGINT Correlator Development & Integration	2	2011	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	410.469	828.171	463.081	-	463.081	318.782	220.831	249.453	229.460	Continuing	Continuing
676007: <i>DASS Integration, GPS</i>	-	-	2.143	-	2.143	1.792	2.688	1.443	1.293	Continuing	Continuing
67A019: <i>GPS IIIA</i>	410.469	446.304	460.938	-	460.938	316.990	218.143	248.010	228.167	Continuing	Continuing
67A020: <i>OCX</i>	-	381.867	-	-	-	-	-	-	-	Continuing	Continuing

Note

Totals include funding for PRCP Program Number 292, GPS IIIA.

The program funding includes overhead reduction and Review, Study, Board reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.965M in FY12.

FY12-16 total OCX funding transferred to PE 0603423F.

In FY2012, BPAC 67007, DASS Integration, includes new start efforts.

A. Mission Description and Budget Item Justification

The Navstar Global Positioning System (GPS) is a space based navigation system that fills validated Joint Service requirements for worldwide, accurate, common grid three dimensional positioning/navigation for military aircraft, ships, and ground personnel. The consistent accuracy, unaffected by location or weather and available in real time, significantly improves effectiveness of reconnaissance, weapons delivery, mine countermeasures and rapid deployment for all services.

The system is composed of three segments: user equipment (funded under PE 0305164F), space, and a control network. The satellites broadcast high accuracy data using precisely synchronized signals which are received and processed by user equipment installed in military platforms. This equipment computes the platform position and velocity and provides steering vectors to target locations or navigation equipment installed in military platforms. The control segment provides daily updates to the navigation messages broadcast from the satellites to maintain system precision in three dimensions to 16 meters spherical error probable worldwide. Additionally, GPS supports the United States Nuclear Detonation (NUDET) Detection System (NDS) mission, and provides strategic and tactical support to the following Department of Defense (DoD) missions: Joint Operations by providing capabilities for Positioning, Navigation, and Timing (PNT), Command, Control, Communications, and Intelligence, Special Operations; Military Operations in Urban Terrain, Defense-Wide Mission Support, Air Mobility, and Space Launch Orbital Support.

GPS IIIA is the next generation space vehicle to join the Navstar GPS constellation. GPS IIIA space vehicles will deliver significant enhancements, including a new L1C (civil) Galileo-compatible signal, enhanced M-code Earth Coverage power, and a growth path to full warfighter capabilities. GPS IIIA is in the Production & Deployment Phase.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0305265F: <i>GPS III Space Segment</i>

Funds for GPS IIIA will support research, development, test and evaluation of two GPS IIIA space vehicles and associated simulators through a structured systems engineering approach that matures and delivers space vehicles for launch. The program includes capability maturation and risk reduction efforts (Capability Insertion Program (CIP)), to address and mitigate program cost schedule and technical challenges. Additionally, the program includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on orbit support, and mission operations in support of civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

OCX is the next generation GPS control segment which includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds for OCX will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, science and technology, technology development, systems engineering, system development, test and evaluation efforts, GPS enterprise integration and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities. Funding is transferred to PE 0603423F beginning in FY12.

The Distress Alerting Satellite System (DASS) is an approved secondary payload on GPS III space vehicles beginning in Block B. DASS will fill validated National Search and Rescue Committee requirements to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under the SECDEF's National Search and Rescue Plan.

In addition the USAF has on-going requirements to rescue its own personnel in harm's way per Air Force Doctrine Document 2-1.6. The implementation of a US Mid Earth Orbiting Search and Rescue Space Segment is via a Canadian-Provided 406 MHZ SAR repeater on the GPS Block III satellites presents a cost effective opportunity with low risk to build on existing Proof of Concept work and provide a proven SAR system that accommodates existing and planned 406 MHZ beacons. USAF and USCG senior leaders have agreed that, as the operational sponsors and main users of the capability, they will share (50/50) integration costs associated with integrating Canadian provided SAR repeater to GPS III B & C Space Vehicles. Costs presented represent USAF 50% Share.

DASS is a New Start for the GPS III program. DASS funding will be applied to early integration activities for GPS IIIB through the Capabilities Insertion Program (CIP) in FY12.

This program is Budget Activity 7 - Operational System Development because it supports operational systems (GPS).

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	423.466	828.171	445.848	-	445.848
Current President's Budget	410.469	828.171	463.081	-	463.081
Total Adjustments	-12.997	-	17.233	-	17.233
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.776	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-11.221	-			
• Other Adjustments	-	-	17.233	-	17.233

Change Summary Explanation

FY12 changes:

GPS IIIA FY12 funding

Increased \$140.192M for engineering change orders and additional costs to complete non-recurring engineering required to assure on time delivery of GPS IIIA SVs 1 and 2.

Decreased -\$2.542M for overhead reduction and report, study, board reduction efficiencies. Reductions for efficiencies are not intended to impact program content.

Decreased -\$5.506M for higher DoD priorities.

OCX FY12 funding

Increased \$275.138M to fully fund program for Milestone B.

Decreased -\$392.192M. OCX funding in FY12 and beyond transferred to PE 0603423F.

DASS FY12 Funding

Increased \$2.143M to initiate new program.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 676007: <i>DASS Integration, GPS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676007: <i>DASS Integration, GPS</i>	-	-	2.143	-	2.143	1.792	2.688	1.443	1.293	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Distress Alerting Satellite System (DASS) is an approved secondary payload on GPS III beginning in Block B. DASS fills validated National Search and Rescue Committee requirements to provide enduring, space-based distress alerting capability to detect, locate, and relay distress alerts to fulfill its responsibilities under the SECDEF's National Search and Rescue Plan.

In addition the USAF has on-going requirements to rescue its own personnel in harm's way per Air Force Doctrine Document 2-1.6. The implementation of a US Mid Earth Orbiting Search and Rescue Space Segment is via a Canadian-Provided 406 MHZ SAR repeater on the GPS Block III satellites presents a cost effective opportunity with low risk to build on existing Proof of Concept work and provide a proven SAR system that accommodates existing and planned 406 MHz beacons. USAF and USCG senior leaders have agreed that, as the operational sponsors and main users of the capability, they will share (50/50) integration costs associated with integrating Canadian provided SAR repeater to GPS III B & C Space Vehicles. Costs presented represent USAF 50% Share.

DASS is a New Start for the GPS III program.

This program is in Budget Activity 7 - Operational Systems Development because it supports operational systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: DASS	-	-	2.143	-	2.143
Description: MAJOR THRUST: GPS III space segment nonrecurring and recurring contract costs to add one DASS unit to each SV beginning at GPS IIIB and continuing through GPS IIIC (24 SVs total).					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: Development and integration of DASS antennas, DASS miscellaneous hardware and cabling, DASS-related space vehicle software, Integrating DASS payload onto the GPS III space vehicles, DASS-related GNST and GSS components and integration, Associated System Engineering and Program Management (SE/PM),					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 676007: <i>DASS Integration, GPS</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Enterprise-level contractor SEIT/PM , Other Government Costs (OGC). Costs do not include development and production of Canadian payload box.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	-	2.143	-	2.143

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• RDT&E AF: <i>PE 0305265F, GPS III</i>	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing

D. Acquisition Strategy
 The Air Force is pursuing a "Block" approach to the GPS III next generation space segment to rapidly respond to warfighter capability requirements. DASS will follow this same strategy. The Block acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. DASS will be inserted into the acquisition strategy beginning with GPS III B – SV 9 and will conclude with GPS III C - SV 32.

E. Performance Metrics
 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 676007: <i>DASS Integration, GPS</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DASS	C/Various	Lockheed Martin:Newtown, PA	-	-		2.143	Nov 2011	-		2.143	Continuing	Continuing	0.000
Subtotal			-	-		2.143		-		2.143			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		2.143		-		2.143			0.000

Remarks

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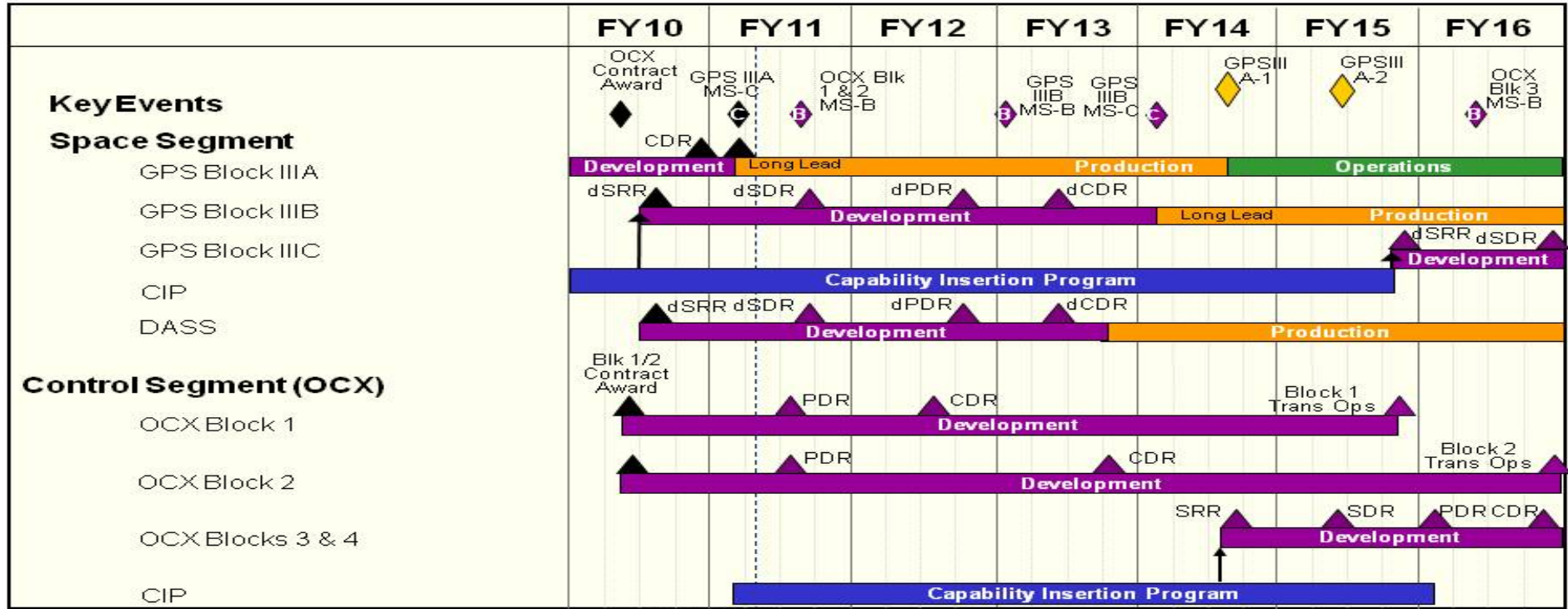
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305265F: *GPS III Space Segment*

PROJECT
 676007: *DASS Integration, GPS*



CDR – Critical Design Review PDR – Preliminary Design Review SDR – System Design Review
 CIP – Capability Insertion Program SRR – System Requirements Review d – Delta
 DASS – Distress Alerting Satellite System SV – Space Vehicle

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 676007: <i>DASS Integration, GPS</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IIIB Delta Preliminary Design Review (PDR)	4	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A019: <i>GPS IIIA</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A019: <i>GPS IIIA</i>	410.469	446.304	460.938	-	460.938	316.990	218.143	248.010	228.167	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Totals include funding for PRCP Program Number 292, GPS IIIA.

A. Mission Description and Budget Item Justification

GPS IIIA is the next generation space vehicle supporting the Navstar GPS constellation. GPS IIIA space vehicles will deliver significant enhancements, including a new L1C (civil) Galileo-compatible signal, enhanced M-code Earth Coverage power, and a growth path to full warfighter capabilities. GPS IIIA is in the Production & Deployment Phase.

Funds in this PE for GPS IIIA will support research, development, test and evaluation of two GPS IIIA space vehicles and associated simulators through a structured systems engineering approach that matures and delivers space vehicles for launch. The program includes capability maturation and risk reduction efforts to address and mitigate program cost (Capability Insertion Program (CIP)), schedule and technical challenges. Additionally the program also includes engineering studies and analyses, trade studies, system development, test and evaluation efforts, integrated logistics support products, on orbit support, and mission operations in support of civil applications necessary to support efforts to protect U.S. military and allies' use of GPS.

B. Accomplishments/Planned Programs (\$ in Millions)

Title: GPS III

Description: Development, test and evaluation of two GPS IIIA space vehicles and associated simulators, capability maturation, risk reduction efforts, engineering studies and analyses, trade studies, system development, test and evaluation efforts, and integrated logistics support products.

FY 2010 Accomplishments:

GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction.

FY 2011 Plans:

GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction.

FY 2012 Base Plans:

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
	410.469	446.304	460.938	-	460.938

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A019: <i>GPS IIIA</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
GPS IIIA space vehicle development, SE&I, technical and program support, capability maturation and risk reduction.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	410.469	446.304	460.938	-	460.938

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• RDT&E: <i>AF PE 0603423F, OCX</i>	288.402	0.000	390.889	0.000	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
• RDT&E (2): <i>AF PE 0305265F, OCX</i>	0.000	381.867	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• MPAF PE 0305265F: <i>GPS III Space Segment</i>	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing
• OPAF PE 0603423F: <i>OCX</i>	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation space segment to rapidly respond to warfighter capability requirements. The Block acquisition approach utilizes a disciplined systems engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. The first block of GPS III satellites, GPS IIIA, will have GPS IIF capabilities plus up to a 10 dB increase in military (M-code) signal power, a new L1C civil signal compatible with the European Galileo and a satellite bus capable of supporting Block B and C capability upgrades.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A019: <i>GPS IIIA</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Block IIIA Development	C/Various	Lockheed Martin:Newtown, PA	692.293	376.898	Nov 2010	398.403	Nov 2011	-		398.403	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:Huntington Beach, CA	11.641	5.100	Nov 2010	5.300	Nov 2011	-		5.300	Continuing	Continuing	0.000
Modernization/SE & Technical Support	Various	Various:Various,	33.767	12.779	Nov 2010	13.641	Nov 2011	-		13.641	Continuing	Continuing	0.000
Subtotal			737.701	394.777		417.344		-		417.344			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Wing Support	Various	Various:Various,	34.474	31.727	Nov 2010	24.774	Nov 2011	-		24.774	Continuing	Continuing	0.000
FFRDC	Various	Aerospace:El Segundo, CA	17.340	19.800	Nov 2010	18.820	Nov 2011	-		18.820	0.000	55.960	0.000
Subtotal			51.814	51.527		43.594		-		43.594			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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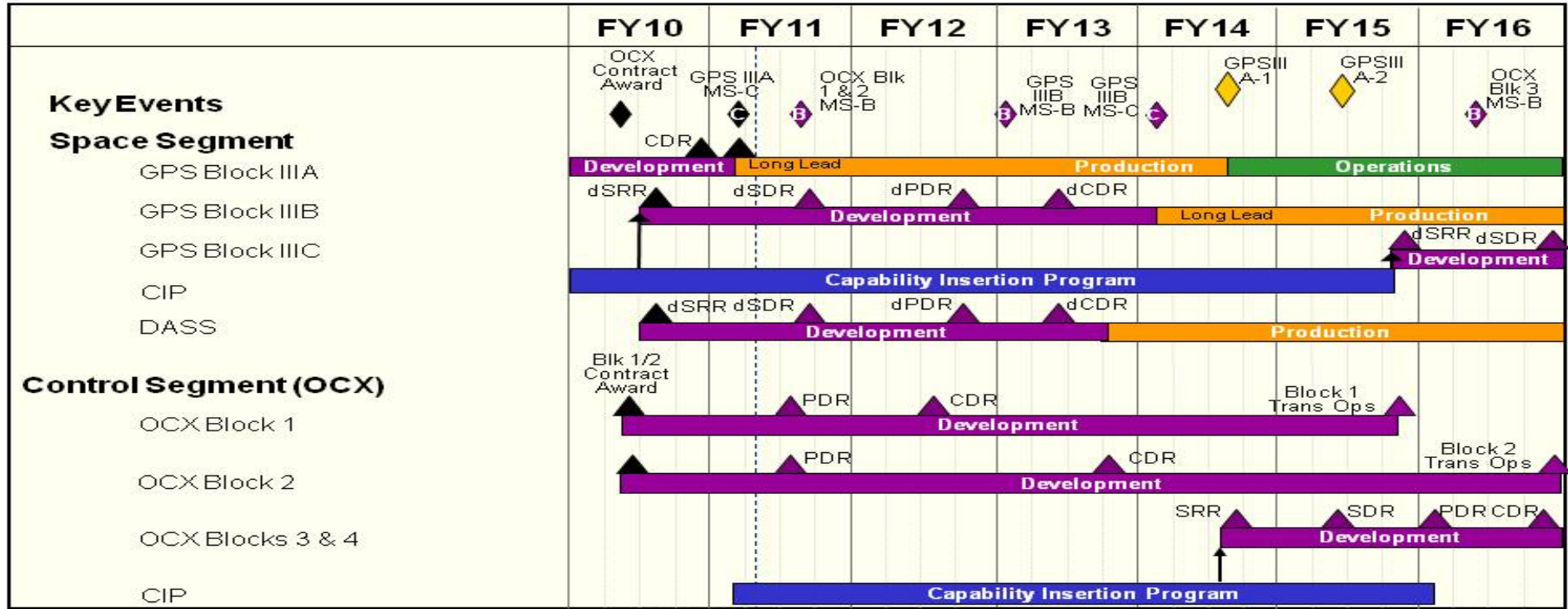
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305265F: *GPS III Space Segment*

PROJECT
 67A019: *GPS IIIA*



CDR – Critical Design Review
 CIP – Capability Insertion Program
 DASS – Distress Alerting Satellite System

PDR – Preliminary Design Review
 SRR – System Requirements Review
 SV – Space Vehicle

SDR – System Design Review
 d – Delta

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A019: <i>GPS IIIA</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
GPS IIIA Critical Design Review (CDR)	4	2010	4	2010
GPS IIIA Milestone C	1	2011	1	2011
GPS IIIB delta System Design Review (dSDR)	3	2011	3	2011
GPS IIIB delta Preliminary Design Review (dPDR)	4	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A020: <i>OCX</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A020: <i>OCX</i>	-	381.867	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

OCX funding transfers to PE 0603423F beginning in FY12.

A. Mission Description and Budget Item Justification

OCX is the next generation GPS control segment which includes, but is not limited to, advanced concept development, systems engineering and analysis, modernized control segment development, training simulators, Integrated Logistics Support (ILS) products, and developmental test resources. The OCX acquisition was established to 1) fly the GPS III satellites, 2) incorporate situational awareness to support Navwar and signal monitoring, and 3) enable mission capability upgrades to support warfighter Effects-Based Approach to Operations (EBAO).

Funds for OCX will support engineering studies and analyses, architectural engineering studies, trade studies, technology needs forecasting, science and technology, technology development, systems engineering, system development, test and evaluation efforts, GPS enterprise integration and mission operations in support of upgrades and product improvements for military and civil applications necessary to support efforts to protect U.S. military and allies' use of GPS. Additionally, funds will ensure a disciplined Capability Insertion Program (CIP) plan to meet Joint Requirements Oversight Council (JROC) approved required capabilities.

In FY2010 and FY2012-2016 this effort is funded in PE 0603423F, Global Positioning System III - Operational Control Segment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: OCX	-	381.867	-	-	-
Description: Development, test and evaluation of OCX and engineering studies, technology needs forecasting, systems engineering, system development, and test and evaluation efforts.					
FY 2010 Accomplishments: NA					
FY 2011 Plans: Continued OCX Block 1-2 development System Engineering & Integration (SE&I), technical and program support.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A020: <i>OCX</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	381.867	-	-	-

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0603423F: <i>OCX RDT&E</i>	288.402	0.000	390.889	0.000	390.889	369.453	386.742	280.494	201.079	Continuing	Continuing
• PE 0305265F: <i>GPS III RDT&E</i>	410.469	446.304	460.297	0.000	460.297	316.328	217.458	247.201	227.330	Continuing	Continuing
• PE 0305265F (3): <i>GPS III Space Segment MPAF</i>	0.000	122.490	515.337	0.000	515.337	515.408	529.623	555.924	626.121	Continuing	Continuing
• PE 0305265F (4): <i>OCX OPAF</i>	0.000	0.000	0.000	0.000	0.000	0.000	11.431	12.656	13.385	Continuing	Continuing

D. Acquisition Strategy

The Air Force is pursuing a "Block" approach to the GPS III next generation control segment (OCX) to rapidly respond to warfighter capability requirements. The Block acquisition utilizes a disciplined system engineering approach which focuses on mitigating cost and schedule risk through a lower risk incremental delivery of mature technologies. This approach focuses on mission success and on time delivery. The first block of GPS III ground control segment (OCX) will provide backwards compatibility to GPS Block II mission operation and provide GPS IIIA mission operation capability.

The full content of OCX Blocks 1.0 and 2.0 includes M-code and civil signal monitoring, Net Centric Global Information Grid connectivity, command and control for GPS IIIA vehicles, and will meet current Information Assurance standards. This acquisition includes a structured capability insertion program to support risk reduction for OCX Blocks 3.0 and 4.0 (associated with controlling GPS IIIB and IIIC SVs).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>	PROJECT 67A020: <i>OCX</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Phase B OCX Blk I & II Development	C/CPIF	Raytheon:Aurora, CO	-	241.754	Nov 2010	-		-		-	Continuing	Continuing	0.000
SE&I	C/CPAF	SAIC:EI Segundo, CA	-	5.993	Nov 2010	-		-		-	Continuing	Continuing	0.000
SE & Technical Support	Various	Various:Various	-	9.973	Nov 2010	-		-		-	Continuing	Continuing	0.000
Subtotal			-	257.720				-		-			0.000

Remarks
Funding for this effort transfers to PE 0603423F starting in FY12.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Wing Support	Various	Various:Various	-	124.147	Nov 2010	-		-		-	Continuing	Continuing	0.000
Subtotal			-	124.147				-		-			0.000

Remarks
Funding for this effort transfers to PE 0603423F starting in FY12.

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Subtotal			-	-			-			-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Subtotal			-	-			-			-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0305265F: <i>GPS III Space Segment</i>			PROJECT 67A020: <i>OCX</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals	-	381.867	-	-	-			0.000	

Remarks

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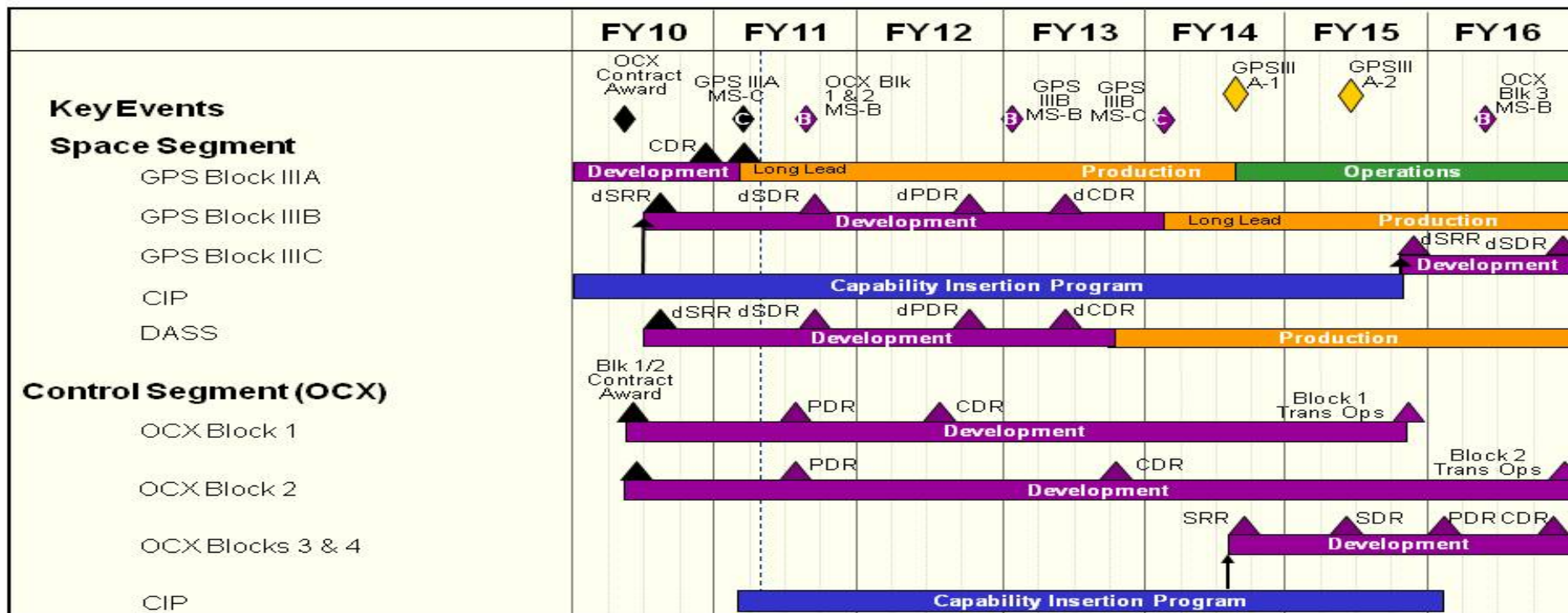
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305265F: *GPS III Space Segment*

PROJECT
 67A020: *OCX*



CDR – Critical Design Review PDR – Preliminary Design Review SDR – System Design Review
 CIP – Capability Insertion Program SRR – System Requirements Review d – Delta
 DASS – Distress Alerting Satellite System SV – Space Vehicle

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0305265F: *GPS III Space Segment*

PROJECT

67A020: *OCX*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
OCX Block 1-2 Preliminary Design Review	3	2011	3	2011
OCX Block 1-2 Milestone B	3	2011	3	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	87.465	132.706	118.950	-	118.950	99.958	106.250	108.387	110.027	Continuing	Continuing
67A030: <i>Infrastructure</i>	15.000	35.348	31.074	-	31.074	32.923	32.256	34.011	36.168	Continuing	Continuing
67A031: <i>Mission Applications</i>	58.993	79.169	73.291	-	73.291	42.984	45.892	46.961	47.518	Continuing	Continuing
67A032: <i>Command & Control</i>	2.500	9.907	11.230	-	11.230	19.814	24.439	25.310	21.701	Continuing	Continuing
67A033: <i>Data Integration</i>	10.972	8.282	3.355	-	3.355	4.237	3.663	2.105	4.640	Continuing	Continuing

Note

The program funding includes Overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$1.417M in FY12.

A. Mission Description and Budget Item Justification

Overall, the program will continue risk reduction engineering and focus on incremental releases (Information Technology BOX construct) to deploy a service-oriented architecture (SOA) environment and tools to progressively advance operational capabilities toward an integrated JSpOC Mission System (JMS). This program will produce a net-centric collaborative environment, enhance and modernize space surveillance capabilities, create decision relevant views of the space environment, and enable efficient distribution of data across the space surveillance network.

JMS is responsible for Space Situational Awareness (SSA) and command and control (C2) of space forces. SSA includes the knowledge of all aspects of space related to operations to thoroughly assess threats to U.S. space assets and develop options, military and diplomatic, to counter them and to establish contingency plans to ensure U.S. forces can maintain access to space assets. JMS will access intelligence on adversary space operations, process surveillance of all space objects and activities, maintain detailed reconnaissance of specific space assets; fuse space environmental data, maintain awareness of cooperative space assets; and allow the Joint Functional Component Command for Space (JFCC-Space) to conduct space forces integrated command, control, communications, processing, analysis, dissemination, and archiving activities.

Near-term focus is to provide a sustainable net-centric environment with a highly accurate, responsive, and robust SSA system migration from the rapidly aging, and sustainment challenged Space Defense Operations Center (SPADOC) system (SPADOC design end of life was 2002). JMS will provide integrated space knowledge/information for the Command, JFCC-Space to plan, direct, coordinate, and control operations of assigned forces. JMS will provide the ability to: monitor status, activities, and environment for assigned/attached space forces; assess how space forces support the battle space, provide impacts of changes to force status, and impacts of enemy forces on space assets; plan space operations to support theater and national operations; and execute Joint space tasking, track task performance, adapt tasking to changing situations, and conduct technology forecasting for emerging needs. JMS will also develop improved information capabilities for integration across SSA sensors through data exposure accomplished via the Net Centric Sensors and Data Sources effort (BPAC A012) in the SSA Systems PE (0604425F).

This program is in Budget Activity 07, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal years.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	139.471	132.706	121.764	-	121.764
Current President's Budget	87.465	132.706	118.950	-	118.950
Total Adjustments	-52.006	-	-2.814	-	-2.814
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-47.999	-			
• SBIR/STTR Transfer	-4.007	-			
• Other Adjustments	-	-	-2.814	-	-2.814

Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 67A033: *Data Integration*

 Congressional Add: *KARNAC*

 Congressional Add: *COTS Technology for Space C2*

Congressional Add Subtotals for Project: 67A033

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	5.000	-
	3.180	-
Congressional Add Subtotals for Project: 67A033	8.180	-
Congressional Add Totals for all Projects	8.180	-

Change Summary Explanation

FY10: -\$38.000M ATR to support other Air Force priorities

FY10: -\$9.999M BTR to support other Air Force priorities

FY10: -\$4.007M SBIR transfer

FY12: +\$4.700M Reprogramming

FY12: -\$0.397M to support other Air Force priorities

FY12: -\$1.417M to support Air Force efficiencies

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A030: <i>Infrastructure</i>	15.000	35.348	31.074	-	31.074	32.923	32.256	34.011	36.168	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Infrastructure will provide a services-oriented architecture (SOA) net-centric collaborative information environment at the Unclassified, Secret, TS/SCI, and SAP levels. Efforts incorporate net-centric enterprise services and integrate incremental space mission applications services. Priority is migration off the legacy SPADOC hardware and services into a sustainable infrastructure. Effort integrates components of SSA mission applications and C2 capabilities into the JSpOC to create timely, actionable knowledge necessary for maintaining space superiority and exercising command and control of space forces.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Infrastructure	15.000	35.348	31.074	-	31.074
Description: Pursue and integrate a collaborative net-centric, SOA information environment					
FY 2010 Accomplishments: Accomplishments: Developed and tested SOA infrastructure at SCI and Secret security levels; initial User Defined Operational Picture (UDOP); provided basic core services like registry/user profiles management, collaboration expansion; information assurance accreditation; and conducted system engineering integration, planning, coordination, and execution.					
FY 2011 Plans: Continue development, fielding, and accreditation of new mission services, core services; expands the SOA infrastructure to include releaseable and Unclassified information; and systems engineering, support, and testing of existing and updated baseline system.					
FY 2012 Base Plans: Continue fielding, and accreditation of SOA infrastructure to include alternate location; net-ready, security, and reliability core services; UDOP capabilities; and provide systems engineering integration, support, and testing of releases.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	15.000	35.348	31.074	-	31.074

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• Other Procurement: <i>Air Force</i>	0.000	0.000	0.929	0.000	0.929	1.348	0.757	6.025	1.690	Continuing	Continuing

D. Acquisition Strategy

Ongoing activities utilize existing risk reduction engineering and study efforts to rapidly deploy a SOA environment and tools to progressively advance operational capabilities toward an integrated JMS.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Integration	C/Various	Various:Various,	2.125	15.465	Jan 2011	17.192	Dec 2011	-		17.192	Continuing	Continuing	TBD
Infrastructure Design & Development	C/Various	Various:Various,	7.278	8.676	Dec 2010	2.687	Dec 2011	-		2.687	Continuing	Continuing	TBD
Subtotal			9.403	24.141		19.879		-		19.879			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	1.030	2.468	Nov 2010	2.215	Dec 2011	-		2.215	Continuing	Continuing	TBD
Development, Eng Mgt, and Review	SS/TBD	Electronic Systems Center FFRDC: Various:Various,	1.340	1.525	Nov 2010	1.620	Nov 2011	-		1.620	Continuing	Continuing	TBD
Development, Management and Review	C/TBD	Various:Various,	2.727	4.064	Nov 2010	4.171	Nov 2011	-		4.171	Continuing	Continuing	TBD
Subtotal			5.097	8.057		8.006		-		8.006			

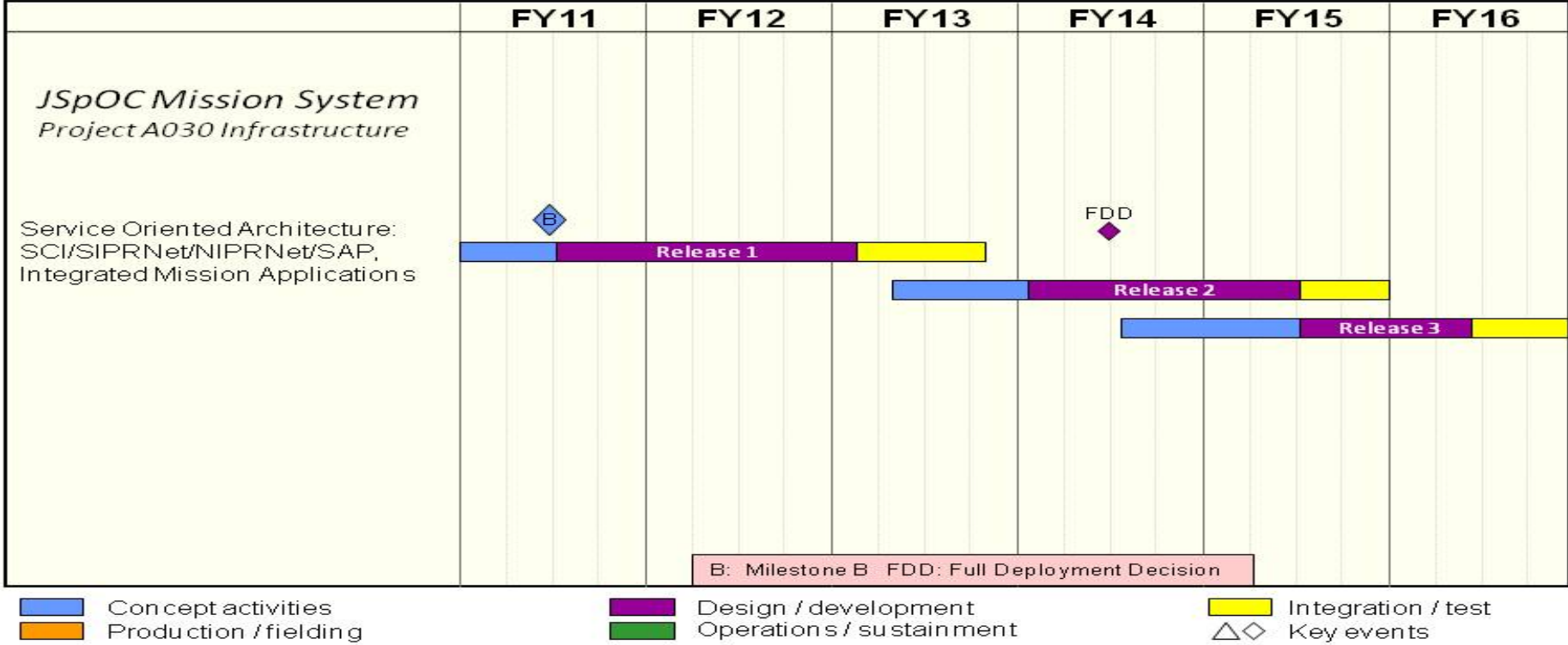
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
RTO	C/TBD	Not specified.:	0.500	3.150	Dec 2010	3.189	Dec 2011	-		3.189	Continuing	Continuing	TBD
Subtotal			0.500	3.150		3.189		-		3.189			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A030: <i>Infrastructure</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Design and Development of Release 1	2	2011	1	2013
Operational Utility Evaluation of Release 1	1	2013	4	2013
Design and Development of Release 2	1	2014	2	2015
Operational Utility Evaluation of Release 2	3	2015	4	2015
Full Deployment Decision	2	2014	2	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A031: <i>Mission Applications</i>	58.993	79.169	73.291	-	73.291	42.984	45.892	46.961	47.518	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Mission applications will provide space services to enhancing the accuracy, sustainability, and responsiveness of space surveillance capabilities from the legacy SPADOC SSA functions onto a net-centric enterprise enabling automated, real-time correlation, integration, distribution of data, and provide the knowledge environment necessary to enable the Commander JFCC Space rapid, responsive decisions for the protection of space assets from proliferating threats (adversary as well as orbiting debris). The system will provide a high accuracy space catalog (knowledge of space objects), increased observation verification and capabilities, and improved event processing. Research, design, and development will provide SSA space catalog applications, services, space surveillance observation processing, and sensor tasking. Funding includes technical studies, systems engineering, and integration. These efforts are in Budget Activity 7, Operational System Development

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Mission Applications	58.993	79.169	73.291	-	73.291
Description: services/mission applications to conduct space control/situational awareness					
FY 2010 Accomplishments: FY10 Accomplishments: Develop and tested mission services like sensor management and force status. Initiated risk reduction for space environmental effects, space superiority, and SSA web services.					
FY 2011 Plans: FY11 Plans: Develop, field, and test mission services like orbit determination satellite positional database (i.e. high accuracy catalog); conjunction analysis/collision prediction; and continue risk reduction efforts like SSA data sharing, space environmental effects, space superiority, and SSA web services.					
FY 2012 Base Plans: FY12 Base Plans: Continues development of mission services like satellite positional database and conjunction analysis/collision prediction; SSA data sharing; maneuver processing; sensor calibration and tasking; and risk reduction efforts.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	58.993	79.169	73.291	-	73.291

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• OPAF: <i>PE 0305614F, JSpOC Mission System</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Continues existing SSA risk reduction efforts and competitively selected system developer and integrator. Rapid release prototyping approach to progressively advance capabilities towards integrated SSA envisioned by existing architectures and roadmaps.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Positional Mission Apps Design and Develop	C/Variou	Various:Various,	21.030	7.341	Nov 2010	7.523	Nov 2011	-		7.523	Continuing	Continuing	TBD
Mission Apps Design and Develop	C/Variou	Various:Various,	19.778	42.242	Dec 2010	42.250	Dec 2011	-		42.250	Continuing	Continuing	TBD
SSA Risk Reduction	C/Variou	Various:Various,	4.500	15.800	Jan 2011	8.634	Jan 2012	-		8.634	Continuing	Continuing	TBD
Subtotal			45.308	65.383		58.407		-		58.407			

Remarks
Note: Potential Mission Aps for FY10 is in error in ABIDES and this Rdoc. FY10 actuals for Potential Mission Aps is: \$19.859M (-\$1.172 less than what is reflected in ABIDES and Rdocs).

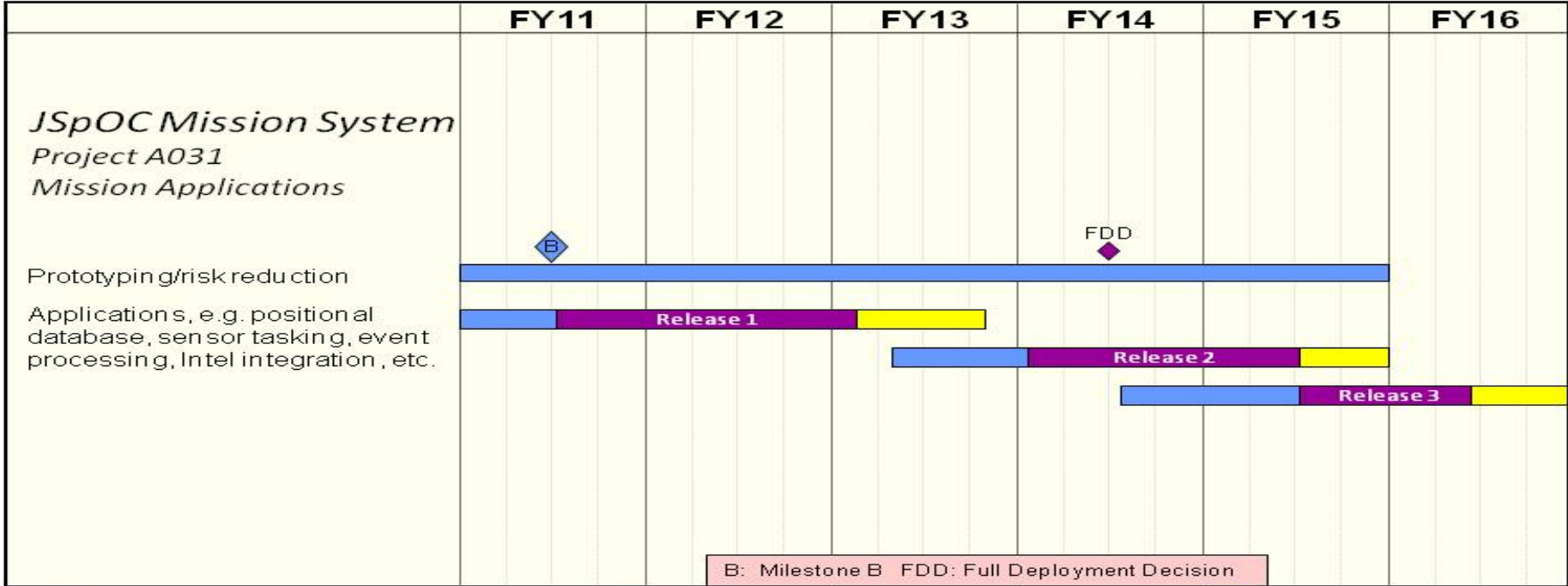
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	2.792	2.202	Nov 2010	2.381	Nov 2011	-		2.381	Continuing	Continuing	TBD
Development, Eng Management, and Review	SS/TBD	MITRE:Boston, MA	4.862	4.651	Nov 2010	5.079	Nov 2011	-		5.079	Continuing	Continuing	TBD
Development, Management & Review	C/TBD	Various:Various,	5.031	6.833	Nov 2010	7.159	Nov 2011	-		7.159	Continuing	Continuing	TBD
Subtotal			12.685	13.686		14.619		-		14.619			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
RTO	C/CPAF	Not specified.:	1.000	0.100	Dec 2010	0.265	Dec 2011	-		0.265	Continuing	Continuing	TBD
Subtotal			1.000	0.100		0.265		-		0.265			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>



- Concept activities
- Design / development
- Integration / test
- Production / fielding
- Operations / sustainment
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A031: <i>Mission Applications</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction & Prototyping	1	2011	4	2015
Release 1 design and development	2	2011	1	2013
Release 1 operational utility evaluation	1	2013	4	2013
Release 2 design and development	1	2014	2	2015
Release 2 operational utility evaluation	3	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A032: <i>Command & Control</i>	2.500	9.907	11.230	-	11.230	19.814	24.439	25.310	21.701	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Command & Control (C2) effort will design, develop and integrate functions to create, visualize, and share decision-relevant views of space operational environment at all echelons. Functions include Space Situational Awareness and attack assessment data to provide an integrated space information environment for the JSpOC C2 node and improve deliberate attack warning/reporting, planning, tasking, course of action (COA) development capability, and situation assessment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: C2	2.500	9.907	11.230	-	11.230
Description: Risk reduction/prototype development of space C2 services					
FY 2010 Accomplishments: FY10 Accomplishments: Initiated Joint Execution & Tasking System for Space.					
FY 2011 Plans: FY 11 Plans: explore JSpOC C2 human factors visualization technologies and space control applications like master space plan, joint space tasking order, space order of battle.					
FY 2012 Base Plans: FY 12 Base Plans: Continues space control services like courses of action preparation and C2 presentation.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	2.500	9.907	11.230	-	11.230

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Risk reduction technology development/operational pilots to decrease uncertainties then employ competitively selected developer to produce and field incremental capabilities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
C2 Risk Reduction	Various	AFRL:Rome, NY	2.500	9.214	Dec 2010	10.531	Nov 2011	-		10.531	Continuing	Continuing	TBD
Subtotal			2.500	9.214		10.531		-		10.531			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	Various	Electronic Systems Center:Hanscom AFB, MA	-	0.693	Nov 2010	0.699	Nov 2011	-		0.699	Continuing	Continuing	TBD
Subtotal			-	0.693		0.699		-		0.699			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

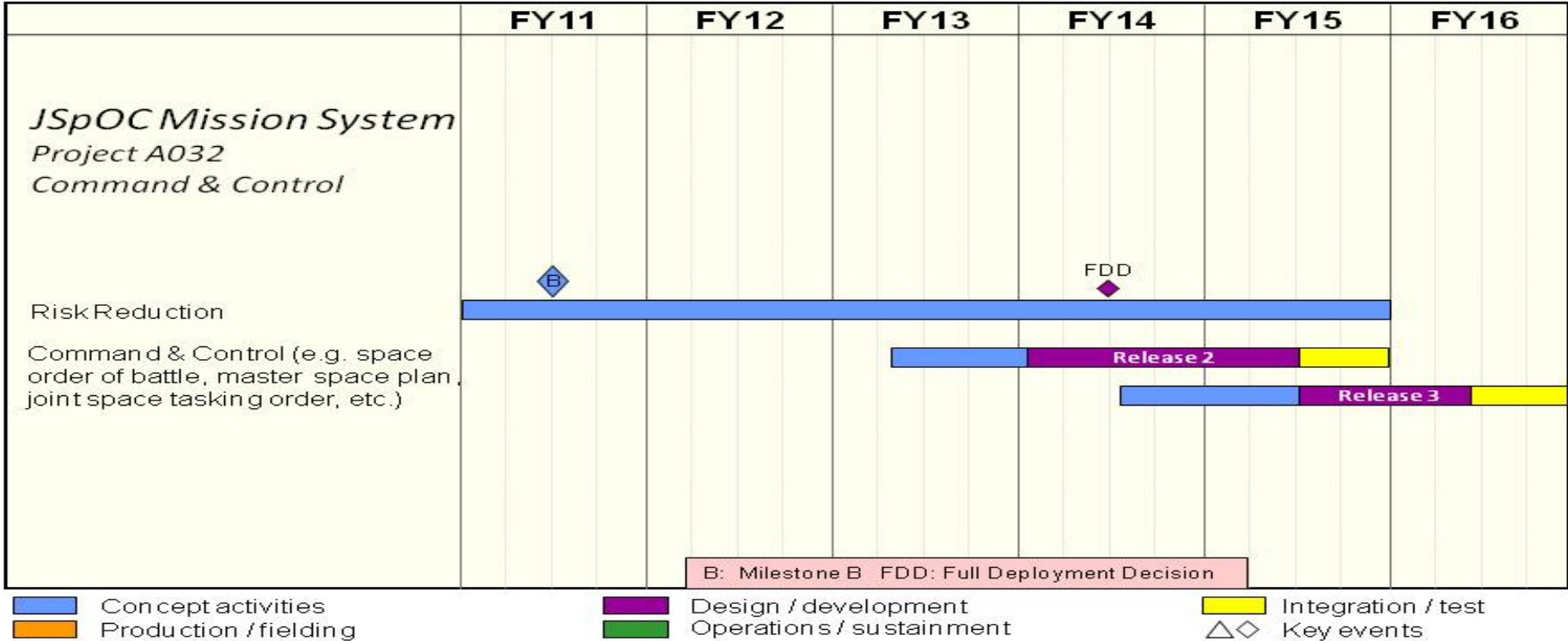
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			2.500	9.907		11.230		-		11.230			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A032: <i>Command & Control</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Risk Reduction	1	2011	4	2015
Release 2 Design and Development	1	2014	2	2015
Release 2 Operational Utility Evaluation	3	2015	4	2015

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A033: <i>Data Integration</i>	10.972	8.282	3.355	-	3.355	4.237	3.663	2.105	4.640	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Data Integration Risk reduction effort mitigates JMS risk for the integration of legacy sensors into a net-centric based enterprise enabling distribution of data obtained across traditional sensors within the space surveillance network and non-traditional sensors and data sources critical to the Joint Space Operations Center (JSpOC) mission. This effort will define and implement the operational concept, technical architecture, and support concept to provide data to enable rapid, responsive decisions by the Commander, US Strategic Command's Joint Functional Component Commander for Space and other space capability users to ensure protection of US space assets from proliferating adversary threats. This effort is vital to JSpOC modernization. The Extended Space Sensor Architecture Advanced Concept Technology Demonstration (ESSA ACTD) is an example how disparate and legacy space sensors network data can be translated into a net-centric environment. This effort will build upon those lessons learned and ensure success thorough participation in Data Management Working Groups (DMWGs) and the Command and Control Space Situational Awareness Community of Interest (C2 SSA COI)

These efforts are in Budget Activity 7, Operational System Development, because they develop capabilities for better integration of SSA data or develop architectures guiding associated technical and budgetary planning.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Data Integration	1.792	8.282	3.355	-	3.355
Description: Data Integration Risk Reduction Effort					
FY 2010 Accomplishments: FY10 Accomplishments: engineering for common logical data model; \$1M additional for KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation					
FY 2011 Plans: FY11 Plans: continues common logical data model and management interfaces to include net-centric satellite observations for high-accuracy processing; space surveillance observations interface; and non-traditional sensors.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>		PROJECT 67A033: <i>Data Integration</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY12 Base Plans: Expand the net-centric sensor interfaces to include new space surveillance sensors such as the Space Fence program and continue non-traditional sensor integration.					
FY 2012 OCO Plans:					
Title: KARNAC (1)					
Description: Additional funding for Project KARNAC					
FY 2010 Accomplishments: Further KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulation					
FY 2011 Plans:					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals					
	2.792	8.282	3.355	-	3.355
	FY 2010	FY 2011			
Congressional Add: KARNAC					
FY 2010 Accomplishments: KARNAC study to improve JSpOC capabilities to include non-traditional data and three dimensional modeling and simulations					
FY 2011 Plans:					
Congressional Add: COTS Technology for Space C2					
FY 2010 Accomplishments: COTS technology to be used for Space Command and Control					
FY 2011 Plans:					
Congressional Adds Subtotals					
	8.180	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2012</u>	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>		
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>	
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Data integration focus is on supporting the migration of the space surveillance network sensors and non-traditional sensors and data sources to a net-centric architecture.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Concept Definition Research/Analysis	Various	Various:Various,	0.240	6.202	Nov 2010	1.830	Nov 2011	-		1.830	Continuing	Continuing	TBD
Sensor & Data Source Integration	Various	Various:Various,	1.552	1.500	Dec 2010	1.275	Nov 2011	-		1.275	Continuing	Continuing	TBD
Subtotal			1.792	7.702		3.105		-		3.105			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office/Related Support	Various	Various:Various,	-	0.580	Nov 2010	0.250	Nov 2011	-		0.250	Continuing	Continuing	TBD
Subtotal			-	0.580		0.250		-		0.250			

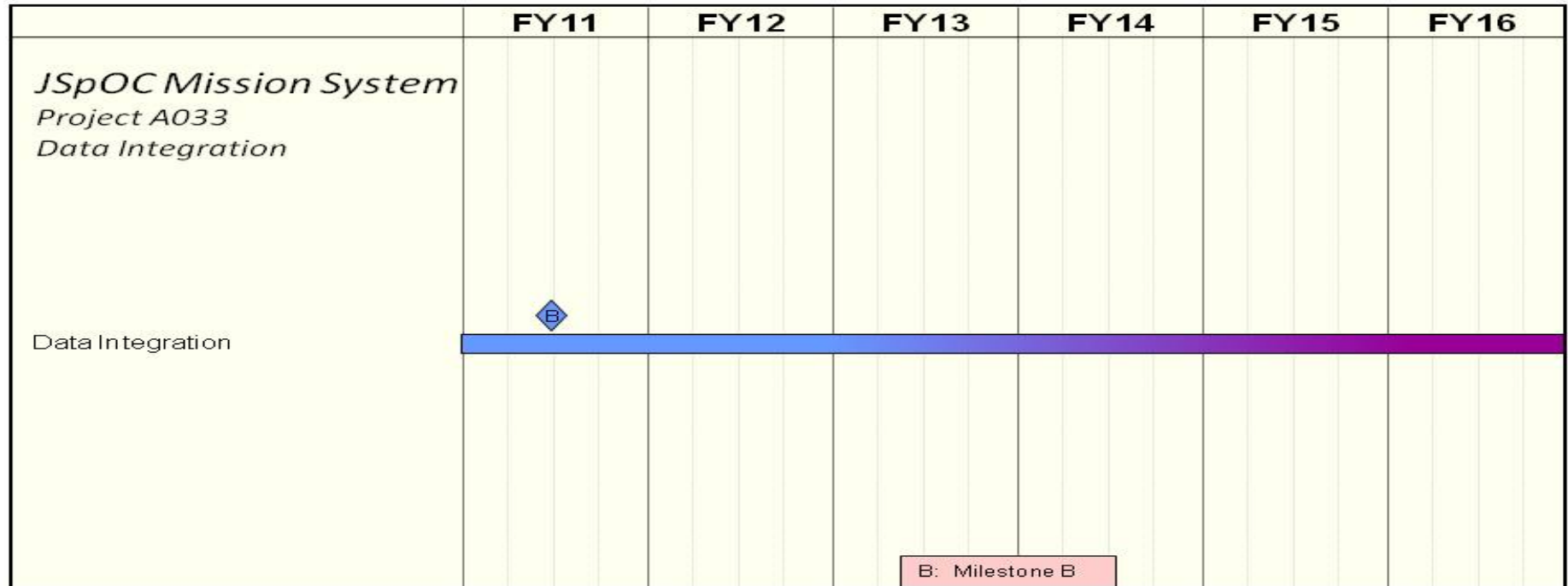
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
KARNAC Study	MIPR	DOE:Various,	6.000	-		-		-		-	0.000	6.000	0.000
COTS for Space C2	SS/CPFF	General Dynamics:Santa Clara, CA	3.180	-		-		-		-	0.000	3.180	0.000
Subtotal			9.180	-		-		-		-	0.000	9.180	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>



- Concept activities
- Design / development
- Integration / test
- Production / fielding
- Operations / sustainment
- △◇ Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305614F: <i>JSpOC Mission System</i>	PROJECT 67A033: <i>Data Integration</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Data Integration	1	2011	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	6.080	5.512	14.736	-	14.736	14.710	15.380	14.690	15.412	Continuing	Continuing
670374: <i>Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt</i>	6.080	5.512	14.736	-	14.736	14.710	15.380	14.690	15.412	Continuing	Continuing

Note

The program funding includes reductions for Service Support Contractors efficiencies that are not intended to impact program content. The efficiencies reductions total \$00.028M in FY12.

A. Mission Description and Budget Item Justification

This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms including the Network Attack System (NAS) via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capability Plan (IOCP) and the DoD Information Operations (IO) Roadmap. The program office investigates and selects the highest potential IO technologies to meet specific shortfalls, deficiencies, and requirements documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilities documents. In accordance with AF Policy on IO, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations. Planned areas of study, prototyping, and technology demonstration include, but are not limited to, exploitation of networks, telephony, Integrated Air Defense Systems (IADS), electronic warfare operations, Command and Control Systems (C2), and applying the latest advancements in emerging physics, electronic warfare, communications, directed energy, electronic sensors, and intelligence to IS. These advancements will be used to develop and deliver cutting edge technologies to the warfighter. The program office works directly with labs, industry, and warfighters to set priorities and find synergistic combinations of new technology, doctrine and training via multiple Network Warfare Operations Capability (NWOC) contract awards to deliver state of the art IO tools to the warfighter as well as to engineer key upgrades and modifications to the NAS. Program funds Cyber C2 efforts to provide development of C2 capabilities across the entire spectrum of air, space, and cyber operations from strategic to tactical level for planning, executing and assessing theater-wide air, space and cyber operations. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the AF IOCP and other applicable requirements documents. Activities performed include those designed to identify, analyze, test, rapidly acquire, and integrate emerging cyber technologies into all regions of the Global Information Grid. Program activities are protected under the PANTHER DEN Special Access Program. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	5.220	5.512	2.474	-	2.474
Current President's Budget	6.080	5.512	14.736	-	14.736
Total Adjustments	0.860	-	12.262	-	12.262
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.022	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	1.039	-			
• SBIR/STTR Transfer	-0.157	-			
• Other Adjustments	-	-	12.262	-	12.262

Change Summary Explanation

Increase in FY12-15 funding provided to achieve AF Cyber Superiority priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>				PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
670374: <i>Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt</i>	6.080	5.512	14.736	-	14.736	14.710	15.380	14.690	15.412	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms including the Network Attack System (NAS) via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capability Plan (IOCP) and the DoD Information Operations (IO) Roadmap. The program office investigates and selects the highest potential IO technologies to meet specific shortfalls, deficiencies, and requirements documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilities documents. In accordance with AF Policy on IO, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations. Planned areas of study, prototyping, and technology demonstration include, but are not limited to, exploitation of networks, telephony, Integrated Air Defense Systems (IADS), electronic warfare operations, Command and Control Systems (C2), and applying the latest advancements in emerging physics, electronic warfare, communications, directed energy, electronic sensors, and intelligence to IS. These advancements will be used to develop and deliver cutting edge technologies to the warfighter. The program office works directly with labs, industry, and warfighters to set priorities and find synergistic combinations of new technology, doctrine and training via multiple Network Warfare Operations Capability (NWOC) contract awards to deliver state of the art IO tools to the warfighter as well as to engineer key upgrades and modifications to the NAS. Program funds Cyber C2 efforts to provide development of C2 capabilities across the entire spectrum of air, space, and cyber operations from strategic to tactical level for planning, executing and assessing theater-wide air, space and cyber operations. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the AF IOCP and other applicable requirements documents. Activities performed include those designed to identify, analyze, test, rapidly acquire, and integrate emerging cyber technologies into all regions of the Global Information Grid. Program activities are protected under the PANTHER DEN Special Access Program. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: NAS	3.130	3.556	5.375	-	5.375
Description: NAS - Network Attack System Modifications/Upgrades					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>	PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>This effort kept the current operational system viable via necessary upgrades & modifications. This funding also continued to provide the program office manpower required for oversight of numerous acquisition programs. These activities are protected under the PANTHER DEN Special Access Program.</p> <p>FY 2011 Plans: This effort will continue maintaining the current operational system via necessary upgrades and modifications. Increased funding is due to greater anticipated equipment obsolescence requiring replacement via upgrades and modifications. This funding also continues to provide the program office manpower required for oversight of numerous acquisition programs. These activities are protected under the PANTHER DEN Special Access Program.</p> <p>FY 2012 Base Plans: This effort will continue maintaining the current operational system via necessary upgrades and modifications. Increased funding is due to greater anticipated equipment obsolescence requiring replacement via upgrades and modifications. This funding also continues to provide the program office manpower required for oversight of numerous acquisition programs. These activities are protected under the PANTHER DEN Special Access Program.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: NWOC Description: NWOC - Network Warfare Operations Capability Studies & Technology</p> <p>FY 2010 Accomplishments: This effort continued the transition of IO technologies to meet capability gaps required by major commands, unified commands, and capabilities documents. These activities are protected under the PANTHER DEN Special Access Program.</p> <p>FY 2011 Plans: This effort continues transition of IO technologies to meet current capability gaps required by major commands, unified commands, and capabilities documents. FY11 funding reduced due to expected increase in the NAS modernization and upgrade efforts. These activities are protected under the PANTHER DEN Special Access Program.</p> <p>FY 2012 Base Plans:</p>	2.522	1.457	8.761	-	8.761

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>	PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY12 efforts will support CENTCOM JUON, Weapons System(s) modernization and AFSPC UON and will continue transition of IO technologies to meet current capability gaps required by major commands, unified commands, and capabilities documents. These activities are protected under the PANTHER DEN Special Access Program. FY 2012 OCO Plans:					
Title: T&E Description: Test & Evaluation (46 Det 2) FY 2010 Accomplishments: Funding continued to provide the required developmental testing for new tool development for future fielding to the operational platform. This funding provided the secure environment for such testing. FY 2011 Plans: Funding continues to provide the required developmental testing for new tool development prior for future fielding to the operational platform. This funding provides the secure environment for such testing. FY 2012 Base Plans: Funding will continue to provide the required developmental testing for new tool development prior for future fielding to the operational platform. This funding will provide the secure environment for such testing. FY 2012 OCO Plans:	0.428	0.499	0.600	-	0.600
Accomplishments/Planned Programs Subtotals	6.080	5.512	14.736	-	14.736

C. Other Program Funding Summary (\$ in Millions)										
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete Total Cost</u>
• PE 0305887F: <i>Info Assurance R&D O&M</i>	12.457	4.853	5.711	0.000	5.711	4.678	4.897	5.192	5.349	Continuing Continuing

D. Acquisition Strategy
For the NAS, the acquisition strategy is a sole source award using multiple types of contracts; a Firm Fixed Priced contract for sustainment and hardware/software patches; a Cost Plus Fixed Fee contract for enhancements and upgrades. The strategy for NAS follow-on or new capabilities is to use a Broad Agency Announcement (BAA) which will deliver capabilities to include sustainment, incremental releases, and minor enhancements to the currently fielded system in annual spiral upgrades.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>	PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt</i>

NWOC tools are acquired through another BAA, which allows us to constantly accept, analyze, and acquire promising new commercial capabilities to enhance our arsenal of network warfare tools.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>	PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
NAS Modifications/Upgrades	C/CPFF	General Dynamics:San Antonio, TX	0.782	0.367	Nov 2010	2.000	Nov 2011	-		2.000	Continuing	Continuing	TBD
NWOC Studies & Technology	C/CPFF	Various:Various,	4.128	1.457	Jan 2011	8.761	May 2012	-		8.761	Continuing	Continuing	TBD
Subtotal			4.910	1.824		10.761		-		10.761			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Acquisition Support	C/CPAF	Various:San Antonio, TX	2.661	1.139	Nov 2010	1.467	Nov 2011	-		1.467	Continuing	Continuing	TBD
Engineering Support	C/CPAF	Various:San Antonio, TX	2.657	2.050	Oct 2010	1.908	Oct 2011	-		1.908	Continuing	Continuing	TBD
Subtotal			5.318	3.189		3.375		-		3.375			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
46 Det 2 Test Squadron	C/CPAF	Northrup Grumman:San Antonio, TX	1.028	0.499	Mar 2011	0.600	Mar 2012	-		0.600	Continuing	Continuing	TBD
Subtotal			1.028	0.499		0.600		-		0.600			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Centralized PMA	C/CPAF	Various:Hanscom AFB, MA	0.075	-		-		-		-	Continuing	Continuing	0.000
Subtotal			0.075	-		-		-		-			0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

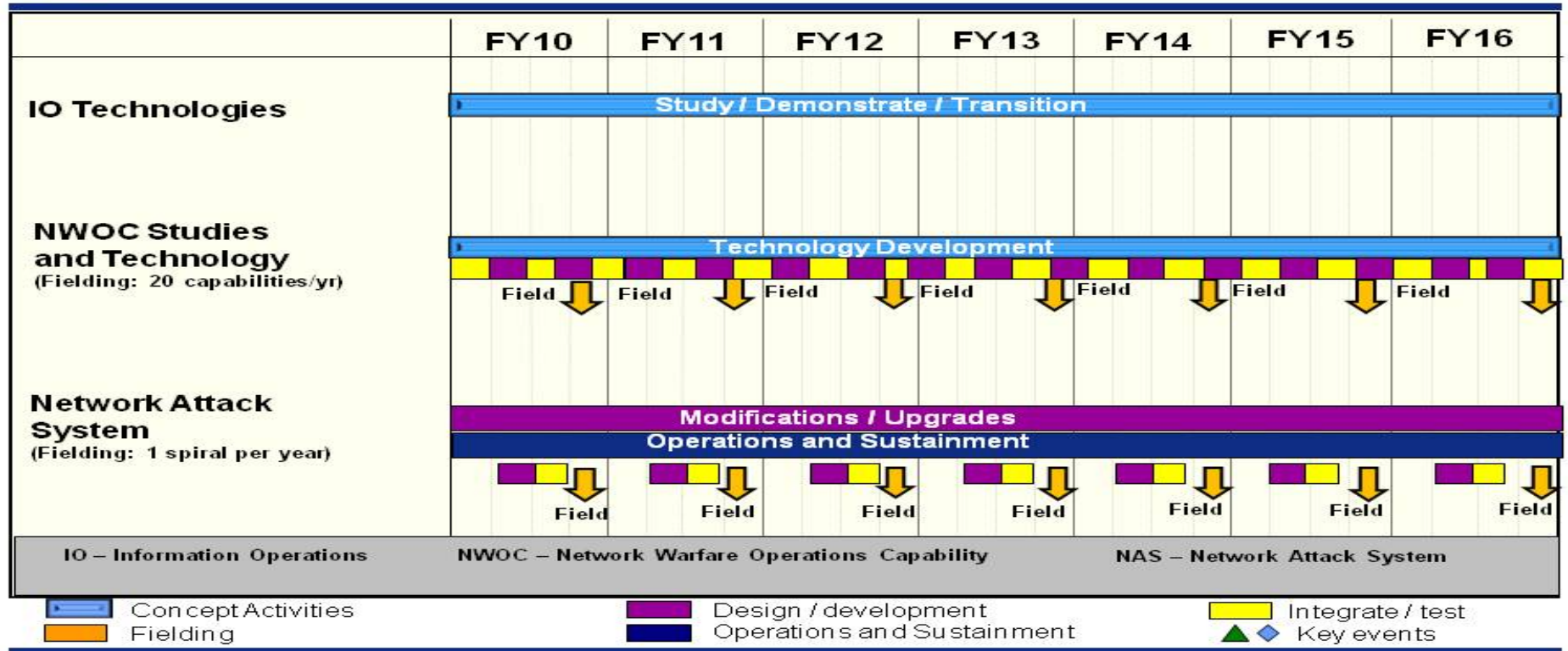
PE 0305887F: Electronic Combat Intelligence Support

PROJECT

670374: Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt



IO Schedule



Current as of: Jan 2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305887F: <i>Electronic Combat Intelligence Support</i>	PROJECT 670374: <i>Electronic Combat Spt, C3 Protection/ Multi-Mission, Technology and Spt</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
IO Technologies	1	2010	4	2016
NWOC - Network Warfare Operations Capability Studies and Technology	1	2010	4	2016
NAS - Network Attack System Modifications/Upgrades	1	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System (Space)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	78.140	72.199	81.989	-	81.989	79.325	60.344	49.309	50.200	Continuing	Continuing
672808: <i>Nuc Detonation Det Sys (sensors)</i>	78.140	72.199	81.989	-	81.989	79.325	60.344	49.309	50.200	Continuing	Continuing

Note

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.556M in FY12.

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 Defense 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 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, neutron and gamma rays) on Defense Support Program (DSP) satellites and Space and Atmospheric Burst (SABRS) systems on Geostationary (GEO) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS), Universal Ground NDS Terminals (UGNT).

This NDS Program Element (PE) includes research and development, systems engineering, testing and fielding of ICADS, UGNT and the integration of SABRS sensors on GEO satellites. ICADS provides two fixed ground receiving stations and UGNT provides the survivable ground receiving station for sensor data from GPS satellites. UGNT, also known as GNT Build 6, is a transportable set of satellite ground station equipment and software. The UGNT will receive and processes data from sensors on GPS and DSP satellites and disseminates NUDET reports to users. SABRS is the next generation neutron/gamma sensor payload that will be hosted on two classified GEO satellites to replace the NDS sensor payload on DSP satellites. Sensor integration for GPS satellites is funded in the GPS Space & Control PE (0305165F) for GPS Block IIF and the GPS III Space Segment PE (0305265F) for GPS III satellites. Ground segment development remains in the NDS PE. DOE funds all NDS sensor research and production .

This program is in Budget Activity 7 - Operational System Development because it supports operational systems.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System (Space)</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	83.846	72.199	82.818	-	82.818
Current President's Budget	78.140	72.199	81.989	-	81.989
Total Adjustments	-5.706	-	-0.829	-	-0.829
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.351	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-5.355	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.829	-	-0.829

Change Summary Explanation

No significant program changes.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System (Space)</i>	PROJECT 672808: <i>Nuc Detonation Det Sys (sensors)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
672808: <i>Nuc Detonation Det Sys (sensors)</i>	78.140	72.199	81.989	-	81.989	79.325	60.344	49.309	50.200	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 Defense 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 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, neutron and gamma rays) on Defense Support Program (DSP) satellites and Space and Atmospheric Burst (SABRS) systems on Geostationary (GEO) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS), Universal Ground NDS Terminals (UGNT).

This NDS Program Element (PE) includes research and development, systems engineering, testing and fielding of ICADS, UGNT and the integration of SABRS sensors on GEO satellites. ICADS provides two fixed ground receiving stations and UGNT provides the survivable ground receiving station for sensor data from GPS satellites. UGNT, also known as GNT Build 6, is a transportable set of satellite ground station equipment and software. The UGNT will receive and processes data from sensors on GPS and DSP satellites and disseminates NUDET reports to users. SABRS is the next generation neutron/gamma sensor payload that will be hosted on two classified GEO satellites to replace the NDS sensor payload on DSP satellites. Sensor integration for GPS satellites is funded in the GPS Space & Control PE (0305165F) for GPS Block IIF and the GPS III Space Segment PE (0305265F) for GPS III satellites. Ground segment development remains in the NDS PE. DOE funds all NDS sensor research and production .

This program is in Budget Activity 7 - Operational System Development because it supports operational systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: NDS	78.140	72.199	81.989	-	81.989
Description: Research and development, testing and fielding of ICADS, GNT, UGNT and the integration of SABRS on GEO satellites.					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System</i> (Space)	PROJECT 672808: <i>Nuc Detonation Det Sys (sensors)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
ICADS and GNT development, NDS sensor on-orbit qualification testing, SABRS on GEO host development and integration, SE&I and technical support. FY 2011 Plans: ICADS, and GNT development, NDS sensor on-orbit qualification testing, SABRS on GEO host development and integration, SE&I and technical support. Begin development of hardware and software for UGNT. FY 2012 Base Plans: Continue ICADS and UGNT development, NDS sensor on-orbit qualification testing, SABRS on GEO host development and integration, SE&I and technical support and program technical support. FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	78.140	72.199	81.989	-	81.989

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF PE 0305913F: <i>NDS</i>	15.389	5.926	4.863	0.000	4.863	5.564	5.915	6.157	6.267	Continuing	Continuing

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 GPS and GEO 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. Funding is MIPR'd to the host satellite Designated Program Office (DPO).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System</i> (Space)	PROJECT 672808: <i>Nuc Detonation Det Sys (sensors)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ICADS and GNT	MIPR	Sandia National Laboratory:Albuquerque, NM	249.097	31.125	Nov 2010	26.374	Nov 2011	-		26.374	Continuing	Continuing	0.000
UGNT	MIPR	Various:Albuquerque, NM	-	12.700	Nov 2010	24.744	Nov 2011	-		24.744	Continuing	Continuing	0.000
SABRS	MIPR	Various:Classified,	79.526	16.500	Nov 2010	12.800	Nov 2011	-		12.800	Continuing	Continuing	0.000
Completed NDS Development Efforts	Various	Various:Various,	13.062	-		-		-		-	0.000	13.062	0.000
Subtotal			341.685	60.325		63.918		-		63.918			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support	Various	Various:Various,	32.832	6.048	Nov 2010	11.137	Nov 2011	-		11.137	Continuing	Continuing	0.000
Technical Support (FFRDC)	Various	Aerospace:El Segundo, CA	29.036	2.541	Nov 2010	2.588	Nov 2011	-		2.588	Continuing	Continuing	0.000
System Engineering & Integration (SE&I)	Various	MITRE:El Segundo, CA	5.684	0.564	Nov 2010	0.588	Nov 2011	-		0.588	Continuing	Continuing	0.000
Completed NDS Support Efforts	Various	Various:Various,	5.185	-		-		-		-	0.000	5.185	0.000
Subtotal			72.737	9.153		14.313		-		14.313			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	PO	17th Test Squadron:Schriever AFB, CO	1.141	0.257	Nov 2010	0.259	Nov 2011	-		0.259	Continuing	Continuing	0.000
On-orbit Sensor Testing	MIPR		26.360	2.464	Nov 2010	3.499	Nov 2011	-		3.499	Continuing	Continuing	0.000

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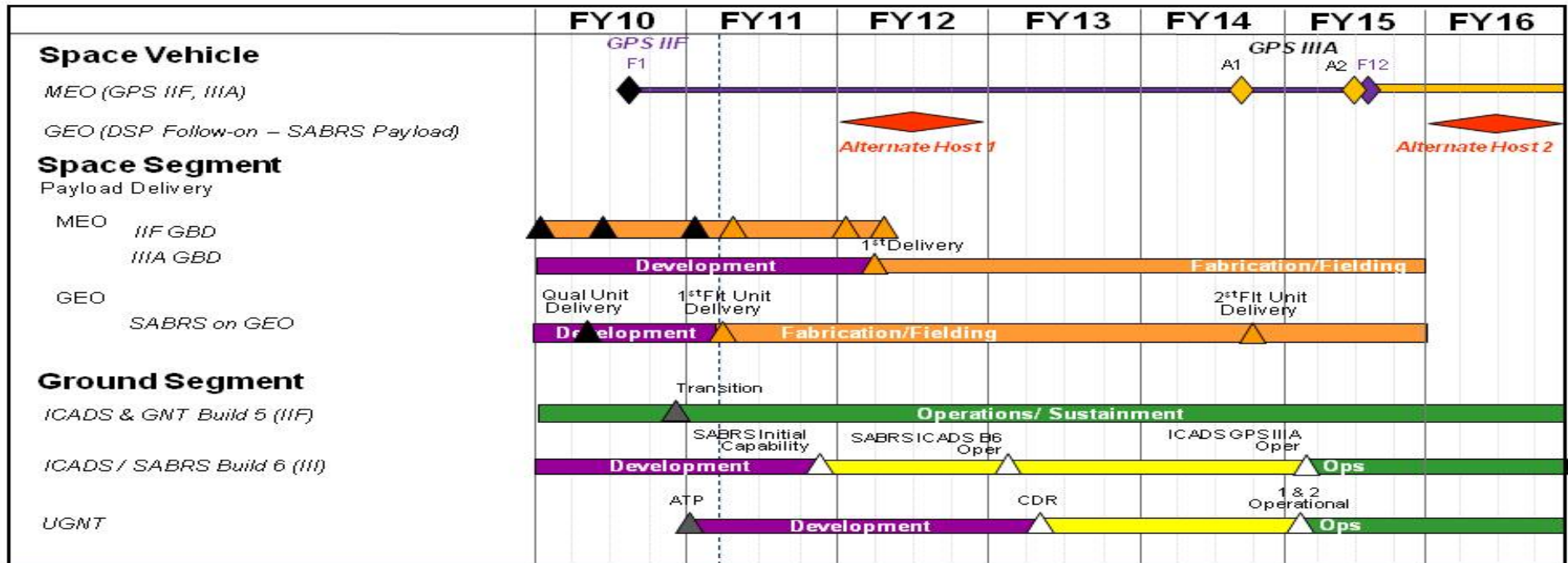
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE
 PE 0305913F: *NUDET Detection System (Space)*

PROJECT
 672808: *Nuc Detonation Det Sys (sensors)*



DSP – Defense Support Program
 MEO – Medium Earth Orbit
 GNT – Ground NDS Terminal

GBD – Global Burst Detector
 SABRS – Space & Atmospheric Burst Reporting System
 ICADS – Integrated Correlation & Display System

GEO – Geosynchronous Earth Orbit
 UGNT – Upgrade Ground NDS Terminal

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305913F: <i>NUDET Detection System (Space)</i>	PROJECT 672808: <i>Nuc Detonation Det Sys (sensors)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Space & Atmospheric Burst Reporting System (SABRS) on Alt Host 1 Complete	1	2011	3	2012
Integrated Correlation & Display System (ICADS) Build 6 Installation	1	2011	3	2011
Development and integration of SABRS on Alt Host 2	3	2011	3	2012
Development of Universal Ground NDS Terminal (UGNT)	1	2011	2	2013
Deliver final 2 Global Burst Detectors (GBD) for GPS IIF	3	2011	1	2012
ICADS SABRS Build 6 Transition to Operations	1	2012	1	2012
ICADS Build 6 Test	2	2012	3	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	10.630	-	-	-	-	-	-	-	Continuing	Continuing
67A016: <i>National Security Space Office</i>	-	10.630	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) was disestablished in December 2010. The Executive Agent for Space was directed to establish a jointly manned space office to support the DoD Executive Agent for Space and the Defense Space Council.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	10.630	10.773	-	10.773
Current President's Budget	-	10.630	-	-	-
Total Adjustments	-	-	-10.773	-	-10.773
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-10.773	-	-10.773

Change Summary Explanation

NSSO was disestablished in Dec 2010.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>	PROJECT 67A016: <i>National Security Space Office</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
67A016: <i>National Security Space Office</i>	-	10.630	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) was disestablished in December 2010. The Executive Agent for Space was directed to establish a jointly manned space office to support the DoD Executive Agent for Space and the Defense Space Council.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Planning and Assessments	-	10.630	-	-	-
Description: Conducts space planning and assessment activities, develops architectures for mid-/long-term space activities, and provides systems-of-systems engineering to examine the technical implications of these plans and architectures across the DoD community.					
FY 2010 Accomplishments: Not applicable					
FY 2011 Plans: Will provide National Security Space (NSS) strategy and enabling activities, NSS plan development and program assessment. Will develop and support space architecture and NSS studies. Will plan and implement architecture study and development, transition and implementation and architecture and enterprise engineering.					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	10.630	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>	PROJECT 67A016: <i>National Security Space Office</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A: <i>Not applicable</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>	PROJECT 67A016: <i>National Security Space Office</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Architecture/other product development II	C/CPAF	SAIC:San Diego, CA	-	6.733	Dec 2010	-		-		-	0.000	6.733	0.000
Architecture/other product development I	C/CPAF	Aerospace Corp:El Segundo, CA	-	1.953	Nov 2010	-		-		-	0.000	1.953	TBD
Architecture/other product development	C/CPAF	MITRE:Bedford, MA	-	1.944	Oct 2010	-		-		-	0.000	1.944	TBD
Subtotal			-	10.630			-			-	0.000	10.630	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-			-			-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-			-			-	0.000	0.000	0.000

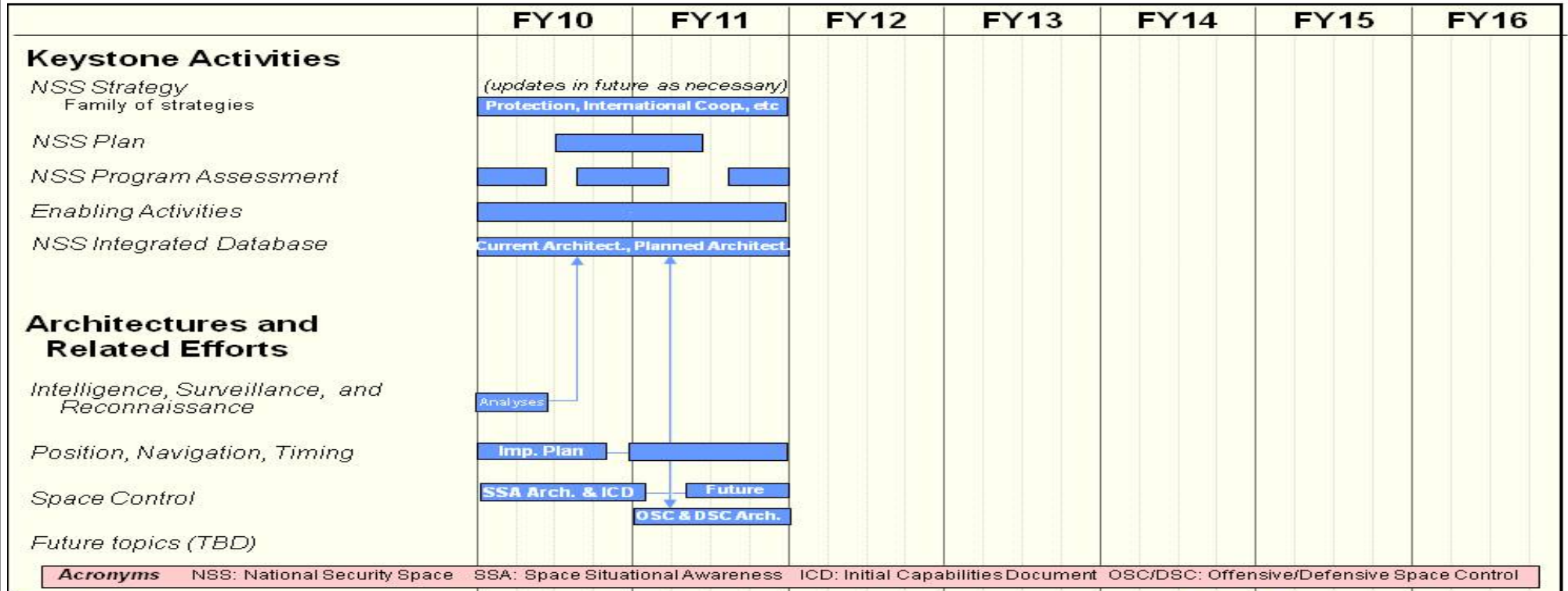
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-			-			-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	10.630			-			-	0.000	10.630	

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>	PROJECT 67A016: <i>National Security Space Office</i>



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|--|--|--|
|  Concept activities |  Design / development |  Integration / test |
|  Production / fielding |  Operations / sustainment |  Key events |

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305924F: <i>National Security Space Office</i>	PROJECT 67A016: <i>National Security Space Office</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Contribute to biannual NSS Plan	2	2011	2	2011
Contribute to annual NSS Program Assessment	2	2010	2	2011
Contribute to annual NSS Program Assessment (2)	3	2010	2	2011
Contribute to annual NSS Program Assessment (3)	3	2011	4	2011
Contribute to space architecture efforts	1	2010	4	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	47.823	43.838	31.956	-	31.956	20.910	34.866	31.102	75.121	Continuing	Continuing
67A017: <i>Sensor Service Life Extension Program</i>	47.823	43.838	31.956	-	31.956	20.910	34.866	31.102	75.121	Continuing	Continuing

Note

The program funding in this Program Element includes overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.440M in FY12.

A. Mission Description and Budget Item Justification

Space Situational Awareness (SSA) is knowledge of all aspects of space related to operations. As the foundation for space control, SSA 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 maintains 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) fund efforts to upgrade and extend the life of operational Space Situation Awareness (SSA) sensors, as needed. These SLEPs include, but are not limited to, programs that extend the serviceable life of assets and maintain critical capability by replacing aging and increasingly unsustainable components with modern equipment. SLEPs may incorporate equipment which inherently includes technological advances resulting in enhanced or increased capabilities. In addition, the SLEP itself may be designed to increase certain capabilities. The current efforts of Eglin, Haystack Ultra-wideband Satellite Imaging Radar (HUSIR), Ground-based Electro Optical Deep Space Surveillance (GEODSS), and Globus II are representative of sensor systems upgraded in the SLEP project. As the need arises in the execution year, funds in this project may be used to begin sensor life extension programs on additional efforts. These efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	54.648	43.838	26.744	-	26.744
Current President's Budget	47.823	43.838	31.956	-	31.956
Total Adjustments	-6.825	-	5.212	-	5.212
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.071	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-3.000	-			
• SBIR/STTR Transfer	-2.754	-			
• Other Adjustments	-	-	5.212	-	5.212

Change Summary Explanation

FY12: \$5.759 was transferred from procurement (Space Mods Space) to RDTE funding
FY12: -\$0.440 was removed for Air Force efficiencies
FY12: -\$0.107 was removed for OSD inflations

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>
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COST (\$ in Millions)	FY 2010		FY 2011		FY 2012		FY 2013		FY 2014		FY 2015		FY 2016		Cost To Complete	Total Cost
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost					
67A017: <i>Sensor Service Life Extension Program</i>	47.823	43.838	31.956	-	31.956	20.910	34.866	31.102	75.121	Continuing	Continuing					
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0							

A. Mission Description and Budget Item Justification

Space Situational Awareness (SSA) is knowledge of all aspects of space related to operations. As the foundation for space control, SSA 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 maintains 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) fund efforts to upgrade and extend the life of operational Space Situation Awareness (SSA) sensors, as needed. These SLEPs include, but are not limited to, programs that extend the serviceable life of assets and maintain critical capability by replacing aging and increasingly unsustainable components with modern equipment. SLEPs may incorporate equipment which inherently includes technological advances resulting in enhanced or increased capabilities. In addition, the SLEP itself may be designed to increase certain capabilities. The current efforts of Eglin, Haystack Ultra-wideband Satellite Imaging Radar (HUSIR), Ground-based Electro Optical Deep Space Surveillance (GEODSS), and Globus II are representative of sensor systems upgraded in the SLEP project. As the need arises in the execution year, funds in this project may be used to begin sensor life extension programs on additional efforts. These efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Eglin	18.974	20.295	9.619	-	9.619
Description: Extends the operational life of the AN/FPS-85 Radar, located at Eglin AFB, through 2018 by upgrading the hardware and software of the radar system to improve system operability and sustainment for AFSPC Space Object Identification (SOI) and metric tracking missions.					
FY 2010 Accomplishments: Complete Phase 1 - Control and Signal Processor Upgrade (CSPU) production and fielding. Accomplish CSPU integration and test.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Released RFP for Phase I SCG replacement. FY 2011 Plans: Award Phase I contract to replace SCG. Award Phase II Tech Assessment. FY 2012 Base Plans: Conduct Phase I PDR and CDR. Purchase hardware for SCG effort. FY 2012 OCO Plans:					
Title: Globus II Description: Globus II Service Life Extension Program. Replace aging and unsustainable hardware groups including the transmitter, mission critical computing resources (MCCR), and receiver-exciter (REX) to extend the radar system operational life. FY 2010 Accomplishments: Released RFP for Phase 1 - Transmitter replacement. FY 2011 Plans: Award Phase I contract to replace the transmitter. Award Phase 2 MCCR/REX technical assessment. FY 2012 Base Plans: Conduct Phase I PDR and CDR. Purchase hardware for transmitter replacement. FY 2012 OCO Plans:	0.673	5.196	11.889	-	11.889
Accomplishments/Planned Programs Subtotals	47.823	43.838	31.956	-	31.956

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0305940F: <i>Eglin, Procurement</i>	0.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0305940F (1): <i>GEODSS, Procurement</i>	0.000	2.248	0.000	0.000	0.000	5.391	0.000	1.659	5.000	Continuing	Continuing
	0.000	0.000	0.000	0.000	0.000	0.000	0.000	27.327	23.783	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0305940F (2): <i>Globus II ,Procurement</i>											

D. Acquisition Strategy

The Eglin SLEP effort is replacing key radar items via an option on the System Engineering, Sustainment and Modernization (SENSOR) contract, competitively awarded to ITT Industries (now ITT Corporation) in 2002. The Air Force uses the SENSOR contract for sustaining and upgrading various Air Force radars, including the Eglin radar.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the HUSIR effort under a master contract with the Electronics System Center, in conjunction with support from other agencies as required. 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 as per contract with the Air Force. MIT/LL will be responsible for operations and sustainment of the upgraded Haystack radar.

The GEODSS SLEP will be awarded as an option on the System Engineering and Sustainment Integrator (SENSOR) contract, competitively awarded to ITT Industries (now ITT Corporation) in 2002. The GEODSS SLEP will use a phased development and deployment strategy to reduce risk.

The Globus II SLEP will be awarded as an option on the System Engineering and Sustainment Integrator (SENSOR) contract, competitively awarded to ITT Industries (now ITT Corporation) in 2002. The Globus II SLEP will use a phased development and deployment strategy to reduce risk.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Eglin architecture development and life extension	C/CPAF	ITT Corporation:Colorado Springs, CO	48.745	16.513	Jun 2011	7.000	Oct 2011	-		7.000	Continuing	Continuing	0.000
HUSIR design and build	SS/TBD	MIT Lincoln Laboratory:Lexington, MA	59.577	4.409	Oct 2010	0.918	Oct 2011	-		0.918	Continuing	Continuing	0.000
GEOSS design, development and life extension	C/CPIF	ITT Corporation:Colorado Springs, CO	-	10.725	Jun 2011	6.544	Jan 2012	-		6.544	Continuing	Continuing	0.000
Globus II development and life extension	C/CPIF	ITT Corporation:Colorado Springs, CO	-	4.470	Jun 2011	9.964	Sep 2012	-		9.964	Continuing	Continuing	0.000
Subtotal			108.322	36.117		24.426		-		24.426			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Development review and management/L3	C/TBD	L3 Engility:Billerica, MA	1.335	-		-		-		-	Continuing	Continuing	0.000
Development review and management/PASS	C/TBD	Odyssey Systems:Wakefield, MA	3.367	1.272	Feb 2011	1.240	Feb 2012	-		1.240	Continuing	Continuing	0.000
Technical review and management/ETASS	C/TBD	Jacobs Technology:Tullahoma, TN	3.770	1.607	Jan 2011	1.660	Jan 2012	-		1.660	Continuing	Continuing	0.000
Program Office Support	Various	Electronic Systems Center:AFB:Hanscom MA,PetersonCO,	13.258	3.963	Nov 2010	3.642	Nov 2011	-		3.642	Continuing	Continuing	0.000
Specialized Cost Services	C/TBD	Tecolote:AFB:HanscomMA,PetersonCO,	0.572	0.523	Oct 2010	0.521	Oct 2011	-		0.521	0.000	1.416	0.000
Subtotal			22.102	7.365		7.063		-		7.063			0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

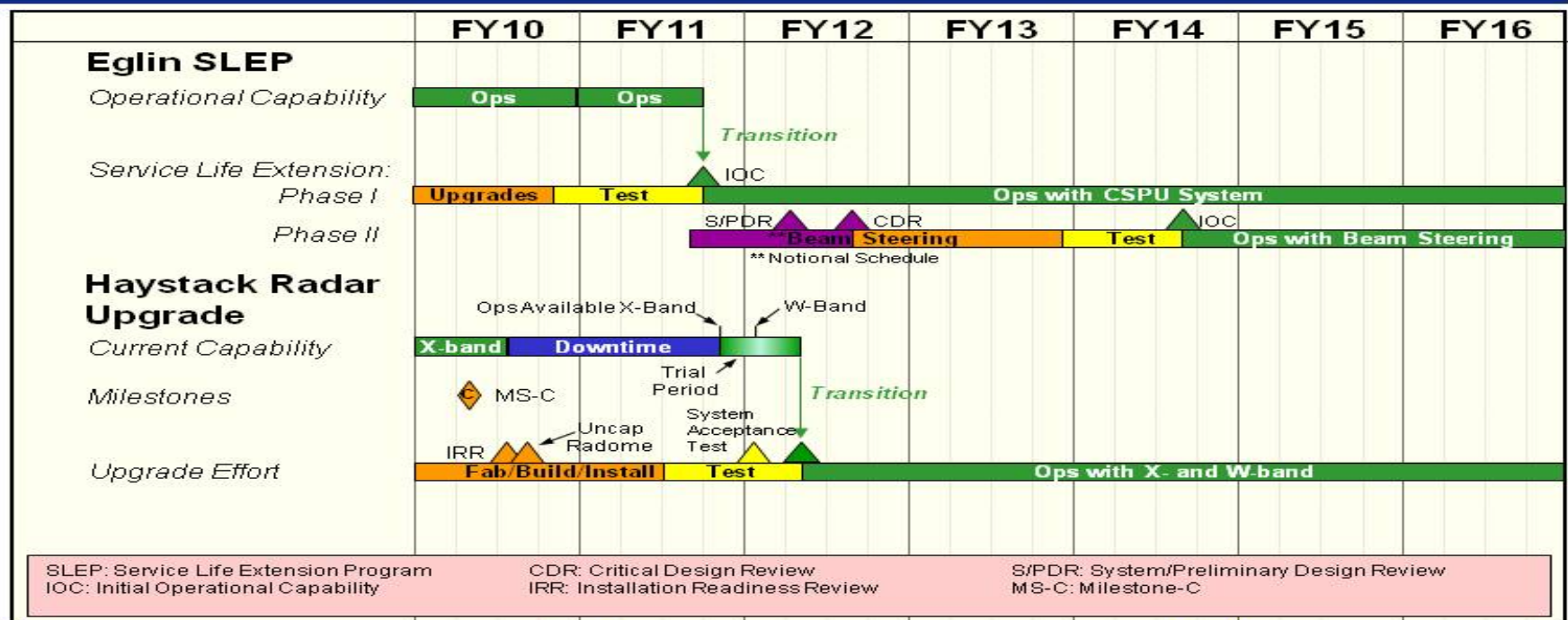
APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0305940F: Space Situational Awareness
 Operations

PROJECT
 67A017: Sensor Service Life Extension
 Program



SSA Programs Sensor SLEPs Schedule



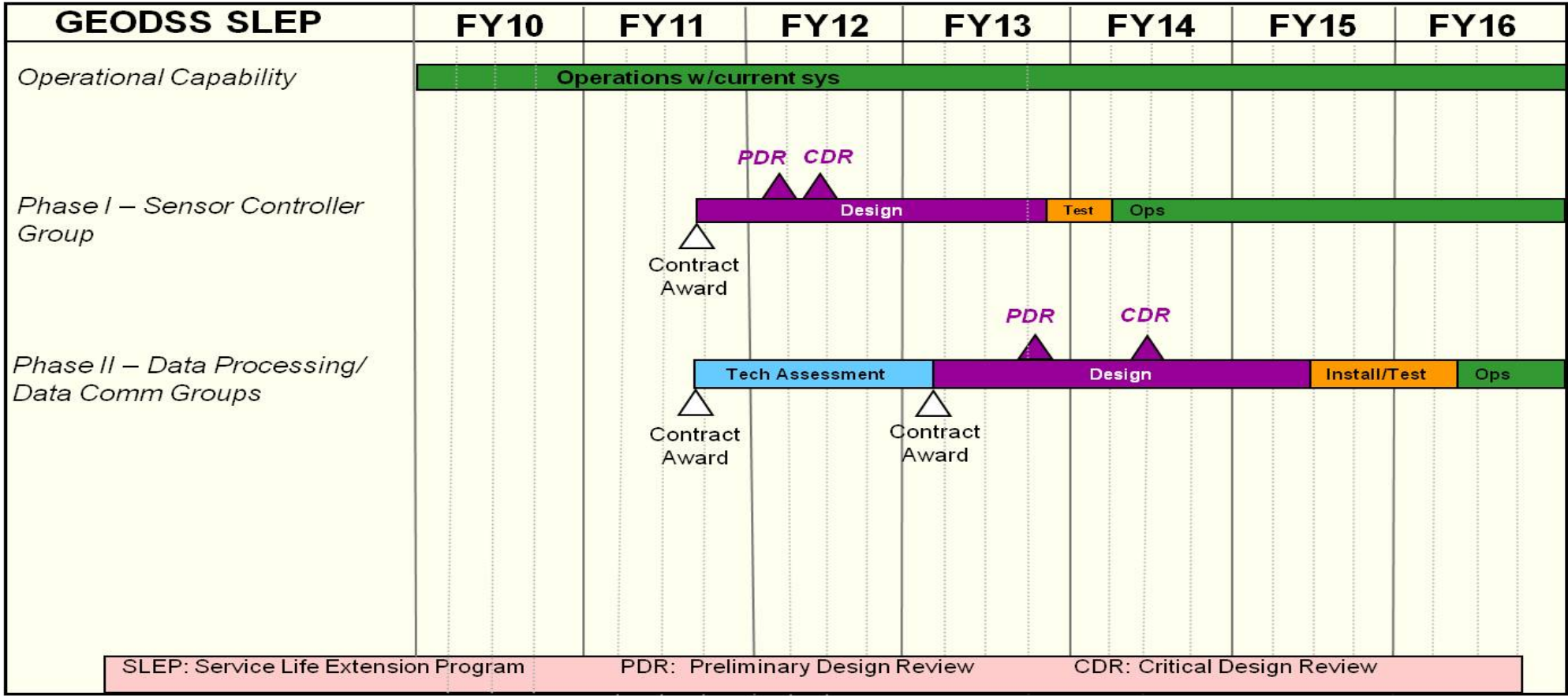
SLEP: Service Life Extension Program
 IOC: Initial Operational Capability
 CDR: Critical Design Review
 IRR: Installation Readiness Review
 S/PDR: System/Preliminary Design Review
 MS-C: Milestone-C

- Concept activities
- Production / fielding
- Design / development
- Operations / sustainment
- Integration / test
- Key events

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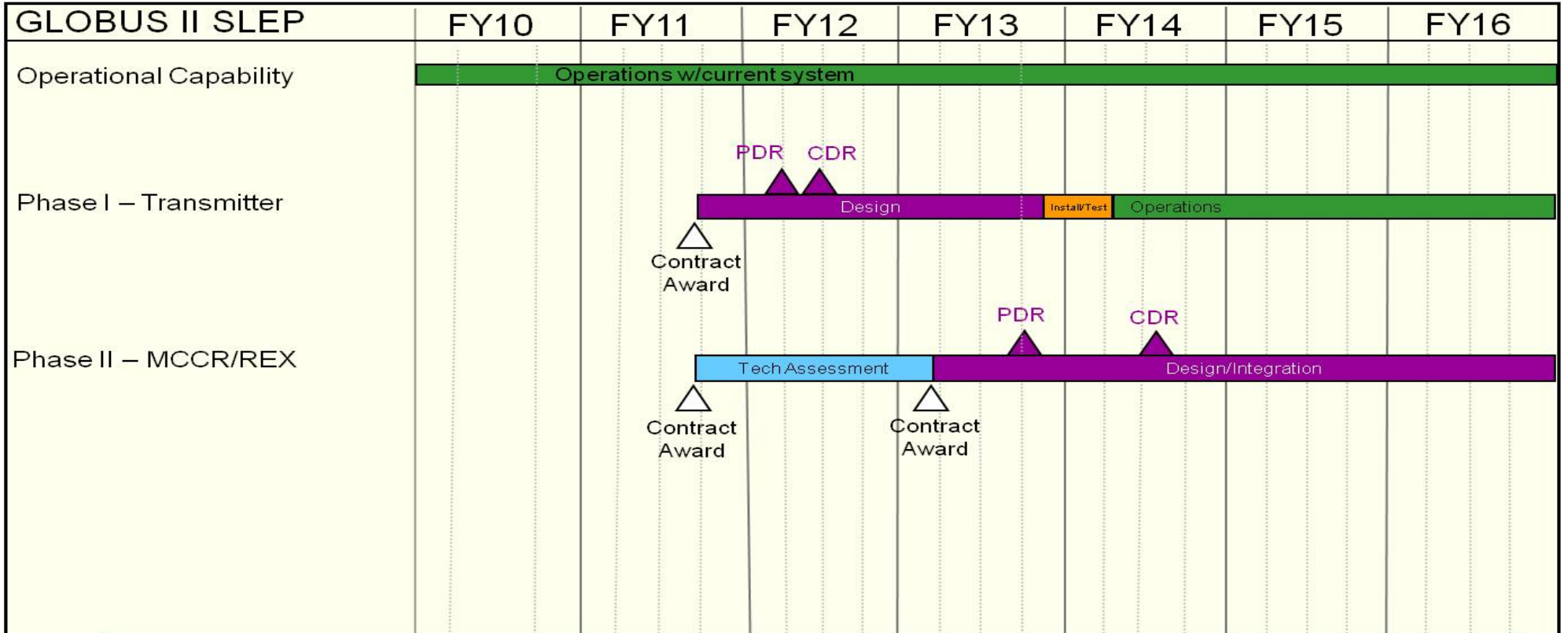
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>



 Tech Assessment	 Design / development				
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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>



SLEP: Service Life Extension Program PDR: Preliminary Design Review CDR: Critical Design Review

- Technical Assessment
- Installation/Test
- Design / development
- Operations / sustainment
- Key events

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0305940F: <i>Space Situational Awareness Operations</i>	PROJECT 67A017: <i>Sensor Service Life Extension Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Eglin Phase II PDR	2	2012	2	2012
Eglin Phase II CDR	3	2012	3	2012
Eglin Phase I CSPU IOC	3	2011	3	2011
Eglin Phase II BSCU IOC	3	2012	3	2012
HUSIR Installation Readiness Review	3	2010	3	2010
HUSIR Uncap Radome	3	2010	3	2010
HUSIR Antenna Complete/X-Band Ops Available	4	2011	4	2011
HUSIR Test	3	2011	1	2012
HUSIR X and W Band Ops	2	2012	2	2012
GEODSS Contract Awards	3	2011	3	2011
GEODSS Phase I PDR	1	2012	1	2012
GEODSS Phase I CDR	3	2012	3	2012
GEODSS Phase II Development Contract Award	1	2013	1	2013
Globus II Phase I Contract Award	4	2011	4	2011
Globus II Phase I PDR	4	2013	4	2013
Globus II Phase I CDR	2	2014	2	2014
Globus II Phase II Development Contract Award	1	2013	1	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing
674871: <i>Information Operations Technology</i>	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing

Note
NASS, IO TECH- Network Attack Support Staff, Information Operations Technology

A. Mission Description and Budget Item Justification

The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating computer Computer Network Operations (CNO) capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans-regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (COCOMs) as directed.

This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

USCYBERCOM supports the Information Operations (IO) community by providing a cadre of experts on CNO technology use, and renders technical assistance in the development, review and coordination of CNO plans and operations. USCYBERCOM coordinates CNO capability research and development in order to achieve global military objectives. USCYBERCOM specifically is responsible for advocating on behalf of the COCOMs for CNO capability development. It is also responsible for partnering with the CNO development community to seek resource advocacy from USSTRATCOM, and fund CNO capability development with service sponsorship and coordination. Additionally, USCYBERCOM focuses capability developer's efforts on addressing COCOM requirements, fosters collaboration between OCO/DCO developers, intelligence providers, and operational planners to shorten the development cycle, transfers end-result capabilities to service components, and supports research and development of OCO/DCO capabilities for the conduct operational planning activities.

USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>
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This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	29.788	21.912	24.011	-	24.011
Current President's Budget	34.025	21.912	23.931	-	23.931
Total Adjustments	4.237	-	-0.080	-	-0.080
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.125	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	5.000	-			
• SBIR/STTR Transfer	-0.926	-			
• Other Adjustments	0.288	-	-0.080	-	-0.080

Change Summary Explanation

FY10 SECDEF-directed increase to support classified cyber initiative.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674871: <i>Information Operations Technology</i>	34.025	21.912	23.931	-	23.931	22.132	21.771	20.042	20.396	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The US Cyber Command (USCYBERCOM) responsibilities include planning, integrating, and coordinating computer Computer Network Operations (CNO) capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Offensive Cyber Operations (OCO) forces; integration of OCO forces with Defensive Cyber Operations (DCO) forces and planning and coordination of cyber capabilities that have trans-regional effects or that directly support national objectives; providing OCO/DCO support for assigned missions and OCO/DCO planning and integration in support of other Combatant Commanders (COCOMs) as directed.

This project funds research, development, testing, and systems modifications of the technologies and capabilities that allow USCYBERCOM to plan, facilitate coordination and integration, deconflict, and synchronize DoD CNO. Activities also include studies and analysis to support both current program planning and execution, and future program planning. This program also provides the ability for other COCOMs to conduct CNO planning. The USCYBERCOM accomplishes part of its mission via systems engineering, testing and development across the primary functions of technical assurance, risk assessments, requirements management, capability development, and gap analysis. The technical assurance function provides world-class "assurance-in-depth" products and services enabling COCOMs to confidently, legally, safely, and securely apply CNO capabilities as one of the elements of national power. Further detail is classified and can be provided upon request. USCYBERCOM provides support for US Strategic Command (USSTRATCOM) and other geographic and functional COCOM exercises, war games, and experimentation requirements. USCYBERCOM integrates and synchronizes its effort with the USSTRATCOM development of CNO military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

USCYBERCOM supports the Information Operations (IO) community by providing a cadre of experts on CNO technology use, and renders technical assistance in the development, review and coordination of CNO plans and operations. USCYBERCOM coordinates CNO capability research and development in order to achieve global military objectives. USCYBERCOM specifically is responsible for advocating on behalf of the COCOMs for CNO capability development. It is also responsible for partnering with the CNO development community to seek resource advocacy from USSTRATCOM, and fund CNO capability development with service sponsorship and coordination. Additionally, USCYBERCOM focuses capability developer's efforts on addressing COCOM requirements, fosters collaboration between OCO/DCO developers, intelligence providers, and operational planners to shorten the development cycle, transfers end-result capabilities to service components, and supports research and development of OCO/DCO capabilities for the conduct operational planning activities.

USCYBERCOM supports research and development of OCO/DCO capabilities based upon COCOM and USCYBERCOM operational requirements to include supporting and conducting quick reaction development of OCO/DCO capabilities in support of OCO/DCO operations as required. A small in-house development team will perform research as required to support this mission. The Special Projects, Vulnerability Assessment Team provides analytical support to exploitable vulnerabilities. Additionally, this team will "re-tool" existing OCO/DCO capabilities to satisfy immediate USCYBERCOM operational needs.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: NRAM, CNOTE and TA Programs</p> <p>Description: NRAM - Network Warfare Risk Assessment and Mitigation, CNOTE - Computer Network Ops Testing and Evaluation, TA - Technical Assurance</p> <p>FY 2010 Accomplishments: Funding provided assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities. These software tools were utilized by both the NW NRAM and CNOTE programs.</p> <p>FY 2011 Plans: Continues to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities.</p> <p>FY 2012 Base Plans: Funding will continue to provide assurance-in-depth products enabling COCOMs to confidently, legally, safely, and securely apply CNA capabilities.</p> <p>FY 2012 OCO Plans:</p>	10.076	5.070	8.740	-	8.740
<p>Title: Requirements & Gap Analysis</p> <p>Description: Requirements, Capabilities and Gap Analysis</p> <p>FY 2010 Accomplishments: Funding provided focused capabilities for geographic and functional COCOMs exercises, wargames, and experimentation requirements. Continued integration and synchronization for the development of network warfare military utility assessments and R&D efforts across the COCOMs.</p> <p>FY 2011 Plans: Funding develops requirements, capabilities and provides gap analysis. Provides focused capabilities for geographic and functional COCOM exercises, war games, and experimentation requirements. Integrates and synchronizes the development of CNO military utility assessments, research, and development efforts across COCOMs.</p> <p>FY 2012 Base Plans:</p>	11.712	11.000	10.270	-	10.270

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Funding will develop requirements, capabilities and provide gap analysis. Will provide focused capabilities for geographic and functional COCOM exercises, war games, and experimentation requirements. Funding will also integrate and synchronize the development of CNO military utility assessments, research, and development efforts across COCOMs.					
<i>FY 2012 OCO Plans:</i>					
<i>Title:</i> CNA/CND-RA	12.237	5.842	4.921	-	4.921
<i>Description:</i> (CNA) Computer Network Attack/ (CND) Computer Network Defense- (RA) Response Action Research and Development Lab					
<i>FY 2010 Accomplishments:</i> Continued development/prototyping of CNA tools based on submissions from the network warfare community.					
<i>FY 2011 Plans:</i> Continues development of the CNA lab and increases CNA capabilities as required to support the network warfare community. Provides funds for Offensive Cyber Operations Lab to continue development/prototyping of OCO tools based on submissions from CNO community.					
<i>FY 2012 Base Plans:</i> Funding will continue development of the CNA lab and increase CNA capabilities as required to support the network warfare community. Will provide funds for Offensive Cyber Operations Lab to continue development/prototyping of OCO tools based on submissions from CNO community.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	34.025	21.912	23.931	-	23.931

C. Other Program Funding Summary (\$ in Millions)						Cost To					
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Complete	Total Cost
• PE 030714F: <i>Joint HQ Information Operations, O&M</i>	0.000	0.278	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
	0.000	1.117	0.704	0.000	0.704	0.518	0.517	0.408	0.413	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0208059: <i>Cyber Command Activities, RDT&E</i>											

D. Acquisition Strategy

Bi-annual Industry and Academia Call for Proposal. Contracts will be awarded under full and open competition whenever possible. Variations of both Fixed Price (FP) and Cost Plus (CP) contracting vehicles will be used.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
J581 - Technical Assurance	Various	NSA:Ft Meade, MD	10.076	5.070	Dec 2010	8.740	Dec 2011	-		8.740	Continuing	Continuing	TBD
J582 - Requirements, Capabilities and Gap Analy	Various	NSA:Ft Meade, MD	11.712	11.000	Jan 2011	10.270	Jan 2012	-		10.270	0.000	32.982	0.000
Subtotal			21.788	16.070		19.010		-		19.010			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
J582-Offensive Cyber Operations Lab	Various	NSA/Other Mission Partners:Ft Meade, MD	12.237	5.842	Dec 2010	4.921	Jan 2012	-		4.921	Continuing	Continuing	TBD
Subtotal			12.237	5.842		4.921		-		4.921			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			34.025	21.912		23.931		-		23.931			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0307141F: NASS, IO TECH INTEGRATION & TOOL DEV

PROJECT

674871: Information Operations Technology



USCYBERCOM NASS IO TECH INTEGRATION & TOOL DEVELOPMENT

	FY10	FY11	FY12	FY13	FY14	FY15	FY16
NWARS	J581	Future year options to be determined					
	J582	Future year options to be determined					
	J584 CNA	Future year options to be determined					
<i>Schedule details are classified (available upon request)</i>							
IO – Information Operations		NWARS – Net Warfare Assurance Risk Assessment and Safeguards					
CNA – Computer Network Attack		RCD – Requirements & Capability Development					
NASS – Network Attack Support Staff							

Concept activities

Integrate / test

Key events

Current as of: Jan 2011

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0307141F: <i>NASS, IO TECH INTEGRATION & TOOL DEV</i>	PROJECT 674871: <i>Information Operations Technology</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
J581 -Net Warfare Assurance, Risk Assessment and Safeguards	1	2010	4	2016
J581 - NWARS - One Year Future Options	1	2011	1	2016
J582 -Requirements and Capability Development	1	2010	4	2016
J582 - RCD - One Year Future Options	1	2011	1	2016
J584 - Computer Network Attack Lab	1	2011	4	2016
J584 - CNA LAB - One Year Future Options	1	2011	1	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	2.957	2.952	1.663	-	1.663	1.188	1.182	1.190	1.216	Continuing	Continuing
674838: <i>Shared Early Warning System</i>	2.957	2.952	1.663	-	1.663	1.188	1.182	1.190	1.216	Continuing	Continuing

Note

The program funding includes reductions for Fourth Estate Baseline Review efficiencies that are not intended to impact program content. The efficiencies reductions total \$10k in FY12.

A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. The SEWS continues to provide Theater Combatant Commanders and foreign nation partners direct operational benefit by improving the architectural design and equipment thereby providing enhanced mission capabilities (i.e., expanding coverage, integration with active defense systems, and radar integration). Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. To enhance mission capability the SEWS program tests: the Integrated Broadcast Service (IBS) migration to Common Interactive Broadcast (CIB), mandatory crypto upgrades, SEWS integration with various radar systems, and the transition to "coalition-based" warning. SEWS utilizes Federally Funded Research and Development Centers (FFRDC), Engineering and Technology Acquisition Support Services (ETASS), and Advisory and Assistance Services (A&AS) contractors to support design, development, and acquisition of a common SEWS architecture to enhance mission capability of existing and future partners; enhance development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System (PLNS) information; site preparation for additional systems, as required, and posture for the design, development, and test of a Joint Data Exchange Center (JDEC)-like capability with Russia. Activities also include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	3.047	2.952	1.679	-	1.679
Current President's Budget	2.957	2.952	1.663	-	1.663
Total Adjustments	-0.090	-	-0.016	-	-0.016
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.013	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.077	-			
• Other Adjustments	-	-	-0.016	-	-0.016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>	PROJECT 674838: <i>Shared Early Warning System</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674838: <i>Shared Early Warning System</i>	2.957	2.952	1.663	-	1.663	1.188	1.182	1.190	1.216	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. The SEWS continues to provide Theater Combatant Commanders and foreign nation partners direct operational benefit by improving the architectural design and equipment thereby providing enhanced mission capabilities (i.e., expanding coverage, integration with active defense systems, and radar integration). Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. To enhance mission capability the SEWS program tests: the Integrated Broadcast Service (IBS) migration to Common Interactive Broadcast (CIB), mandatory crypto upgrades, SEWS integration with various radar systems, and the transition to "coalition-based" warning. SEWS utilizes Federally Funded Research and Development Centers (FFRDC), Engineering and Technology Acquisition Support Services (ETASS), and Advisory and Assistance Services (A&AS) contractors to support design, development, and acquisition of a common SEWS architecture to enhance mission capability of existing and future partners; enhance development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System (PLNS) information; site preparation for additional systems, as required, and posture for the design, development, and test of a Joint Data Exchange Center (JDEC)-like capability with Russia. Activities also include studies and analysis to support both current program planning and execution and future program planning.

This program is in Budget Activity 7, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Shared Early Warning System	2.957	2.952	1.663	-	1.663
Description: Development of SEWS common architecture and SEWS initiatives as identified by theater commanders.					
FY 2010 Accomplishments: Investigated a number of potential system and infrastructure improvements, including continuing the Network Time Protocol (NTP) server investigation along with Global Command & Control System-Joint (GCCS-J) Integrated Command, Control, Communications, Computers and Intelligence (C4I) System Framework (ICSF) client and Clear-Cube-type blade PC evaluations. Investigated how to employ the results of Broadband Global Area Network/Voice over IP (BGAN/VoIP) enhancement studies while completing the BGAN multicasting study					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>	PROJECT 674838: <i>Shared Early Warning System</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
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and the Iridium Evaluation. Evaluated the utility of various bilateral partner networks along with Exercise and Operational Communications (XOCOMM) as a data source. Completed several enhancements to existing Radiant Mercury cross-domain solutions capabilities. Increased Integrated Space Command and Control Systems Engineering (ISC2 SE) support and GCCS support to SEW system development, especially for data formats and Interface Control Document (ICD) development. Continued to posture for possible deployment of the JDEC system in Moscow and development of a multi-lingual, web-based infrastructure to provide PLNS information.

FY 2011 Plans:

Continue to investigate and integrate a number of significant external system upgrades, to include changes from the IBS broadcast to CIB, tactical radio replacement using Universal Serial Bus (USB) Embedded National Tactical Radio (ENTR) radios, and transition to the CIB Common Message Format. Complete the development and demonstration of the previously prototyped remote data and Process ID (PID) monitoring capabilities for GCCS 4.1.1.2. Begin a study of how to integrate SEW-Space (SEW-S) and SEW-Radar (SEW-R) data. Investigate alternative covariance matrix solutions. Develop a Deployable SEW Suite (DSS) prototype. Evaluate alternatives to the aging Bisynchronous Serial Tunneling (BSTUN) protocol currently used by SEWS. Continue to develop enhancements to the Radiant Mercury Cross Domain Solution (CDS) software. Continue to develop an alternative secondary notification capability solution for Combatant Command (COCOM) use. Continue to support all phases of the test process and increase ISC2 systems engineering support and GCCS R&D support to SEW system development. Stay postured for implementation of SEW capability with Russia (e.g., JDEC-like and/or PLNS-like projects).

FY 2012 Base Plans:

Will continue to investigate and integrate a number of significant external system upgrades. Will continue to evaluate alternative covariance matrix solutions as well as approaches for integrated SEW-S/SEW-R architectures. Will test and integrate the CIB/Integrated Waveform upgrade for the USB ENTR Block 2. Will begin development of the Remote Data Monitoring Administration (RDMA) capability for GCCS 4.2. Will test and incorporate the Variable Length Message Format (VLTF) in support of SEW-R integration efforts. Will continue to develop and implement an alternative secondary notification capability solution for Combatant Command (COCOM) use. Will engineer, test, and integrate Air Defense System Integrator (ADSI) data output into GCCS-J 4.1.1.2 to support future SEW-R. Will begin studying and testing the Joint Command and Control (JC2) terminal which will replace GCCS-J as early as 2013. Will evaluate the feasibility of including the Air and Missile Defense Operational Testing Suite (AMDOTS) Remote Monitoring Unit's (RMU) into the SEWS Lab--CAVE and

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>	PROJECT 674838: <i>Shared Early Warning System</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Centralized Distribution Facility (CDF) for SEWS data analysis and archival. Will continue to support all phases of the test and systems engineering processes. Will stay postured for implementation of SEW capability with Russia (e.g., JDEC-like and/or PLNS-like projects). <i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	2.957	2.952	1.663	-	1.663

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF: <i>PE 0308699F, Comm Elect Mods</i>	0.238	0.312	0.313	0.000	0.313	0.322	0.328	0.332	0.338	Continuing	Continuing

D. Acquisition Strategy
The acquisition strategy builds on existing capabilities using evolutionary acquisition to modernize and sustain SEWS.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>	PROJECT 674838: <i>Shared Early Warning System</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Development	C/CPFF	Lockheed Martin: Colorado Springs, CO	17.597	1.337	Oct 2010	0.734	Oct 2011	-		0.734	Continuing	Continuing	TBD
Integration & Modernization	MIPR	US Navy: San Diego, CA	2.404	0.714	Feb 2011	0.191	Feb 2012	-		0.191	Continuing	Continuing	TBD
Product Development	MIPR	Various: Colorado Springs, CO	6.736	0.293	Jan 2011	0.558	Jan 2012	-		0.558	Continuing	Continuing	TBD
Subtotal			26.737	2.344		1.483		-		1.483			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	SS/CPFF	MITRE: Colorado Springs, CO	4.271	0.160	Oct 2010	-		-		-	Continuing	Continuing	TBD
Advisory & Assistance Services (A&AS)	C/TBD	ETASS: Colorado Springs, CO	7.426	0.326	Jan 2011	0.089	Jan 2012	-		0.089	Continuing	Continuing	TBD
Program Management	C/Various	AFMC/ESC: Colorado Springs, CO	1.445	0.122	Oct 2010	0.091	Oct 2011	-		0.091	Continuing	Continuing	TBD
Subtotal			13.142	0.608		0.180		-		0.180			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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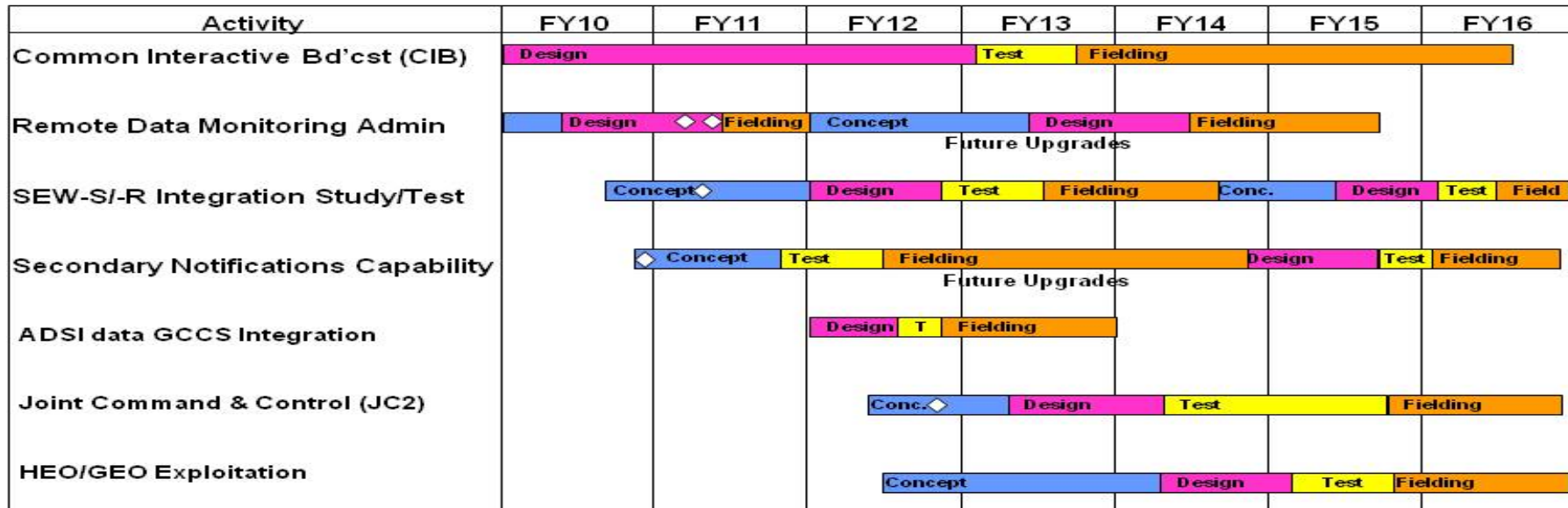
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0308699F: Shared Early Warning System	PROJECT 674838: Shared Early Warning System



SEWS Program Schedule



U.S. AIR FORCE



- Concept activities
- Production / fielding
- Design / development
- Integration / test
- Key events

Acronyms

- SI-R—Satellite & Radar
- HEO/GEO—Highly Elliptical Orbit/Geosynchronous
- ADSI—Air Defense System Integrator
- GCCS—Global Command and Control System

Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0308699F: <i>Shared Early Warning System</i>	PROJECT 674838: <i>Shared Early Warning System</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Common Interactive Broadcast 1	1	2010	2	2016
Remote Data Monitoring Admin	1	2010	3	2015
SEWS-S/SEWS-R Integration Study/Test	4	2010	4	2016
Secondary Notifications Capability	1	2011	4	2016
ADSI data GCCS Integration	4	2011	4	2013
Joint Command & Control	3	2012	4	2016
HEO/GEO Exploitation	3	2012	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	105.356	113.107	24.509	-	24.509	18.377	-	-	-	Continuing	Continuing
674885: <i>Avionics Modernization Program (AMP)</i>	102.347	43.472	24.509	-	24.509	18.377	-	-	-	Continuing	Continuing
675362: <i>AMP Phase II</i>	3.009	69.635	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number 298, C-130 AMP.

This C-130 Airlift Squadrons Program Element contains three project codes: C-130 Avionics Modernization Program (AMP), C-130 AMP Phase II and C-130 Initiatives.

C-130 Avionics Modernization Program (AMP) will modernize the avionics suites & cockpit configurations for 221 Combat Delivery C-130s in order to meet the International Civil Aviation Organization's (ICAO) & the FAA's mandated Communication, Navigation, Surveillance/ Air Traffic Management (CNS/ATM) and AF Nav/ Safety mandates.

C-130 Initiatives is for new requirements not covered by C-130 AMP or C-130 AMP Phase II.

C-130 Avionics Modernization Program (AMP) Phase II will modernize the avionics suites & cockpit configurations of 74 AC/EC/MC/LC-130 Special Mission aircraft and 28 Combat Delivery C-130s to meet the CNS/ATM and AF Nav/Safety mandates. The FY11 funds will enable initial contract award for risk reduction efforts. This program intends to leverage design efforts completed under AMP Phase I. AC-130U and MC-130H/W will require SOF-unique capabilities integrated within AMP Phase II. Funds for these will be provided in Major Force Program-11 (MFP-11) and are not shown here.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	109.250	113.107	7.700	-	7.700
Current President's Budget	105.356	113.107	24.509	-	24.509
Total Adjustments	-3.894	-	16.809	-	16.809
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-3.894	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	16.809	-	16.809

Change Summary Explanation

The FY12 \$2.86M was taken because funds will be freed up by contractor to civilian conversions.

\$16.809M has been transferred in FY12 from AMP's APAF line into its RDT&E line to fund the AMP's IOT&E and complete software development.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674885: <i>Avionics Modernization Program (AMP)</i>	102.347	43.472	24.509	-	24.509	18.377	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Totals include funding for PRCP Program Number 298, C-130 AMP.

Prior Years RDT&E funding estimate is \$1,332.660. This does not include \$257.9M of Major Force Program (MFP)-11 funding from FY01-06. The To-Complete funding estimate is \$18.377M in FY13.

Prior Quantity of RDT&E Articles is 3.

A. Mission Description and Budget Item Justification

To date, Boeing has completed all Critical Design Reviews (CDR) for AMP's hardware and majority of the software requirements. First flight with the initial software build was in Aug 08. Software upgrades will continue into 2011. Retrofit of the three test aircraft to production configuration was completed in Jun 10. Developmental efforts for the AMP's training systems will continue through FY13. In addition, this System Development & Design (SDD) contract allows for Special Mission analyses, studies, and engineering efforts in support of additional Mission Design Series (MDS) and planning for future block upgrades.

The C-130 Avionics Modernization Program (AMP) Phase I consolidates and installs the mandated Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) capabilities, the AF Navigation/Safety modifications and C-130 Broad Area Review requirements on AF's 221 Combat Delivery C-130s. These mods are incorporated with other Reliability, Maintainability, and Sustainability (RM&S) upgrades which include: new fleet-wide weather radars, aircrew displays, dual autopilots, dual flight management systems and HF/UHF/VHF radios/data links. An AMP-equipped C-130 will be able to safely and effectively operate worldwide in today's and tomorrow's airspace. In addition to meeting CNS/ATM and Nav/Safety requirements, AMP will also lower the cost of ownership and increase survivability of the Mobility Air Forces' (MAF) C-130 Combat Delivery fleet.

This fleet consists of three different MDSs to be modified by AMP: C-130H2, H2.5, and H3s. Within each of these MDSs, multiple cockpit and avionics variations exist. Today, these differences create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew/aircraft scheduling and interoperability particularly 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 with a common cockpit layout, eliminating many of these logistics, interoperability and training issues.

A number of C-130 obsolescence and Diminishing Manufacturing Sources (DMS) issues were addressed during SDD resulting in new hardware incorporated in the AMP design. Shown here are RDT&E funds for only C-130 AMP Phase I.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>
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The SDD contract was awarded to The Boeing Company on 30 Jul 01. From FY02-05, the combination of funding and requirements instability, coupled with increases in development costs pushed AMP into cost and schedule breaches. With the completion of an Air Force Service Cost Position in Oct 06, a major cost deviation was confirmed.

In Dec 06, a Program Deviation Report (PDR) was issued and a critical Nunn-McCurdy (N-M) breach was reported to Congress in Feb 07. In Jun 07, following a five month review, USD(AT&L) recertified AMP to Congress, albeit for a reduced number of 222 aircraft, further reduced to 221 due to a Jun 08 aircraft loss. This program is now called C-130 AMP Phase I (AMP PH-I). This certified fleet constitutes the majority of AF's Combat Delivery fleets operated by AMC, ANG and AFRC.

The 119 Special Mission and 47 C-130H1 Combat Delivery aircraft, separated from core AMP at N-M certification in Jun 07, are now referred to as AMP Phase II. Disposition of these 166 aircraft will be addressed as a separate modification program.

All aircraft flight test Development Test and Evaluation (DT&E) requirements were completed in Dec 09. Initial Operational Test & Evaluation (IOT&E) is scheduled to start in 2nd quarter FY12. Software Build 0.2 will require follow-on Development and Operational Testing scheduled to begin in 4th quarter FY12. Funding to complete SDD was reprogrammed from 3010 to 3600 in FY12 and FY13.

On 19 Jun 10, USD/AT&L issued an ADM approving C-130 AMP's entrance into the Low-Rate Initial Production and Deployment Phase. The ADM authorized installation of Lot 1 AMP kits, procurement & installation of Lots 2 & 3 kits at the depot and at the contractors' facilities.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: SDD</p> <p>Description: Complete design activities for software spirals and remaining Group A engineering data release for the H2, H2.5, and H3 configurations. Contractor also provide flight test support. To achieve the overall AMP development efforts, the following RDT&E tasks also are required: Training Systems Development (aircrew and maintenance systems), Engineering Change Orders (ECO), Gov't Furnished Equipment (GFE), the contractor Award Fee and program support efforts.</p> <p>FY 2010 Accomplishments: Complete design activities for software spirals and remaining Group A engineering data release for the H2, H2.5, and H3 configurations. Contractor also provide flight test support. To achieve the overall AMP development efforts, the following RDT&E tasks also are required: Training Systems Development (aircrew</p>	99.016	41.731	19.434	-	19.434

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>and maintenance systems), Engineering Change Orders (ECO), GFE, the contractor Award Fee and program support efforts.</p> <p>FY 2011 Plans: Complete design activities for software spirals and remaining Group A engineering data release for the H2, H2.5, and H3 configurations. Contractor also provide flight test support. To achieve the overall AMP development efforts, the following RDT&E tasks also are required: Training Systems Development (aircrew and maintenance systems), Engineering Change Orders (ECO), Development of new hardware resulting from DMS issues, GFE, the contractor Award Fee and program support efforts.</p> <p>FY 2012 Base Plans: Complete design activities for software spirals and remaining Group A engineering data release for the H2, H2.5, and H3 configurations. Contractor also provide flight test support. To achieve the overall AMP development efforts, the following RDT&E tasks also are required: Training Systems Development (aircrew and maintenance systems), ECO, GFE, the contractor Award Fee and program support efforts.</p> <p>FY 2012 OCO Plans:</p>					
<p>Title: DT&E</p> <p>Description: Developmental Test and Evaluation (DT&E).</p> <p>FY 2010 Accomplishments: Developmental Test and Evaluation (DT&E).</p> <p>FY 2011 Plans: Developmental Test and Evaluation (DT&E).</p> <p>FY 2012 Base Plans: Developmental Test and Evaluation (DT&E).</p> <p>FY 2012 OCO Plans:</p>	3.331	1.741	5.075	-	5.075
Accomplishments/Planned Programs Subtotals	102.347	43.472	24.509	-	24.509

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• PE 0401115F: <i>APAF, C-130 AMP, BP11</i>	0.000	170.529	235.635	0.000	235.635	248.722	372.784	557.192	699.483	Continuing	Continuing

D. Acquisition Strategy

The C-130 AMP contract was awarded 30 July 01 as a Cost-Plus Award Fee contract to develop and install AMP kits for the development aircraft and conduct developmental flight test. A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FY03-04 which resulted in delays in System Development and Demonstration (SDD) program exceeding 2 years. Revisions to the AF training system began in Jul 06 under the AMP contract. This effort will modify the various training programs, courses, Weapons Systems Trainers, and Maintenance Trainers to the AMP configuration.

The Nunn-McCurdy certification resulted in the need for a 2nd restructure and rebaseline for the remaining program activities with a contract modification Aug 08. The program office awarded two pre-Milestone C kit buys in Sep 08 under a Jul 08 OSD Acquisition Decision Memorandum (ADM). The C-130 AMP Milestone C hardware, through Lot 3 buys and installs, was authorized on 19 Jun 10. In addition to the kit buys and installs, the ADM also approved associated training and support. The Lot 1 kits were delivered Sep 09 and Feb 10, and were inducted for WR-ALC installation Aug 10 and Oct 10 respectively. The LRIP Lot 4/5 approval will require a return to OSD for an IPR/DAB review in 1st quarter FY12.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Design & Development	SS/CPAF	Boeing:Long Beach, CA	85.527	40.131	Jan 2011	22.584	Nov 2011	-		22.584	17.862	166.104	0.000
Subtotal			85.527	40.131		22.584		-		22.584	17.862	166.104	0.000

Remarks
Note: Funds shown here are required for System Design & Development, ECO, Training System Upgrades, Government Furnished Property (GFP), & Award Fees. Award Dates vary throughout the year depending on activity.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support	TBD	TBD:Wright Patterson AFB, OH	13.489	1.600		0.975		-		0.975	0.375	16.439	0.000
Subtotal			13.489	1.600		0.975		-		0.975	0.375	16.439	0.000

Remarks
Beginning in FY11, most of Program Office Support efforts will be funded with 3010 appropriated C-130 AMP funding.

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	TBD	TBD:Edwards AFB, CA	3.331	1.741	Nov 2010	0.950	Nov 2011	-		0.950	0.140	6.162	0.000
Subtotal			3.331	1.741		0.950		-		0.950	0.140	6.162	0.000

Remarks
DT&E flight test program is primarily done out of Edwards AFB. FY11 efforts required as a result of software upgrades to AMP. FY12 funding required to support possible follow-on efforts related to IOT&E testing results.

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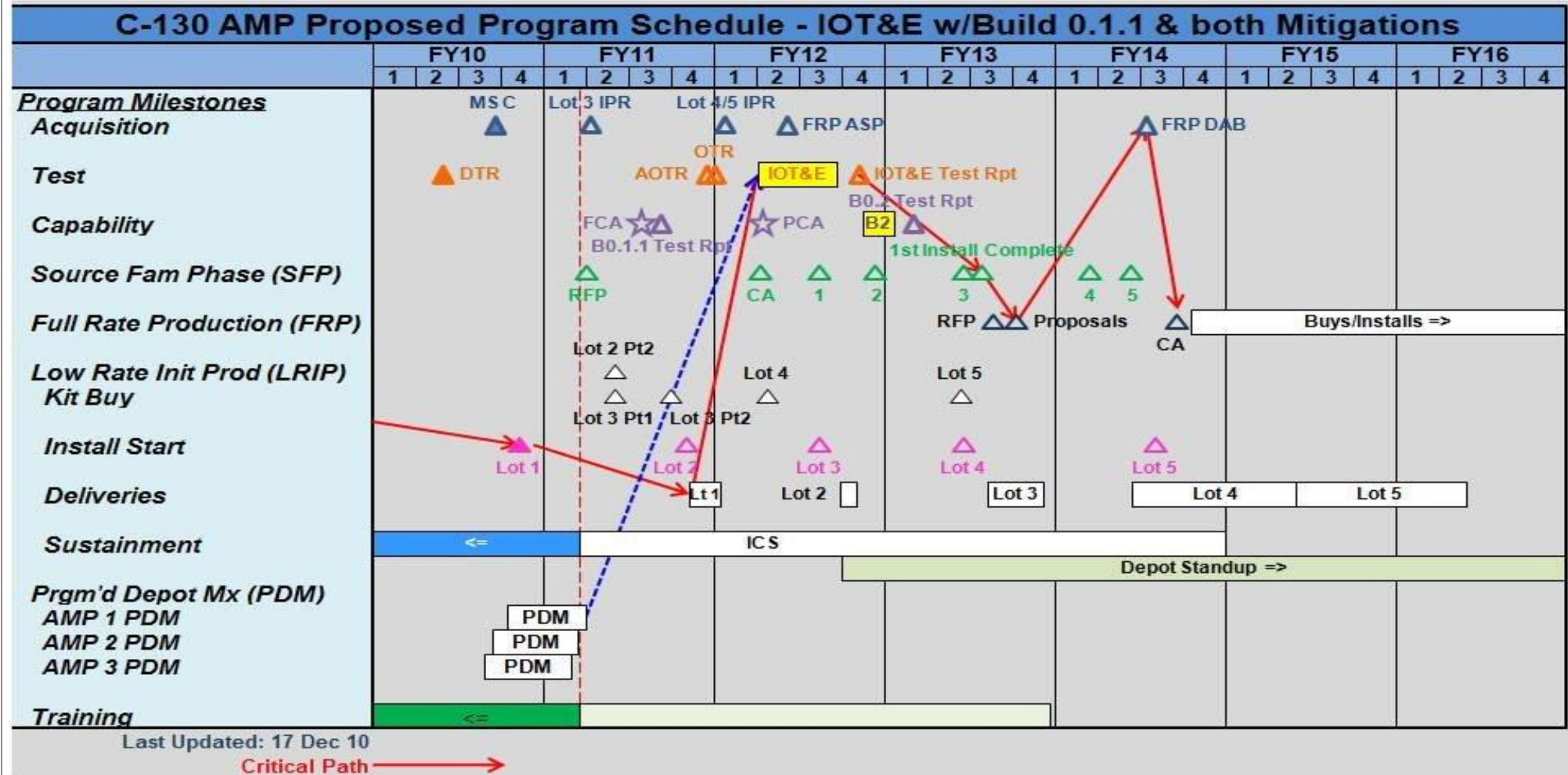
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0401115F: C-130 AIRLIFT SQUADRONS

PROJECT
 674885: Avionics Modernization Program (AMP)



Last Updated: 17 Dec 10

Critical Path →

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 674885: <i>Avionics Modernization Program (AMP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Source Familiarization Phase (SFP) Request for Proposals (RFP)	1	2011	2	2012
Functional Configuration Audit (FCA)	3	2011	3	2011
Assessment of Operational Test Readiness (AOTR)	4	2011	1	2012
Physical Configuration Audit (PCA)	2	2012	2	2012
SFP Contract Award	2	2012	2	2012
IOT&E & IOT&E Test Report	2	2012	4	2012
Follow-On Test and Evaluation (FOT&E)-(Build 0.2 Requirement)	4	2012	1	2013
Follow-On Test and Evaluation (FOT&E)	4	2012	1	2013
Installation Completion of SFP's contractor's 2nd kit install	4	2013	4	2013
Full-Rate Production (FRP) Request for Proposals (RFP)	4	2013	4	2013
FRP Contract Award	4	2014	4	2014

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675362: <i>AMP Phase II</i>	3.009	69.635	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program Phase II (AMP PH-II) was broken out from core AMP during the Nunn-McCurdy certification in Jun 07. The 166 C/AC/EC/LC/MC-130s (119 Special Mission and 47 C-130H1 Combat Delivery aircraft) originally in PH-II, has been reduced to 102 aircraft (74 AC/LC/MC-130s and 28 C-130H1s) as the users have elected to replace some fleets with new C-130Js.

AMP PH-II will consolidate and install the mandated Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) capabilities; the AF Nav/Safety modifications; and C-130 Broad Area Review requirements. Since these aircraft were part of core AMP since its inception in 2001 until 2007, it's anticipated that AMP PH-II will leverage AMP's core hardware and software to accommodate the unique requirements of these Special Mission aircraft.

The funding for these aircraft was postponed until FY10 as a result of AMP's Nunn-McCurdy certification in Jun 2007. These mandated modifications will be incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include installation of new weather radars, aircrew displays, dual autopilots, dual flight management systems and HF/UHF/VHF radios/data links. An AMP-equipped aircraft will be able to safely and effectively operate world-wide in today's and tomorrow's airspace. In addition, AMP Phase II will lower the cost of ownership and increase survivability for both the Mobility Air Forces (MAF) and Special Operations Forces (SOF) C-130 fleets.

The fleets consist of six (6) different Mission Design Series (MDS) aircraft to be modified (AC-130U, EC-130H, LC-130H, MC-130H, MC-130W, and C-130H1). Within each MDS, multiple configurations exist among the aircraft that will be modified. Today, different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft scheduling and interoperability particularly at forward operating locations.

C-130 AMP Phase II will standardize the cockpit configurations and avionics suites for these variants into a single cockpit configuration by installing the core AMP avionics package with a common cockpit layout, thus eliminating many of these significant logistics, interoperability and training problems. Also, many of the C-130 Diminishing Manufacturing Sources (DMS) issues are resolved as a result of new hardware included in the AMP design. Shown here are RDT&E funds for only C-130 AMP Phase II. The funds enable initial contractual award for risk reduction efforts.

USSOCOM's AC-130U and MC-130H/W require SOF-unique capabilities integrated with AMP Phase II. Funds for these capabilities will be provided in MFP-11 and are not shown here.

BA7- This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full-rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Risk Reduction</p> <p>Description: Conduct risk reduction and design activities for CNS/ATM compliance, improved avionics/cockpit commonality, RM&S improvements, and related obsolescence/DMS fixes for the AC-130U, MC-130H/W, and C-130H1.</p> <p>FY 2010 Accomplishments: Conduct risk reduction and design activities for CNS/ATM compliance, improved avionics/cockpit commonality, RM&S improvements, and related obsolescence/DMS fixes for the AC-130U, MC-130H/W, and C-130H1.</p> <p>FY 2011 Plans: These funds will be used for risk reduction efforts if the core C-130 AMP is to be adapted to accommodate the unique mission requirements of some of these aircraft such as an AC-130 gunship.</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	3.009	69.635	-	-	-
Accomplishments/Planned Programs Subtotals	3.009	69.635	-	-	-

C. Other Program Funding Summary (\$ in Millions)												
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost	
• PE 0401115F: <i>APAF, C-130 AMP Phase II, BP11</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The AMP Phase II work is divided into short-term and long-term efforts. The short-term effort meets near-term CNS/ATM mandates and obsolescence. The long-term and main effort will integrate AMP Phase I's capabilities onto each MDS in AMP Phase II, add SOF-unique capabilities (e.g. terrain following radar) and preserve the current unique capabilities. This program includes modifications to training and support systems. The long-term contractual actions are divided into two main parts. The first part updates preliminary design with sub-system risk reduction to provide decision knowledge for the second part, a traditional Engineering and Manufacturing Development effort. The long-term effort leverages the existing AMP contract and core design, but segments activities to permit focus on each aircraft type. Both of these contracts will be cost plus award fee.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Short term radios, enhanced mode S, and voice/data recorder	C/Various	330th Aircraft Sustainment Wing:Robins AFB	3.000	28.000		-		-		-	0.000	31.000	0.000
Long-term hardware and software design, integration, and test	SS/CPIF	Boeing:Long Beach, CA	-	36.685	Jun 2011	-		-		-	Continuing	Continuing	TBD
Subtotal			3.000	64.685		-		-		-			

Remarks
Note: Funds shown here contain SDD, ECO, Training System Upgrades and the Award Fee.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Support Office	C/Various	Various:Various	0.343	4.100		-		-		-	Continuing	Continuing	TBD
Subtotal			0.343	4.100		-		-		-			

Remarks
Award dates vary throughout the year depending on activity (TDY, Training, Contractor Support)

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various	Various	Various:Various	-	0.850	Jun 2011	-		-		-	Continuing	Continuing	TBD
Subtotal			-	0.850		-		-		-			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>

There currently is no schedule
for C-130 AMP Phase II.

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401115F: <i>C-130 AIRLIFT SQUADRONS</i>	PROJECT 675362: <i>AMP Phase II</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Short Term radios, enhanced mode S, and voice/data recorders	4	2010	4	2011
Long term Material Development Decision	3	2010	3	2010
Long term Risk Reduction Contract Award	3	2011	3	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	82.339	58.990	24.941	-	24.941	-	-	-	-	Continuing	Continuing
674495: <i>Avionics Modernization Program</i>	1.681	4.867	-	-	-	-	-	-	-	Continuing	Continuing
674835: <i>Reliability Enhancement & Reengining Program</i>	61.332	34.654	24.941	-	24.941	-	-	-	-	Continuing	Continuing
675353: <i>C-5 Block Upgrade</i>	19.326	19.469	-	-	-	-	-	-	-	Continuing	Continuing

Note

Totals include funding for PRCP Program Number 273, C-5 AMP.
Totals include funding for PRCP Program Number 327, C-5 RERP.

A. Mission Description and Budget Item Justification

674495: Avionics Modernization Program (AMP): AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM), navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs 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 are incorporated in the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress toward Next Gen Air Transportation System. AWFCS 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 is also incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. The portion of avionics capability required for modernization that was not complete at the end of AMP development will be captured and funded in RERP. All other avionics capability will be captured in a separate follow-on block upgrade program. 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. Equipment Diminishing Manufacturing Source (DMS) issues will be resolved to support continued operations through studies, development, and redesign efforts. FY 2010/2011: Funding required for development of Pilot Assist Capability/Servo (PAC/Servo) capabilities for insertion in aircraft that have previously completed the AMP modification. NOTE: FY 2011 is the last year of RDT&E for C-5 AMP.

674835: C-5 Reliability Enhancement and Re-engining Program (RERP): 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). This effort centers around replacing the current TF39 engines with more reliable, Commercial Off-the-Shelf CF6 turbofan engines with increased take-off thrust and stage three noise compliance. The new engines, military designation F138-GE-100, increase payload capability and access to Communications, Navigation, Surveillance/Air Traffic Management (CNS/ATM) airspace. On 7 Oct 10, the USD(AT&L) conducted a successful full rate production (FRP) Decision Acquisition Board (DAB) and approved the C-5 RERP FRP ADM for lots 5 – 7; directed Air Force to fully fund RERP to the OSD Cost Assessment and Program Evaluation (CAPE)

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0401119F: <i>C-5 Airlift Squadrons</i>

Independent Cost Estimate (ICE) for RDT&E; and re-designated C-5 RERP as an Acquisition Category IC program. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. FY 2010: Funding supports RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations. FY10 is also required to continue the development/delivery of aircrew/maintenance training devices. FY 2011: Funding supports RERP design, development, engineering change orders, contractor/government test, and technical order publications. Mission support funding is required for program office operations. FY11 funding is also required to design, build, test and initiate delivery of aircrew/maintenance training devices. FY 2012: Funding supports final RERP design, development, engineering change orders, contractor/government test, and technical order publication. Mission support funding is required for program office operations. FY12 funding is also required to finalize the testing and development/delivery of aircrew/maintenance training devices and efforts to continue to minimize divergence of AMP and RERP baselines. NOTE: FY 2012 is the last year of RDT&E funding for C-5 RERP.

675353: C-5 Block Upgrade: Purpose of this program is to provide a measured approach to implement a common baseline for the C-5 fleet and its training systems in order to allow insertion and integration of new/future capabilities and replacement of future unsupportable equipment. This program supports software (S/W) and hardware (H/W) baselines between legacy aircraft, Avionics Modernization Program (AMP) aircraft, and Reliability Enhancement and Re-engining Program (RERP) aircraft. The C-5 AMP core processing platform has a total of two Core Processor Module (CPM) cards; C-5 RERP core processing platform has a total of three CPM cards. The AMP requirement is to have 50% spare processing and memory capability; CPM-1 and CPM-2, respectively, have only 22% and 19% throughput capability remaining. AMP throughput/capacity constraint does not allow for new/future capability and contributes to current computer problems. Failure to upgrade the AMP system to the 3 CPM RERP configuration will affect mission capable rates, will inhibit the ability to fix current Deficiency Reports (DRs), and will drive increased sustainment costs associated with S/W and H/W baseline divergence. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. FY 2010: Funding supports Block Upgrade design, development, engineering change orders, and contractor/government test. FY 2011: Funding supports Block Upgrade design, development, engineering change orders, contractor/government test, and technical order publications. NOTE: FY 2011 is the last year of RDT&E for C-5 Block Upgrade.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	85.266	58.990	15.118	-	15.118
Current President's Budget	82.339	58.990	24.941	-	24.941
Total Adjustments	-2.927	-	9.823	-	9.823
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-2.927	-	9.823	-	9.823

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>
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Change Summary Explanation

FY10 reduction is a result of AMP enhanced surveillance development completing ahead of schedule. Excess funding was moved to other higher priorities.

FY12 increase results from the Department's requirement to fund the reliability enhancement and re-engining program to meet Capability Assessment & Program Evaluation requirements.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674495: <i>Avionics Modernization Program</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674495: <i>Avionics Modernization Program</i>	1.681	4.867	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Avionics Modernization Program (AMP): AMP implements Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM), navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs 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 are incorporated in the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress toward Next Gen Air Transportation System. AWFCS 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 is also incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. The portion of avionics capability required for modernization that does not complete at the end of AMP development will be captured and funded in RERP. All other avionics capability will be captured in a separate follow-on block upgrade program. AMP requirements have been expanded to incorporate updates to the new avionics architecture, to include security enhancements to the Global Positioning System. Equipment Diminishing Manufacturing Source (DMS) issues will be resolved to support continued operations through studies, development, and redesign efforts. FY 2010/2011: Funding required for development of the Pilot Assist Capability/Servo (PAC/Servo) capabilities for insertion in aircraft that have previously completed the AMP modification. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: PAC SERVO	1.681	4.867	-	-	-
Description: Redesign, development, and testing of brushless PAC Servo to increase Mean Time Between Repairs.					
FY 2010 Accomplishments: Redesign, development, and testing of brushless PAC Servo to increase Mean Time Between Repairs.					
FY 2011 Plans: Redesign, development, and testing of brushless PAC Servo to increase Mean Time Between Repairs.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674495: <i>Avionics Modernization Program</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	1.681	4.867	-	-	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0401119F: <i>APAF, BA-05, C-5 Mods, Avionics Modernization Program</i>	60.814	33.638	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing
• PE: <i>0401119F, APAF, BA-07, C-5 AMP Other Production Charges</i>	4.866	1.468	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing

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 line replaceable units and software to meet C-5 communication, navigation, surveillance/air traffic management requirements; update existing engineering and technical data; develop interface control specifications based on requirements; prototype the new system; and support flight testing. The AMP modification is planned for the C-5 fleet.

E. Performance Metrics
 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674495: <i>Avionics Modernization Program</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PAC/Servo	SS/CPAF	Lockheed Martin: Marietta, GA	356.629	2.422		-		-		-	0.000	359.051	0.000
Subtotal			356.629	2.422		-		-		-	0.000	359.051	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PAC/Servo	TBD	Lockheed Martin: Marietta, GA	28.737	2.445		-		-		-	0.000	31.182	0.000
Subtotal			28.737	2.445		-		-		-	0.000	31.182	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PAC/Servo	TBD	Lockheed Martin: Marietta, GA	19.096	-		-		-		-	0.000	19.096	0.000
Subtotal			19.096	-		-		-		-	0.000	19.096	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			404.462	4.867		-		-		-	0.000	409.329	0.000

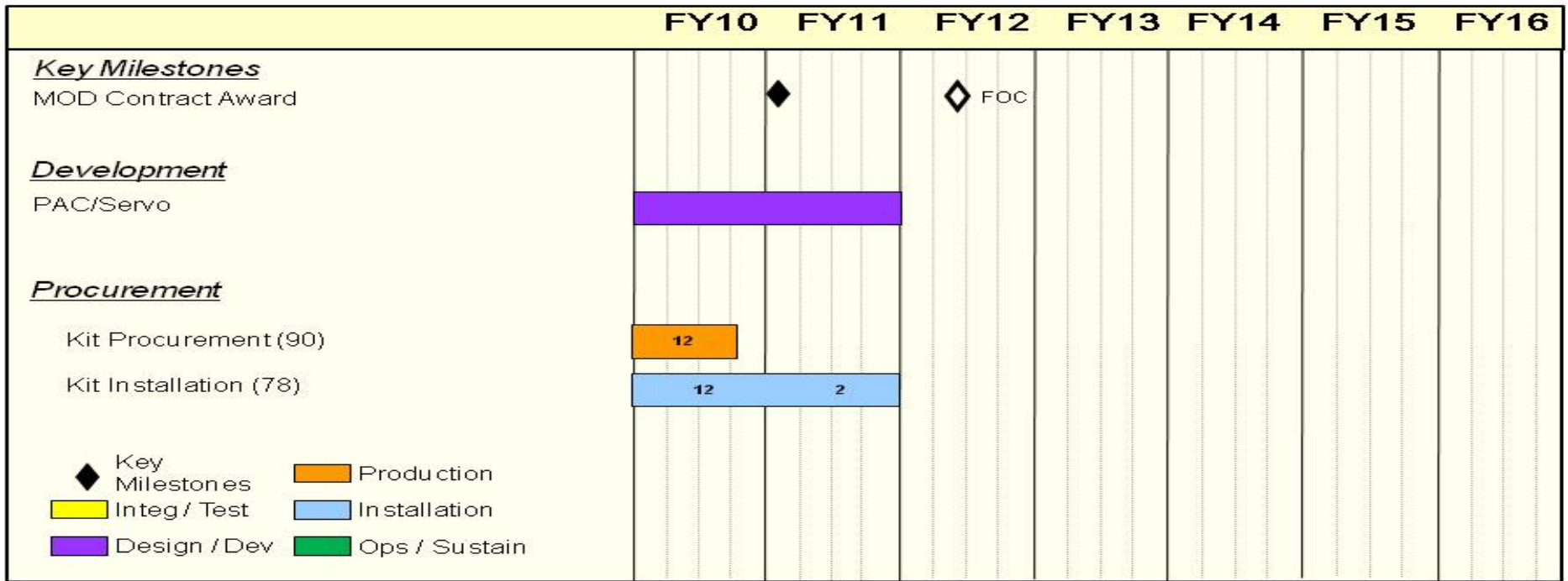
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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674495: <i>Avionics Modernization Program</i>



C-5 AMP Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674495: <i>Avionics Modernization Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Aircraft is in production	1	2010	4	2011
PAC/Servo Development	1	2010	4	2011
Full Operational Capability	2	2012	2	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>				PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674835: <i>Reliability Enhancement & Reengining Program</i>	61.332	34.654	24.941	-	24.941	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

C-5 Reliability Enhancement and Re-engining Program (RERP): 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). This effort centers around replacing the current TF39 engines with more reliable, Commercial Off-the-Shelf CF6 turbofan engines with increased take-off thrust and stage three noise compliance. The new engines, military designation F-138-GE-100, increase payload capability and access to Communications, 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 to increase fleet availability. Increased costs led to a review of total program requirements. On 14 Feb 08, the USD(AT&L) certified a restructured RERP to Congress. This restructured program reduced RERP scope to include only 49 production aircraft (47 C-5Bs and 2 C-5Cs). The AF was directed to fully fund RERP to the OSD Cost Analysis Improvement Group (CAIG) Independent Cost Estimate (ICE). On 14 Mar 08 the USD(AT&L) conducted a successful Milestone C (MS C) Defense Acquisition Board (DAB). The USD(AT&L) signed the Acquisition Program Baseline (APB) reflecting the N-M certification and the MS C approval on 24 Jun 08. Equipment Diminishing Manufacturing Source (DMS) issues will be resolved to support continued operations through studies, bridge buys, life of type buys, development and redesign efforts. On 7 Oct 10, USD AT&L conducted a successful Full Rate Production (FRP) Decision Acquisition Board (DAB) and approved the C-5 RERP FRP ADM for lots 5 – 7; directed Air Force to fully fund RERP to the OSD Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) for RDT&E; re-designated C-5 RERP as an Acquisition Category IC program. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

The Prior Years funding estimate is \$1,472.363M.

FY2010: Funding supports RERP design, development, engineering change orders, and contractor/government test. Mission support funding is required for program office operations. FY10 funding is also required to continue the development/delivery of aircrew/maintenance training devices.

FY2011: Funding supports RERP design, development, engineering change orders, contractor/government test, and technical order publications. Mission support funding is required for program office operations. FY11 funding is also required to design, build, test and initiate delivery of aircrew/maintenance training devices.

FY2012: Funding supports RERP design, development, engineering change orders, contractor/government test, and technical order publication in support of the correction of Qualification Operational Test & Evaluation deficiency reports. Mission support funding is required for program office operations. FY12 funding is also

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>
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required to finalize the testing and development/delivery of aircrew/maintenance training devices and efforts to continue to minimize divergence between AMP and RERP baselines.

FY12 is the last year of RDT&E funding.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Reliability Enhancement & Re-engining Program</p> <p>Description: Reliability Enhancement and Re-engining Program (RERP) will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability).</p> <p>FY 2010 Accomplishments: The accomplishments/planned program funding in Paragraph B are to support RERP design, development, engineering change orders, contractor/government test, technical order publications, and the continued development/delivery of aircrew/maintenance training devices. Mission support funding is also required for program office operations.</p> <p>FY 2011 Plans: The accomplishments/planned program funding in Paragraph B are to support RERP design, development, engineering change orders, contractor/government test, technical order publications, and design, build, test and deliver the aircrew/maintenance training devices. Mission support funding is also required for program office operations.</p> <p>FY 2012 Base Plans: Program funding supports final RERP design, development, engineering change orders, contractor/government test, technical order publications, resulting resulting from Qualification Operational Testing & Evaluation deficiency report corrections and to finalize the development/delivery of aircrew and maintenance training devices and efforts to minimize divergence between AMP and RERP baselines. Mission support funding is also required for program office operations.</p> <p>FY 2012 OCO Plans:</p>	61.332	34.654	24.941	-	24.941
Accomplishments/Planned Programs Subtotals	61.332	34.654	24.941	-	24.941

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0401119F: <i>APAF, BA-5, C-5 Reliability Enhancement and Re-engining Program, Advance Procurement</i>	141.566	166.900	112.200	0.000	112.200	175.800	0.000	0.000	0.000	Continuing	Continuing
• PE 0401119F (1): <i>APAF, BA-5, C-5 Mods, Reliability Enhancement and Re-engining Program</i>	437.876	676.457	851.859	0.000	851.859	936.024	1,012.009	330.946	0.000	Continuing	Continuing
• PE 0401119F (2): <i>APAF, BA-06, C-5 Initial Spares</i>	0.000	0.000	116.175	0.000	116.175	117.186	131.933	0.000	0.000	Continuing	Continuing
• PE 0401119F (3): <i>APAF, BA-07, C-5 Other</i>	12.373	19.641	9.389	0.000	9.389	0.000	0.000	0.000	1.532	Continuing	Continuing

D. Acquisition Strategy

Reliability Enhancement and Re-engining Program (RERP): System Development & Demonstration (SDD) includes 1 C-5A and 2 C-5Bs. The acquisition strategy considers every opportunity to use commercial components to modernize the C-5 to meet or exceed required system performance and support, so as to renew the weapon system until 2040. Lockheed Martin was selected as the prime contractor through a sole source arrangement. Lockheed selected General Electric (Powerplant), Goodrich (Pylon), and Honeywell (Avionics) as the major subcontractors.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Not specified.	SS/FFP	Lockheed Martin:Marietta, GA	46.738	-		-		-		-	0.000	46.738	46.738
Not specified. (1)	SS/CPAF	Lockheed Martin:Marietta, GA	1,290.066	22.934	Oct 2010	8.060		-		8.060	0.000	1,321.060	1,321.060
Interim Contract Support (ICS)	SS/Various	Lockheed Martin:Marietta, GA	0.234	0.300	Jan 2011	0.300		-		0.300	0.000	0.834	0.834
Subtotal			1,337.038	23.234		8.360		-		8.360	0.000	1,368.632	1,368.632

Remarks

Costs shown on Interim Contract Support (ICS) line were previously included in SDD line. Due to a change in contracting strategy post-FY09 PB submission, these costs were moved from the SDD line to the ICS line. These costs represent the costs associated with post-SDD DMS resolution and resolution of Deficiency Reports (DRs) discovered during Qualification Operational Test & Evaluation (QOT&E) to be executed using the ICS contract vehicle.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
WR-ALC/GRS, Robins AFB, GA	TBD	WR-ALC:Robins AFB, GA	31.653	0.150		0.150		-		0.150	0.000	31.953	31.953
ASC/WLS, Wright-Patterson AFB, OH	TBD	ASC:Wright-Patterson AFB, OH	46.849	0.200		0.200		-		0.200	0.000	47.249	47.249
Subtotal			78.502	0.350		0.350		-		0.350	0.000	79.202	79.202

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
418 Test Squadron (Edwards AFB)	TBD	418 Test Squadron:Edwards AFB, CA	63.621	1.350		3.279		-		3.279	0.000	68.250	68.250
Subtotal			63.621	1.350		3.279		-		3.279	0.000	68.250	68.250

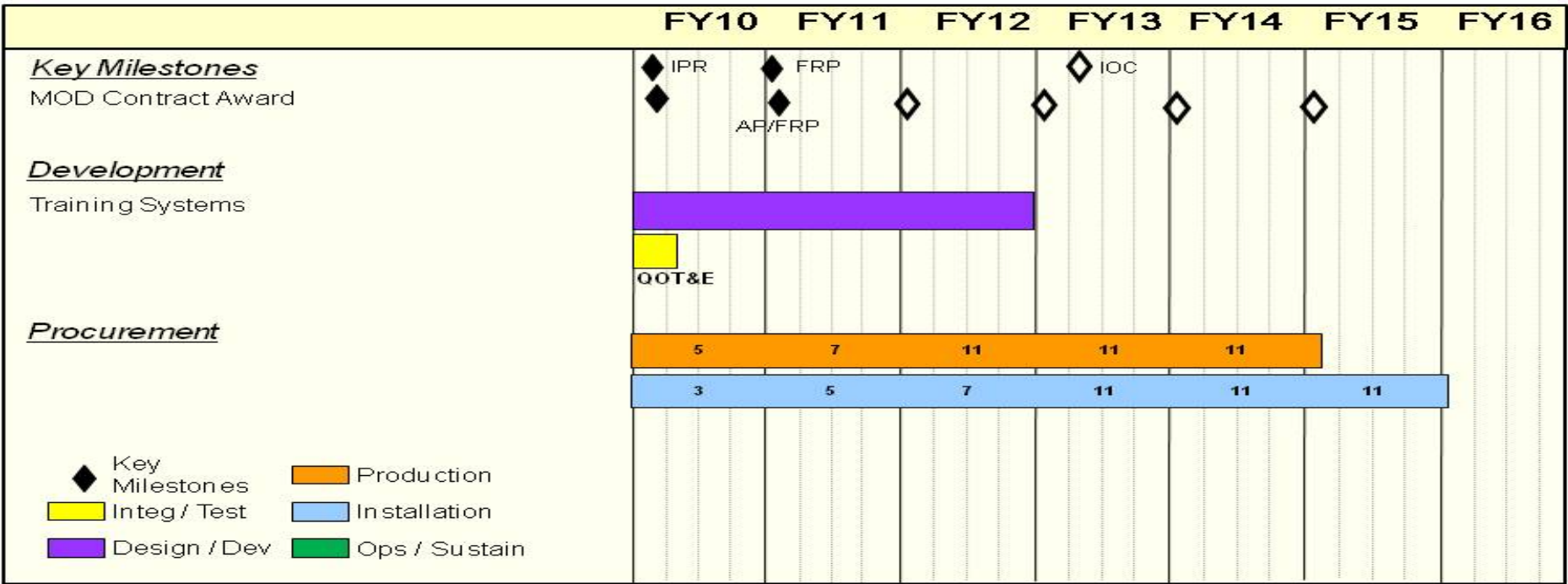
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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>



C-5 RERP Schedule



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As of: 01/06/11

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 674835: <i>Reliability Enhancement & Reengining Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Complete Dedicated Qualification Operational Test and Evaluation (QOT&E) (AFOTEC Report Complete)	3	2010	3	2010
Full Rate Production (FRP) decision	4	2010	4	2010
Training System Development	1	2010	3	2012
Initial Operational Capability	1	2013	1	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675353: <i>C-5 Block Upgrade</i>	19.326	19.469	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

C-5 Block Upgrade:

Purpose of this program is to provide a measured approach to implement a common baseline for the C-5 fleet in order to allow insertion and integration of new/future capabilities and replacement of future unsupportable equipment. Software (S/W) and hardware (H/W) baselines between the Avionics Modernization Program (AMP) and Reliability Enhancement and Re-engining Program (RERP) have diverged. S/W deficiencies corrected under AMP sustainment (Block Cycle Changes) reappear in RERP. C-5 AMP system has a total of two Core Processor Module (CPM) cards; C-5 RERP system has a total of three CPM cards. Originally, AMP was to have 50% spare processing and memory capability; AMP's CPM-1 and CPM-2, respectively, have only 22% and 19% throughput capability remaining. AMPs throughput/capacity constraint does not allow room for any new/future capability and contributes to current computer problems. Failure to upgrade the C-5 AMP system to the 3 CPM RERP configuration will affect mission capable rates, will inhibit the ability to fix current Deficiency Reports (DRs) and drive increased sustainment costs associated with S/W and H/W baseline divergence. The C-5 Block Upgrade Program development requirements complete in FY11. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: C-5 Core Processing Platform & Software Commonality	19.326	19.469	-	-	-
Description: Upgrade the AMP core processing platform [Versatile Integrated Avionics (VIA) and Avionics Interface Unit (AIU)] to the RERP core processing platform configuration and address key AMP program waivers/recurring critical AMP DRs in RERP software.					
FY 2010 Accomplishments: Development and integration of AMP core processing software for a 3 core processing module (CPM) environment and investigation/development of software solutions for key AMP waivers. Development and integration of critical AMP DR solutions into RERP software suite.					
FY 2011 Plans: Complete software development and integration, regression testing, Ground Testing, Development Test & Evaluation (DT&E) and Operational Test & Evaluation (OT&E).					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	19.326	19.469	-	-	-

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0401119F: <i>APAF, BA-5, C-5 Mods, Block Upgrade Program</i>	0.000	21.260	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
 Program acquisition strategy established a single integrating contractor (Lockheed Martin) to integrate & qualify the C-5 RERP core processing platform utilizing the C-5 AMP Operational Flight Program (OFP) into the C-5 AMP aircraft and incorporate software solutions developed for AMP into the RERP software baseline. Block Upgrade 01 is the start of a measured approach in implementing a more common baseline to allow insertion and integration of newly acquired/required capabilities and replacement of future unsupportable equipment due to obsolescence or Diminishing Manufacturing Source (DMS) issues.

E. Performance Metrics
 Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Update	SS/CPFF	Lockheed Martin: Marietta, GA	19.326	13.957	Feb 2011	-		-		-	0.000	33.283	28.068
Subtotal			19.326	13.957		-		-		-	0.000	33.283	28.068

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
418 Test Squadron (Edwards AFB, CA)	PO	418 Test Squadron: Edwards AFB, CA	-	5.512	Jul 2012	-		-		-	0.000	5.512	5.512
Subtotal			-	5.512		-		-		-	0.000	5.512	5.512

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			19.326	19.469		-		-		-	0.000	38.795	33.580

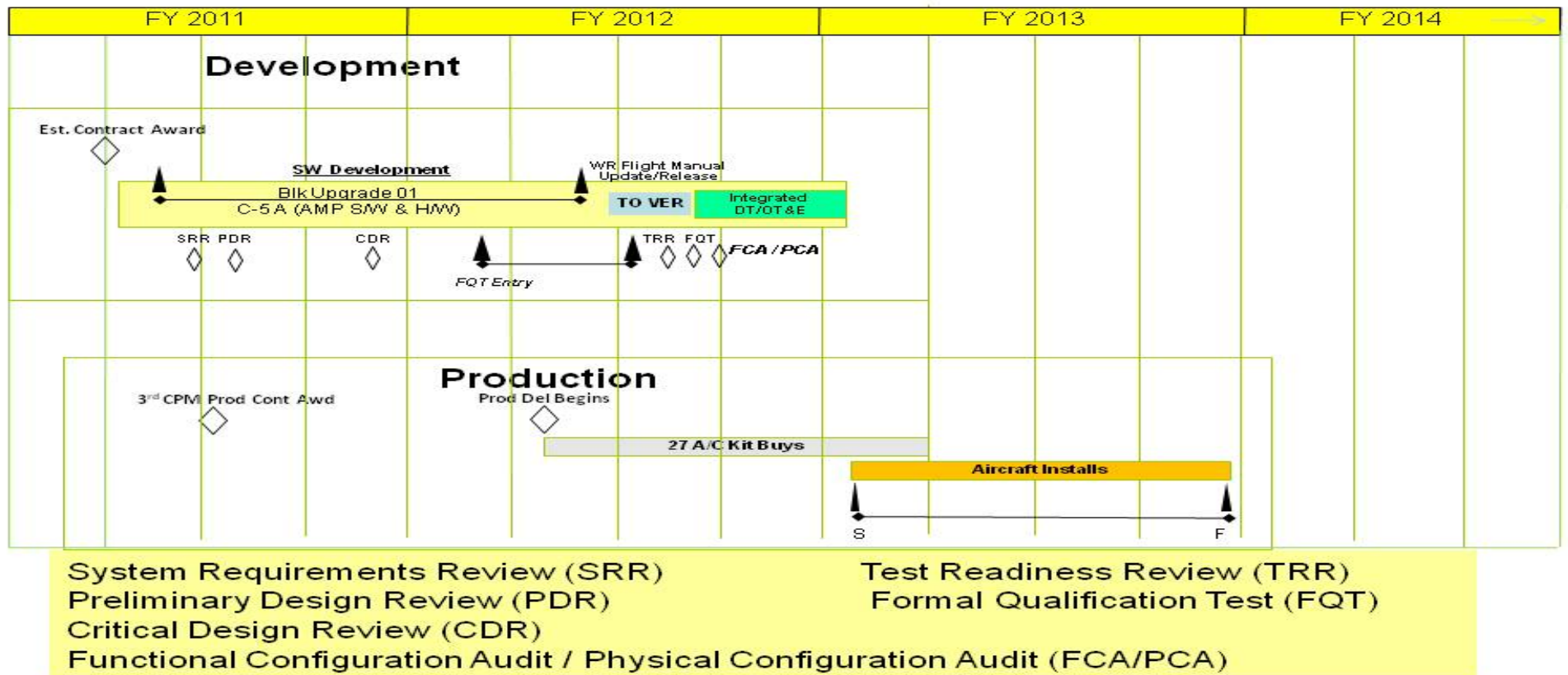
Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>

Summary Schedule

C-5 Fleet Block Upgrade 01



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401119F: <i>C-5 Airlift Squadrons</i>	PROJECT 675353: <i>C-5 Block Upgrade</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
System Development and Demonstration	1	2011	1	2013
Production	2	2012	4	2013
Test Readiness Review (TRR)	3	2012	3	2012
Formal Qualification Test (FQT)	3	2012	3	2012
Integrated DT/OT&E	3	2012	1	2013
Aircraft Kit Installations	1	2013	4	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0401130F: <i>C-17 Aircraft</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	Continuing	Continuing
672569: <i>C-17 Aircraft</i>	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	Continuing	Continuing

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 200, C-17A.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$22.045M in FY12.

Mission Description: 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 security 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. 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.

Budget Item Justification: RDT&E efforts support aircraft performance improvements and airspace access mandates. In addition, funding may be used to develop solutions to emergency obsolescence and safety of flight issues that impact the mission capability or continued support of the C-17 weapon system.

- FY 2010: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop.

- FY 2011: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/Air Traffic Management (ATM) System - Phase 1 Surveillance, ILS Identification and FCC Updates, Replacement Heads-Up Display (RHUD), RCIP Obsolescence, IFF Mode 5, and Airdrop.

- FY 2012: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	161.855	177.212	183.745	-	183.745
Current President's Budget	156.232	177.212	128.169	-	128.169
Total Adjustments	-5.623	-	-55.576	-	-55.576
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.675	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.516	-			
• SBIR/STTR Transfer	-4.432	-			
• Other Adjustments	-	-	-55.576	-	-55.576

Change Summary Explanation

- FY2012 reduction due to higher Air Force priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
672569: <i>C-17 Aircraft</i>	156.232	177.212	128.169	-	128.169	98.494	117.246	112.975	74.943	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 200, C-17A.

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$22.045M in FY12.

Mission Description: 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 security 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. 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.

Budget Item Justification: RDT&E efforts support aircraft performance improvements and airspace access mandates. In addition, funding may be used to develop solutions to emergency obsolescence and safety of flight issues that impact the mission capability or continued support of the C-17 weapon system.

- FY 2010: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop.

- FY 2011: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/Air Traffic Management (ATM) System - Phase 1 Surveillance, ILS Identification and FCC Updates, Replacement Heads-Up Display (RHUD), RCIP Obsolescence, IFF Mode 5, and Airdrop.

- FY 2012: Continued development and testing of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Performance Improvement Development and Testing</p> <p>Description: Continued development of C-17 aircraft performance improvements for its avionics, aircraft and mission systems and the development of solutions to emergent obsolescence and safety of flight issues and airspace access mandates.</p> <p>FY 2010 Accomplishments: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Instrument Landing System (ILS) Identification and Flight Control Computer (FCC) Updates, Replacement Heads-Up Display (RHUD), Replacement Core Integrated Processor (RCIP), Formation Flying System, Identification Friend or Foe (IFF) Mode 5, Advanced Situational Awareness Countermeasures (ASACM) and Airdrop.</p> <p>FY 2011 Plans: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, IFF Mode 5, and Airdrop.</p> <p>FY 2012 Base Plans: Continued development of C-17 aircraft performance improvements/mandates to include projects such as, but not limited to, Communication Navigation Surveillance (CNS)/ATM System - Phase 1 Surveillance, ILS Identification and FCC Updates, RHUD, RCIP Obsolescence, and IFF Mode 5.</p> <p>FY 2012 OCO Plans:</p>	79.347	122.412	70.170	-	70.170
<p>Title: Systems Engineering/ Program Management</p> <p>Description: Systems Engineering/Program Management</p> <p>FY 2010 Accomplishments: Systems Engineering/Program Management</p> <p>FY 2011 Plans: Systems Engineering/Program Management</p> <p>FY 2012 Base Plans:</p>	43.887	28.000	30.000	-	30.000

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>		PROJECT 672569: <i>C-17 Aircraft</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Systems Engineering/Program Management					
FY 2012 OCO Plans:					
Title: Producibility Enhancement/Performance Improvement (PE/PI) Contractor Flight Test					
	23.198	16.800	18.000	-	18.000
Description: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.					
FY 2010 Accomplishments: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.					
FY 2011 Plans: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.					
FY 2012 Base Plans: Continuation of contractor testing of new capabilities as required. Costs include maintenance on the test aircraft, engine overhaul of the flight test aircraft unique engines, contractor engineering support for test related technical and safety of flight issues, test planning, test analysis and test execution.					
FY 2012 OCO Plans:					
Title: Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test					
	9.800	10.000	9.999	-	9.999
Description: Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.					
FY 2010 Accomplishments: Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.					
<i>FY 2012 Base Plans:</i> Continuation of the direct costs of flight testing. The costs include ramp space, fuel, air traffic control, range costs, etc., which are items each weapon system must pay for when using Air Force flight test locations.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	156.232	177.212	128.169	-	128.169

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0401130F: <i>C-17 APAF BA 02 BP 10</i>	2,598.525	128.683	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401130F (1): <i>C-17 APAF BA 05 BP 11</i>	321.969	576.064	202.179	0.000	202.179	329.867	334.844	357.017	349.739	Continuing	Continuing
• PE 0401130F (2): <i>C-17 APAF BA 07 BP 13</i>	11.000	38.947	183.696	10.970	194.666	192.072	225.078	130.242	148.522	Continuing	Continuing
• PE 0401130F (3): <i>Initial Spares APAF BA 06 BP 16</i>	0.000	0.000	13.692	0.000	13.692	8.192	13.022	28.024	12.584	Continuing	Continuing
• PE 0401130F (4): <i>Organic Depot APAF BA 07 BP 19</i>	26.522	21.198	6.458	0.000	6.458	2.588	0.000	0.000	0.000	Continuing	Continuing

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) Indefinite Delivery Indefinite Quantity (IDIQ) contracts for the procurement of C-17s and engines beyond 180, including 43 aircraft included in the FY07 – FY10 Defense Appropriation Acts, and foreign orders that may materialize; 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract to develop cost reduction changes, capability enhancements/airspace access mandates and design fixes to service-revealed problems – (RDT&E, APAF); 3) a Globemaster III Integrated Sustainment Program (field support) contract to support the current and future fielded aircraft – (O&M, TWCF); 4) an engine contract for Government Furnished Equipment (GFE) engines – (APAF); 5) an Aircrew Training Systems (ATS) contract - (O&M, TWCF); 6) a Maintenance Training Systems (MTS) contract - (O&M, TWCF); 7) a Weapon System Trainers (WST) contract - (APAF); and 8) a Training System contract for instruction, contractor logistic support (CLS), and change

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0401130F: <i>C-17 Aircraft</i>	672569: <i>C-17 Aircraft</i>

management of the ATS and MTS to include Foreign Military Sales (FMS) customers. The CLS contract was awarded Nov 10 and merged tasks from both the ATS and MTS contracts into one overarching C-17 Training System follow-on services contract - (O&M, TWCF).

FY10 Congressional action funded an additional 10 aircraft. The current acquisition USAF program of record is 223 aircraft (note: 1 of the 223 aircraft became the United States contribution to the Strategic Airlift Capability (SAC consortium)).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Aircraft Performance Improvements	Various	Boeing:Long Beach, CA	7,328.677	161.825	Oct 2010	113.353	Oct 2011	-		113.353	354.346	7,958.201	0.000
Subtotal			7,328.677	161.825		113.353		-		113.353	354.346	7,958.201	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Mission Support OGC	Various	Wright-Patterson AFB:WPAFB, OH	125.736	5.387	Oct 2010	4.817	Oct 2011	-		4.817	19.324	155.264	0.000
Subtotal			125.736	5.387		4.817		-		4.817	19.324	155.264	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Combined Test Force	PO	AFFTC:Edwards AFB, CA	384.276	10.000	Oct 2010	9.999	Oct 2011	-		9.999	29.988	434.263	0.000
Joint Precision Airdrop System (JPADS)	MIPR	Various:Various,	4.350	-		-		-		-	0.000	4.350	0.000
Semi-Prepared Runway Operations (SPRO)	MIPR	Various:Various,	11.060	-		-		-		-	0.000	11.060	0.000
AFRL	PO	Wright-Patterson AFB:WPAFB, OH	0.265	-		-		-		-	0.000	0.265	0.000
Subtotal			399.951	10.000		9.999		-		9.999	29.988	449.938	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>			PROJECT 672569: <i>C-17 Aircraft</i>				
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	7,854.364	177.212	128.169	-	128.169	403.658	8,563.403	0.000		

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

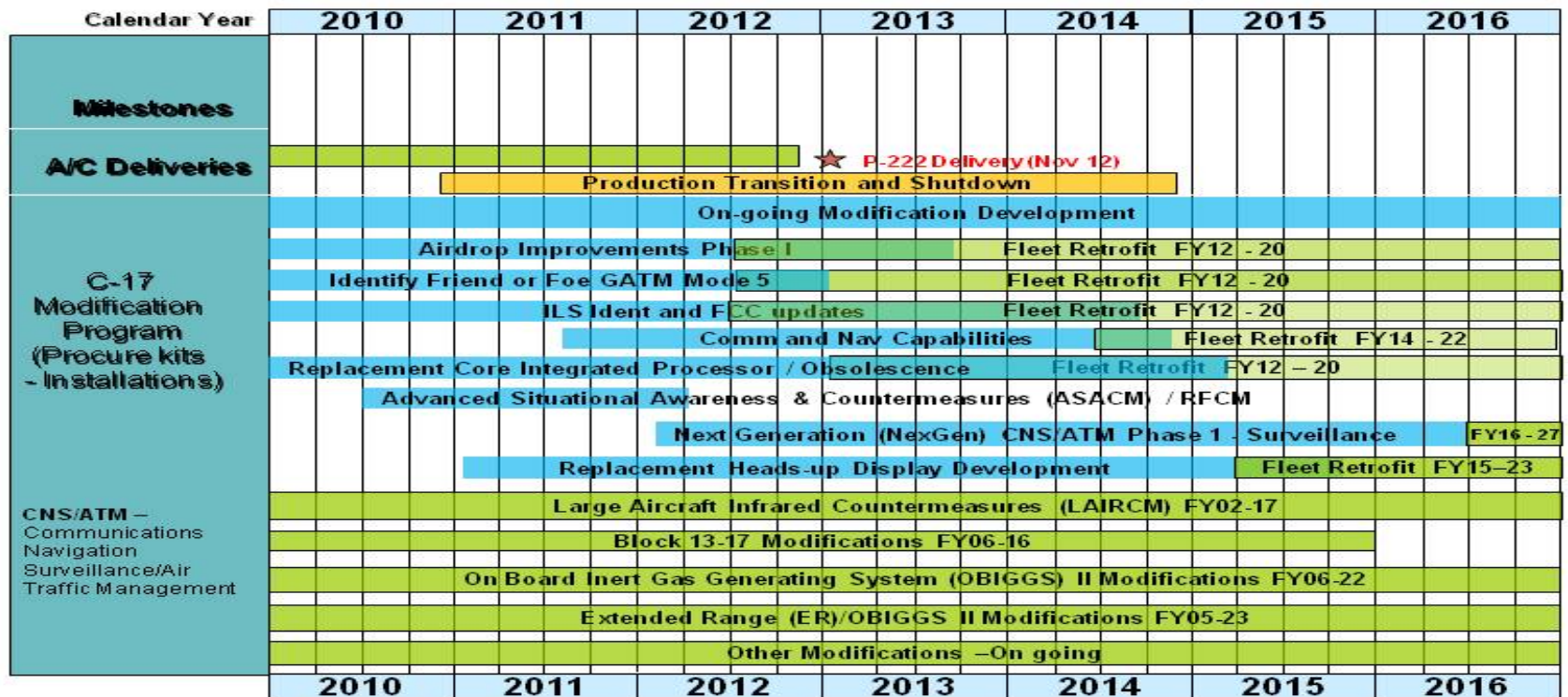
R-1 ITEM NOMENCLATURE

PE 0401130F: C-17 Aircraft

PROJECT

672569: C-17 Aircraft

C-17 Program Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401130F: <i>C-17 Aircraft</i>	PROJECT 672569: <i>C-17 Aircraft</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Airdrop Improvements Flight Test #2	2	2012	3	2012
Mode 5 Flight Test	2	2012	1	2013
Instrument Landing System Identification & Flight Control Computer Update Flight Test	2	2012	3	2012
Software Enhancements Flight Test	2	2012	3	2012
Replacement HUD (RHUD) PDR	3	2012	3	2012
CNS/ATM - Phase 1 - Surveillance PDR	3	2012	3	2012
Replacement HUD (RHUD) CDR	1	2013	1	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	29.072	26.770	39.537	-	39.537	23.195	38.220	23.838	24.258	Continuing	Continuing
675061: <i>C-130J</i>	29.072	26.770	39.537	-	39.537	23.195	38.220	23.838	24.258	Continuing	Continuing

Note

Prior Years funding estimate is \$155.2M. The To Complete funding estimate is \$123.3M.

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number 220, C-130J. The C-130J program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded and production funding is anticipated in the current or subsequent fiscal year.

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), weather reconnaissance (WC-130J), search and rescue (HC-130J), and special operations (MC-130J). All aircraft variants must be capable of worldwide operations.

FY12 C-130J program RDT&E funds provided for:

- 1) Participation in the International Cooperative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, Canada, Norway 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 Upgrades, testing, and trial kit installation(s). Block 7 is the second phase of a three-block upgrade initiative which primarily addresses mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7 is the first Block Upgrade initiative that is a true International partnership, as the development costs are being shared by each participating nation. Block 7 requirements include: a.) Communication, Navigation, and Surveillance (CNS) b.) Civil Global Positioning System (GPS) c.) New flight management system (FMS) d.) Link 16 e.) Mission Computer (MC) upgrades. Block 7 (as well as all future Block Upgrades) will be integrated into the training systems integration lab prior to incorporation into the fielded trainers.
- 3) Start of Block 8 Upgrades. Block 8 is the last phase of three block upgrades which will complete all known mandated Communication, Navigation, and Surveillance/Air Traffic Control (CNS/ATM) requirements. Block 8 will again be an International partnership with cost being shared by each participating nation. Block 8 requirements include: a.) TEMPEST Compliance b.) Identification Friend or FOE (IFF) transponder Mode-5 c.) Civil Data-link d.) Automatic Dependent Surveillance-Broadcast (ADS-B) e.) Mission Computer (MC) upgrades

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>
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4) Other AMC approved initiatives. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily address deficiencies, system improvements, and may alleviate diminishing manufacturing sources (DMS) issues. This includes Navigation Safety upgrades, and Joint Precision Airdrop System (JPADS), among other priorities.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	30.019	26.770	31.569	-	31.569
Current President's Budget	29.072	26.770	39.537	-	39.537
Total Adjustments	-0.947	-	7.968	-	7.968
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-0.947	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	7.968	-	7.968

Change Summary Explanation

Additional funds were required in FY12 to fully fund the USAF's share of the C-130J Block 8.1 effort. Block 7.0, the first phase of the C-130J International Project Arrangement, experienced a schedule slip in 2010 requiring Block 8.1 funds to be diverted to Block 7.0. All seven countries have committed to fully-fund Block 8.1. Block 8.1 contract award planned for April 2011.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675061: <i>C-130J</i>	29.072	26.770	39.537	-	39.537	23.195	38.220	23.838	24.258	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Totals include funding for PRCP Program Number 220, C-130J. The C-130J program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded and production funding is anticipated in the current or subsequent fiscal year.

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), weather reconnaissance (WC-130J), search and rescue (HC-130J), and special operations (MC-130J). All aircraft variants must be capable of worldwide operations.

FY12 C-130J program RDT&E funds provided for:

- 1) Participation in the International Cooperative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, Canada, Norway 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 Upgrades, testing, and trial kit installation(s). Block 7 is the second phase of a three-block upgrade initiative which primarily addresses mandated Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) requirements. Block 7 is the first Block Upgrade initiative that is a true International partnership, as the development costs are being shared by each participating nation. Block 7 requirements include: a.) Communication, Navigation, and Surveillance (CNS) b.) Civil Global Positioning System (GPS) c.) New flight management system (FMS) d.) Link 16 e.) Mission Computer (MC) upgrades. Block 7 (as well as all future Block Upgrades) will be integrated into the training systems integration lab prior to incorporation into the fielded trainers.
- 3) Start of Block 8 Upgrades. Block 8 is the last phase of three block upgrades which will complete all known mandated Communication, Navigation, and Surveillance/Air Traffic Control (CNS/ATM) requirements. Block 8 will again be an International partnership with cost being shared by each participating nation. Block 8 requirements include: a.) TEMPEST Compliance b.) Identification Friend or FOE (IFF) transponder Mode-5 c.) Civil Data-link d.) Automatic Dependent Surveillance-Broadcast (ADS-B) e.) Mission Computer (MC) upgrades
- 4) Other AMC approved initiatives. AMC has prioritized requirements that do not fall within the International Block Upgrade program, which primarily address deficiencies, system improvements, and may alleviate diminishing manufacturing sources (DMS) issues. This includes Navigation Safety upgrades, and Joint Precision Airdrop System (JPADS), among other priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Conclude the test and Common Core TKI phase, effectively closing the Common Core effort. US TKIs, for the US Marine Corps (USMC), the US Coast Guard (USCG), for Air Combat Command (ACC) and other Air Mobility Command (AMC) platforms, will be begin. FY 2012 OCO Plans:					
Title: Block 8.1 Description: BLOCK 8.1. Adds Identification Friend or Foe (IFF) Mode 5, Civil Data Link, Automatic Dependent Surveillance - Broadcast (ADS-B) FY 2010 Accomplishments: Received the proposal and conducted fact-finding. FY 2011 Plans: Award contract and Common Core hardware and software development will begin. FY 2012 Base Plans: The Block 8.1 effort will continue with the Common Core hardware and software development. Major Milestones expected to be completed include Systems Requirements Review (SRR), Preliminary Design Review (PDR), Critical Design Review (CDR), and Integrated Baseline Review (IBR). FY 2012 OCO Plans:	0.076	5.999	31.237	-	31.237
Title: Other AMC Initiatives Description: Other AMC approved initiatives FY 2010 Accomplishments: Prop dolly redesign FY 2011 Plans: Other AMC initiatives FY 2012 Base Plans: Other AMC initiatives FY 2012 OCO Plans:	1.500	0.500	0.500	-	0.500
Title: IPO Program Management Administration (PMA)	0.186	0.100	0.100	-	0.100

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Description: International Program Office (IPO) Support. Funds for Travel, Supplies and DFAS/DCMA Support					
FY 2010 Accomplishments: Travel, Supplies and DFAS/DCMA Support					
FY 2011 Plans: Travel, Supplies and DFAS/DCMA Support					
FY 2012 Base Plans: Travel, Supplies and DFAS/DCMA Support					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	29.072	26.770	39.537	-	39.537

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0401132F: <i>C-130J APAF BA 05 Block 7</i>	0.000	0.000	18.060	0.000	18.060	34.710	39.700	61.330	37.120	Continuing	Continuing
• PE 0401132F (1): <i>C-130J APAF BA 05 Block 8</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	25.140	Continuing	Continuing

D. Acquisition Strategy
The C-130J aircraft will be modified using a "block upgrade" strategy. The full CNS/ATM, nav safety requirement will be met in three block upgrades. Block 6.0 development was funded from FY03-07. Block 7.0 started in FY07 and Block 8.1 which began in FY10, should complete the known CNS/ATM and nav safety requirements. The proportion of CNS/ATM and nav safety requirements allocated to Blocks 6.0 through 8.1 was determine 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 (PA) by the United States (USAF, USMC, USCG), the United Kingdom, Italy, Australia, Denmark, Canada, and Norway. An international program office (IPO), with USAF lead (Wright Patterson AFB, OH), manages the block upgrades development effort. Embodiment of a Block on the aircraft is the responsibility of each nation.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Block 7.0 , Aeronautical Systems Center (AFMC), WPAFB, OH	SS/CPAF	Lockheed Martin Aeronautics:Marietta, GA	99.067	20.247	Jan 2011	7.200	Dec 2011	-		7.200	0.000	126.514	0.000
Block 8.1, Aeronautical Systems Center (AFMC), WPAFB, OH	SS/CPAF	Lockheed Martin Information Sytems:Marietta, GA	0.076	5.999	Apr 2011	31.237	Feb 2012	-		31.237	0.000	37.312	0.000
AMC-I, Aeronautical Systems Center (AFMC), WPAFB, OH	SS/CPAF	TBD:TBD,	1.500	0.003	May 2011	0.500	Feb 2012	-		0.500	0.000	2.003	0.000
Subtotal			100.643	26.249		38.937		-		38.937	0.000	165.829	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
IPO Support	TBD	TBD:TBD,	0.341	0.100	Nov 2010	0.100	Nov 2011	-		0.100	0.000	0.541	0.000
Subtotal			0.341	0.100		0.100		-		0.100	0.000	0.541	0.000

Remarks
Travel, Supplies - all vary on support needed

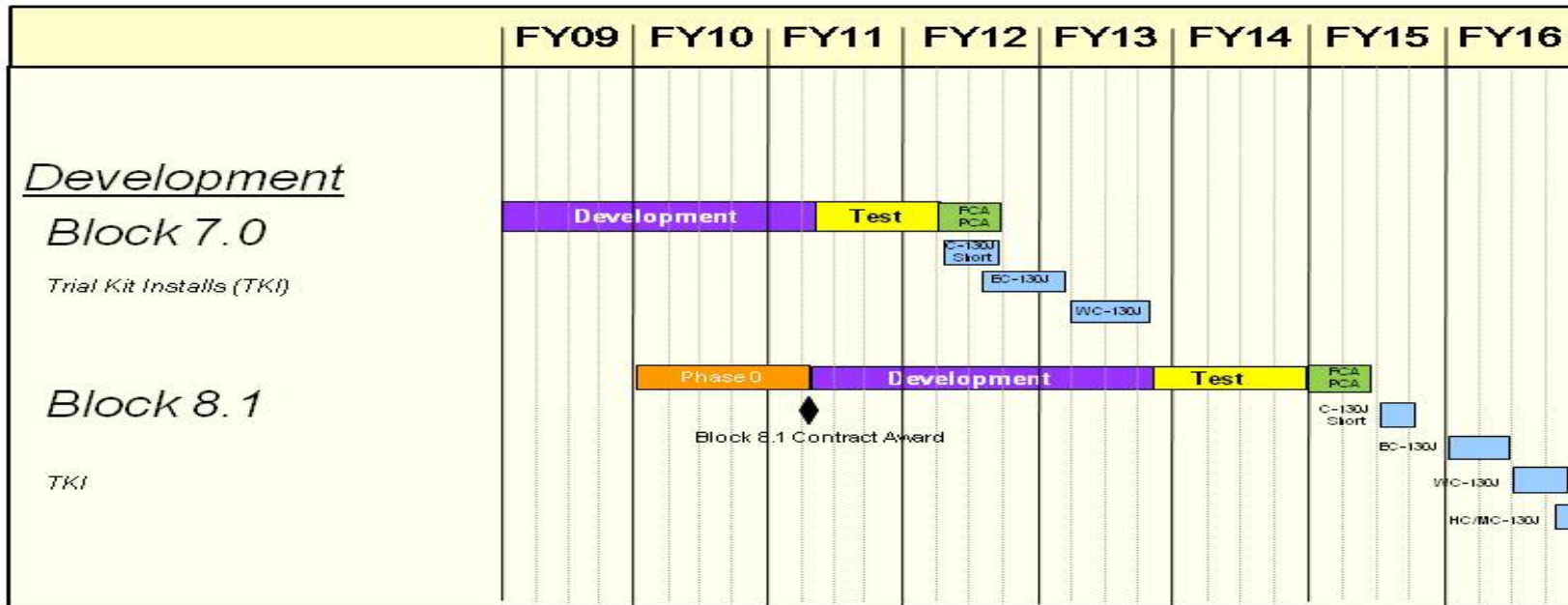
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
TBD	TBD	TBD:TBD,	-	-		-		-		-	0.000	0.000	0.000
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>



C-130J Schedule



Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401132F: <i>C-130J PROGRAM</i>	PROJECT 675061: <i>C-130J</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Block 7.0 Common Core Development Development	1	2010	3	2012
Block 7.0 Test	2	2011	2	2012
Block 7.0 Functional Configuration Audit (FCA) and Physical Configuration audit (PCA)	2	2012	3	2012
USAF Block 7.0 Trial Kit Installs	2	2012	4	2013
Block 8.1 Phase 0	1	2010	3	2011
Block 8.1 Common Core Development	2	2012	2	2015
Block 8.1 Test	4	2013	4	2014
Block 8.1 FCA/PCA	1	2015	2	2015
Block 8.1 TKIs	3	2015	2	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	25.700	17.227	7.438	-	7.438	7.759	5.825	5.906	6.010	Continuing	Continuing
674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>	25.700	17.227	7.438	-	7.438	7.759	5.825	5.906	6.010	Continuing	Continuing

Note
The Prior Years Funding estimate is \$362.8M. The To-Complete funding estimate is \$50.4M.

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 357, Large Aircraft Infrared Countermeasures (LAIRCM) - ACAT 1C

The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.097M in FY12.

The Large Aircraft Infrared Countermeasures (LAIRCM) system is an evolutionary acquisition program that provides significantly improved defensive systems capability for DoD aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat. The current LAIRCM system configuration [AN/AAQ-24V] consists of an ultra-violet missile warning sensor (MWS), a laser transmitter assembly, control interface unit (CIU) and processors to detect, track, jam and counter incoming IR missiles. The number of sensors and turrets per aircraft is determined by the size and signature of the aircraft. The 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 03 Aug 98. The system was first fielded on the C-17 aircraft.

The baseline program development is complete and consists of the small laser transmitter assembly (SLTA), ultra-violet MWS, processor, control interface unit (CIU) and a repeater (on some aircraft) to meet the need for advanced IR countermeasures. The Guardian Laser Transmitter Assembly (GLTA) is an upgrade to the baseline transmitter equipment. First production GLTA delivery occurred in June 08.

Development of the Next Generation Missile Warning System (NexGen MWS) is new hardware that improves capability. Baseline equipment (ultra-violet MWS) will be retrofitted with the NexGen MWS as it becomes available. DT/OT was conducted in FY10 with IOT&E in FY11.

LAIRCM upgrades – This includes continuous hardware and software upgrades and testing of the LAIRCM system to maintain concurrency with new and emerging threats. These upgrades include, but are not limited to capability, hardware and/or software, upgrades to current LAIRCM line replaceable units (LRUs) for capabilities like engagement reporting (ER), Closed Loop Infrared Countermeasures (CLIRCM) and other emerging capabilities to upgrade/update system threat defeating ability. It also includes development/integration of new LRUs/LRU variants into the current LAIRCM system based on emerging technology and upgrades to the capability of LAIRCM support/test equipment.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>
BA 7: <i>Operational Systems Development</i>	

Group A integration and testing as well as integration support to incorporate LAIRCM on new platforms (including C-130J and multiple potential C-130 variants) as defined by AMC and AFSOC, multiple potential tanker aircraft variants as defined by AMC, and other federal agency requirements as directed by DoD will be accomplished.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	26.784	17.227	7.535	-	7.535
Current President's Budget	25.700	17.227	7.438	-	7.438
Total Adjustments	-1.084	-	-0.097	-	-0.097
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-1.084	-	-0.097	-	-0.097

Change Summary Explanation

FY10: -\$1.084M adjustment

(1) -\$0.112 Congressional General Reduction

(2) -\$0.972 Small Business Innovation Research (SBIR) adjustment

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>	PROJECT 674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>	25.700	17.227	7.438	-	7.438	7.759	5.825	5.906	6.010	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
The Prior Years Funding estimate is \$362.8M. The To-Complete funding estimate is \$50.4M

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 357, Large Aircraft Infrared Countermeasures (LAIRCM) - ACAT 1C

The program funding includes reductions for overhead efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.097M in FY12.

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The baseline program development is complete and consists of the small laser transmitter assembly (SLTA), ultra-violet MWS, processor, control interface unit (CIU) and a repeater (on some aircraft) to meet the need for advanced IR countermeasures. The Guardian Laser Transmitter Assembly (GLTA) is an upgrade to the baseline transmitter equipment. First production GLTA delivery occurred in June 08.

Development of the Next Generation Missile Warning System (NexGen MWS) is new hardware that improves capability. Baseline equipment (ultra-violet MWS) will be retrofitted with the NexGen MWS as it becomes available. DT/OT was conducted in FY10 with IOT&E in FY11.

LAIRCM upgrades – This includes continuous hardware and software upgrades and testing of the LAIRCM system to maintain concurrency with new and emerging threats. These upgrades include, but are not limited to capability, hardware and/or software, upgrades to current LAIRCM line replaceable units (LRUs) for capabilities like engagement reporting (ER), Closed Loop Infrared Countermeasures (CLIRCM) and other emerging capabilities to upgrade/update system threat defeating ability. It also includes development/integration of new LRUs/LRU variants into the current LAIRCM system based on emerging technology and upgrades to the capability of LAIRCM support/test equipment.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>	PROJECT 674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>
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Group A integration and testing as well as integration support to incorporate LAIRCM on new platforms (including C-130J and multiple potential C-130 variants) as defined by AMC and AFSOC, multiple potential tanker aircraft variants as defined by AMC, and other federal agency requirements as directed by DoD will be accomplished.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: LAIRCM Development</p> <p>Description: Continue integration of LAIRCM system onto new aircraft (a/c) for AMC & AFSOC customers.</p> <p>FY 2010 Accomplishments: Continuing LAIRCM integration program onto AMC C-130J. Continue planning/study of multiple AFSOC EC-130J variants and LAIRCM integration, including some trial installation and flight test h/w procurements due to changing user requirements. Identify/study potential new technologies for new/future line replaceable unit (LRU)/shop replaceable units (SRUs) to be added to the system. Continue hardware (h/w) and software (s/w) upgrade program of current LAIRCM system equipment to new s/w architecture including additional Engagement Reporting capability. Continue recurring jam code development and testing program.</p> <p>FY 2011 Plans: Complete LAIRCM integration program onto AMC C-130J. Re-start study/integration of LAIRCM onto AFSOC AC-130U, initiated with FY09 Congressional Add funding. Continue planning/study/integration of additional AFSOC EC-130J variants, including some trial installation and flight test h/w procurements. Begin development/integration of potential new technologies for new/future LRU/SRUs to be added to the system. Begin development of Future Infrared Countermeasures (FIRCM) capabilities. Continue h/w and s/w upgrade program for current LAIRCM system equipment to new s/w architecture, including additional Engagement Reporting capability. Continue recurring jam code development and testing program.</p> <p>FY 2012 Base Plans: Complete AFSOC AC-130U and additional AFSOC EC-130J variants. Continue development/integration of potential new technologies for new/future LRU/SRUs to be added to the system. Continue development of Future Infrared Countermeasures (FIRCM) capabilities. Continue h/w and s/w upgrade program for current LAIRCM system equipment to new s/w architecture, including additional Engagement Reporting capability. Continue recurring jam code development and testing program.</p> <p>FY 2012 OCO Plans:</p>	25.700	17.227	7.438	-	7.438

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>	PROJECT 674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals	25.700	17.227	7.438	-	7.438

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0401134F: <i>APAF, C-17</i>	267.937	282.959	32.672	0.000	32.672	113.203	118.769	119.143	119.789	Continuing	Continuing
• PE 0401134F (1): <i>APAF, C-130</i>	120.433	133.019	0.000	154.841	154.841	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401134F (2): <i>APAF, C-5</i>	66.823	78.522	3.190	59.299	62.489	3.147	5.239	5.312	5.377	Continuing	Continuing
• PE 0401134F (3): <i>APAF, C-130J</i>	0.000	55.339	17.428	27.983	45.411	8.285	8.447	8.603	8.707	Continuing	Continuing
• PE 0401134F (4): <i>APAF, HC/ MC-130 Recap</i>	0.000	0.000	0.000	34.000	34.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Aircraft integration contracts award to aircraft prime contractor with separate integration support contract awarded to Northrop Grumman Corporation (Rolling Meadows). IR countermeasure upgrades awarded as modifications under the LAIRCM production contract.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>	PROJECT 674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
EC-130J Integration	SS/CPFF	Northrop Grumman:Rolling Meadows, IL	1.791	3.132	Jun 2011	-		-		-	0.000	4.923	0.000
AC-130U Integration	SS/CPFF	Northrop Grumman:Rolling Meadows, IL	2.893	3.086	May 2011	1.932	Jan 2012	-		1.932	0.000	7.911	0.000
C-130J Development & Integration	SS/CPAF	Lockheed Martin:Marietta, GA	19.840	4.544	Dec 2010	-		-		-	0.000	24.384	0.000
LAIRCM Hardware and Software upgrades	SS/CPFF	Northrop Grumman:Rolling Meadows, IL	8.114	3.251	Feb 2011	1.462	Nov 2011	-		1.462	Continuing	Continuing	0.000
Subtotal			32.638	14.013		3.394		-		3.394			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
A/C Survivability Division (Program Office)	Various	Various:Various,	0.507	0.217		0.164		-		0.164	Continuing	Continuing	0.000
Subtotal			0.507	0.217		0.164		-		0.164			0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Various Gov't Test Organizations	Various	Various:Various,	5.300	2.997		3.880		-		3.880	Continuing	Continuing	0.000
Subtotal			5.300	2.997		3.880		-		3.880			0.000

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APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

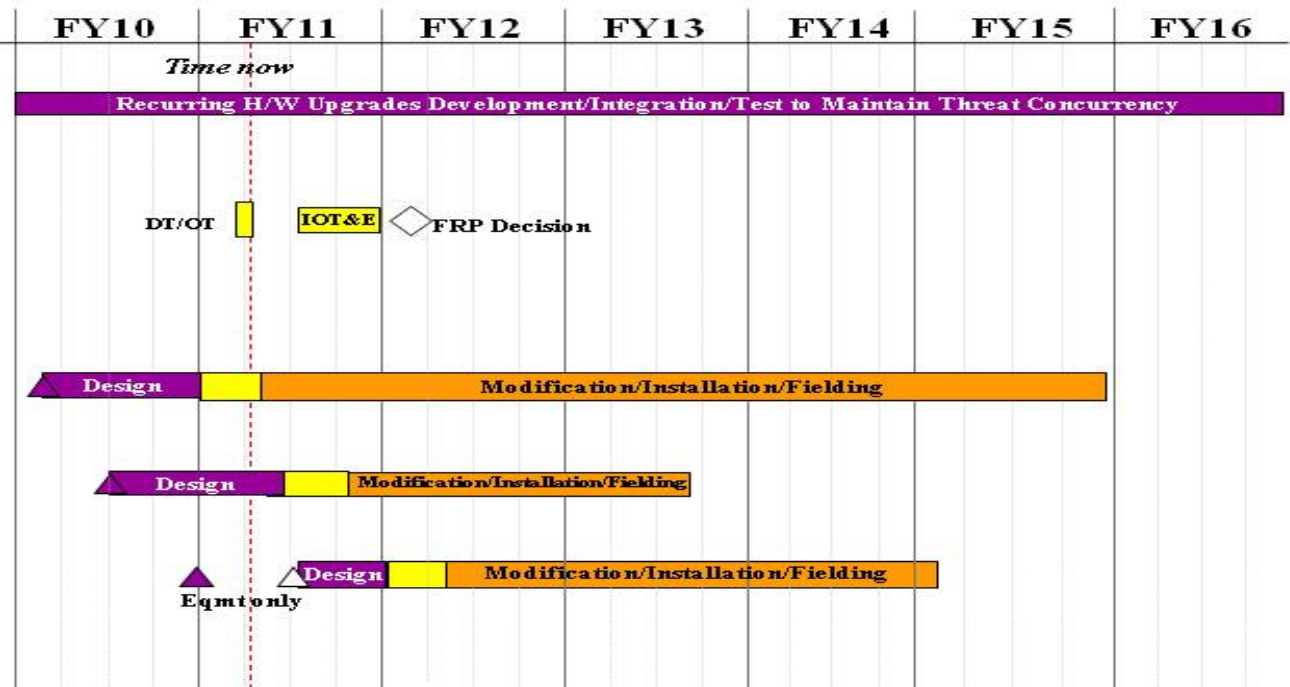
PE 0401134F: Large Aircraft InfraRed Counter Measures (LAIRCM)

PROJECT

674942: Large Aircraft Infrared Counter Measures (LAIRCM)



LAIRCM Program Schedule



- Contract Awards
- Design / development
- Integration / test
- Milestone Decision
- Mod/Install/ fielding
- Operations / sustainment

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401134F: <i>Large Aircraft InfraRed Counter Measures (LAIRCM)</i>	PROJECT 674942: <i>Large Aircraft Infrared Counter Measures (LAIRCM)</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Hardware & Software Upgrades	1	2010	4	2016
NexGen MWS IOT&E	3	2011	4	2011
NexGen MWS Full Rate Production Decision	1	2012	1	2012
C-130J Integration	1	2010	2	2011
EC-130J Integration	2	2010	4	2011
AC-130U Integration	4	2010	2	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	1.308	-	1.308	1.324	1.342	1.369	1.394	Continuing	Continuing
675379: <i>Light Mobility Aircraft</i>	-	-	1.308	-	1.308	1.324	1.342	1.369	1.394	Continuing	Continuing

Note

IN FY2012, Project 5379, Light Mobility Aircraft, efforts were transferred from PE 0401315F, Cargo-Short Takeoff and Landing (C-STOL) Aircraft, Project 5379, Light Mobility Aircraft, in order to more readily differentiate Light Mobility Aircraft (LiMA) efforts from C-STOL activities.

A. Mission Description and Budget Item Justification

The Light Mobility Aircraft (LiMA) program will fill an Air Force light mobility gap by acquiring Commercial-Off-The-Shelf (COTS) aircraft, which are also suitable for building partner capacity (BPC) especially in lesser developed partner nations (PN). Suitable aircraft may be single or multi-engine, fixed-wing and capable of operating from austere, unprepared surfaces. This program supports irregular warfare efforts that help prepare partner nations to defend and govern themselves by demonstrating an airlift capability that is consistent with their needs for supporting infrastructure, performance, anticipated methods of employment, acquisition and sustainment costs, and multi-role/multi-mission capability. FY2012 RDT&E funding will be used for efforts and products such as systems engineering strategy and analysis, risk analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition strategy baseline planning and analysis. It will also be used to conduct Live Fire Testing, if required.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	1.308	-	1.308
Total Adjustments	-	-	1.308	-	1.308
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	1.308	-	1.308

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>
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Change Summary Explanation

For FY2012, project 5379, Light Mobility Aircraft (LiMA) transfers in its entirety from PE 0401315F to PE 0401139 with no change of planned content.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675379: <i>Light Mobility Aircraft</i>	-	-	1.308	-	1.308	1.324	1.342	1.369	1.394	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Light Mobility Aircraft (LiMA) program will fill an Air Force light mobility gap by acquiring Commercial-Off-The-Shelf (COTS) aircraft, which are also suitable for building partner capacity (BPC) especially in lesser developed partner nations (PN). Suitable aircraft may be single or multi-engine, fixed-wing and capable of operating from austere, unprepared surfaces. This program supports irregular warfare efforts that help prepare partner nations to defend and govern themselves by demonstrating an airlift capability that is consistent with their needs for supporting infrastructure, performance, anticipated methods of employment, acquisition and sustainment costs, and multi-role/multi-mission capability. FY2012 RDT&E funding will be used for efforts and products such as systems engineering strategy and analysis, risk analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition strategy baseline planning and analysis. It will also be used to conduct Live Fire Testing, if required.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Light Mobility Aircraft (LiMA)	-	-	1.308	-	1.308
Description: Conduct LiMA missionization, development and test					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: Conduct missionization and integration of non-standard components, efforts and products such as systems engineering strategy and analysis, risk analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition planning baseline strategy and analysis. It will also be used to conduct Live Fire Testing, if required.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	-	1.308	-	1.308

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>	
• PE 0401315F: <i>Light Mobility Aircraft APAF BA 3</i>	0.000	65.699	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401315F (1): <i>C-STOL Aircraft RDT&E AF BA 7</i>	0.000	1.283	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

A full and open source selection is planned.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Light Mobility Aircraft Missionization	C/TBD	TBD:TBD,	-	-		1.308	Jan 2012	-		1.308	Continuing	Continuing	0.000
Subtotal			-	-		1.308		-		1.308			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

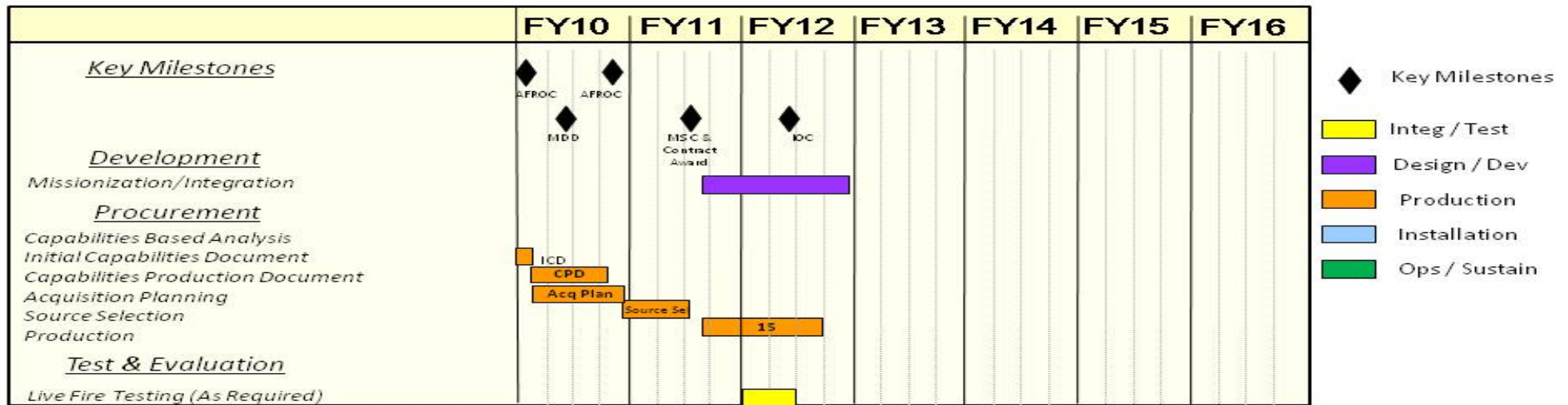
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		1.308		-		1.308			0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>

Light Mobility Aircraft (LiMA)



For FY11, LiMA is funded in PE 040135F; for FY12 and beyond, LiMA is funded in PE 0401139F

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401139F: <i>LIGHT MOBILITY AIRCRAFT (LIMA)</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Missionization/Integration	3	2011	4	2012
Live Fire Testing	1	2012	2	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	11.832	20.453	6.161	-	6.161	-	-	-	-	Continuing	Continuing
674494: <i>KC-135 Aging Aircraft Program</i>	0.800	-	-	-	-	-	-	-	-	Continuing	Continuing
675261: <i>KC-135 Upgrades</i>	11.032	20.453	6.161	-	6.161	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

KC-135 Upgrades (675261)

KC-135 CNS/ATM (Block 45) program – Block 45 addresses obsolescence, reliability and maintainability issues currently experienced by the KC-135 fleet. Funding supports a modification program performing analysis, testing, software development, prototyping, documenting source-data, and integration of a new Digital Flight Director (DFD), Radio Altimeter (RA), Autopilot (AP) and Electronic Engine Instrument Displays (EEID).

This program has associated APAF funding in Program Elements 0401218F and 0401897F.

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiency reductions total \$0.029M in FY12.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

KC-135 Podded Large Aircraft Infrared Countermeasures (LAIRCM) – KC-135 aircraft have no defensive capability against the Man Portable Air Defense System (MANPADS) threat. LAIRCM is an evolutionary acquisition program that provides significantly improved defensive systems capability for DoD aircraft to counter the infrared (IR) MANPADS missile threat.

This program is a temporary modification to one Air Reserve Component (ARC) KC-135 to perform an Operational Utility Evaluation (OUE) of a Department of Homeland Security (DHS) developed podded LAIRCM system that was originally installed on a commercial-variant aircraft. The intent of this modification program is to conduct an OUE to evaluate system suitability to meet Air Expeditionary Force (AEF) mission requirements. The contractor is providing all hardware and software at no cost to facilitate the OUE. Funding will be utilized to support aircraft modification, de-modification, and test and evaluation activities. Air Mobility Command (AMC) requirements for this effort are documented in AMC AF 1067, 09-039, dated 15 Dec 09.

KC-135 Aging Aircraft Program (674494)

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0401218F: <i>KC-135s</i>
BA 7: <i>Operational Systems Development</i>	

This program supports projects to keep the KC-135 viable for the future. In FY10, Congress added funds to deploy advanced ultrasonic robotic inspection techniques that may dramatically reduce the time required to inspect aircraft for defects. The deployment of the ultrasonic robotic inspection technology will provide significantly improved identification and characterization of defects. This effort will support the KC-135 until the planned fleet retirement of 2040.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	11.832	20.453	6.211	-	6.211
Current President's Budget	11.832	20.453	6.161	-	6.161
Total Adjustments	-	-	-0.050	-	-0.050
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.050	-	-0.050

Change Summary Explanation

- Program received Congressional add of \$800K in FY10 to further develop autonomous robotic inspection technologies.

- FY12 reduction is an inflation cut (non-pay, non-fuel, purchases).

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 674494: <i>KC-135 Aging Aircraft Program</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674494: <i>KC-135 Aging Aircraft Program</i>	0.800	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program supports projects to keep the KC-135 viable for the future. In FY10, Congress added funds to procure equipment that will enable the Air Force to deploy advanced ultrasonic robotic inspection techniques that may dramatically reduce the time required to inspect aircraft for defects. The deployment of the ultrasonic robotic inspection technology will provide significantly improved identification and characterization of defects. This effort will support the KC-135 until the planned fleet retirement of 2040.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Autonomous Robotic Inspection	0.800	-	-	-	-
Description: Earmark to further advance the semi autonomous robotic inspection to a fully autonomous robotic inspection					
FY 2010 Accomplishments: Funds support the further development of fully autonomous robotic inspection technology for the KC-135 aircraft.					
FY 2011 Plans:					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	0.800	-	-	-	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: .	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

This effort will advance the semi autonomous robotic inspection to a fully autonomous robotic inspection

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 674494: <i>KC-135 Aging Aircraft Program</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: KC-135s	PROJECT 674494: <i>KC-135 Aging Aircraft Program</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Phase two	TBD	Not specified.;	-	-	Sep 2011	-		-		-	0.000	0.000	0.000
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Remarks
This project will further develop autonomous ultrasonic robotic inspection technology techniques to support the KC-135 aircraft.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

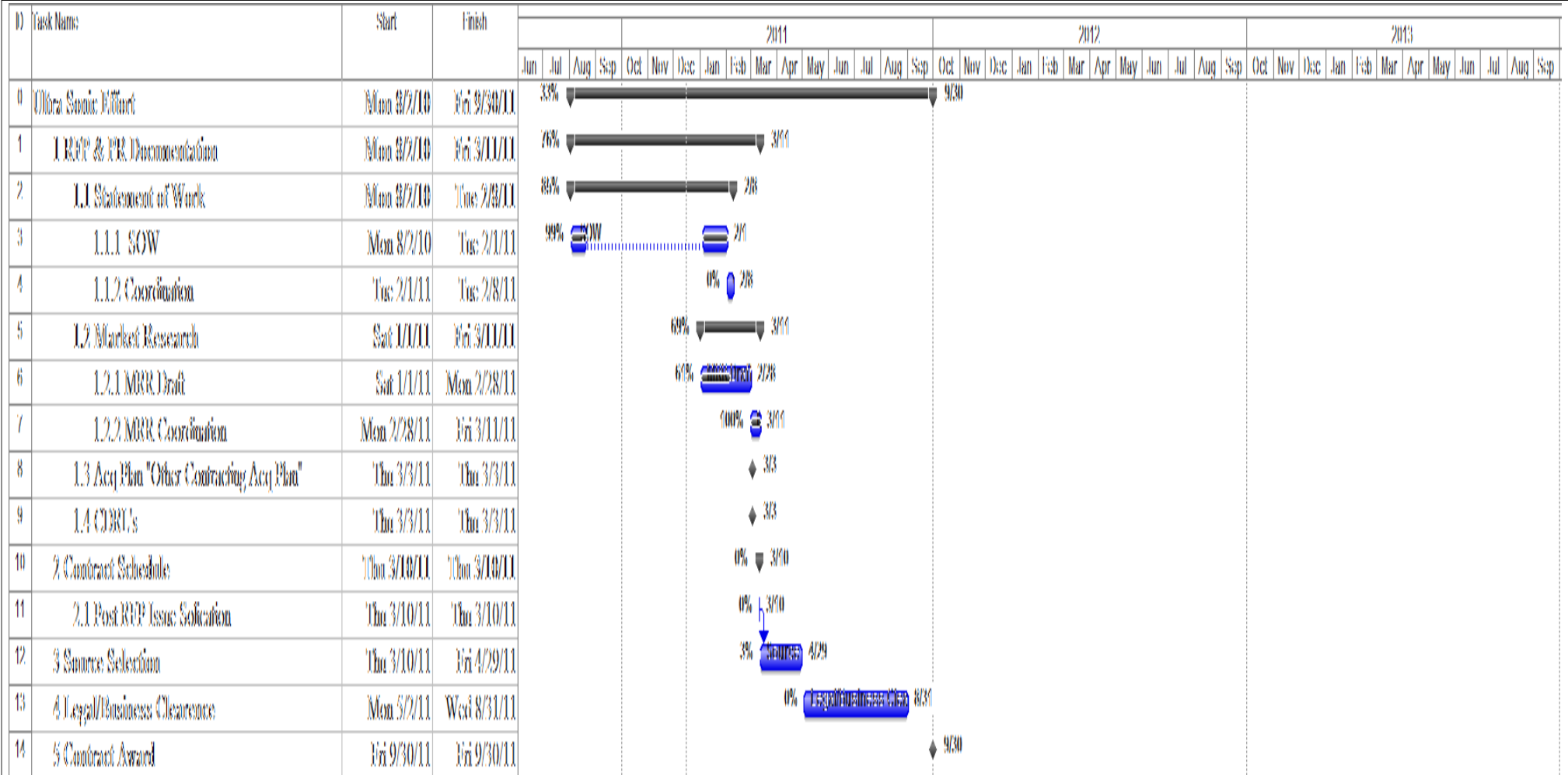
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		-		-		-	0.000	0.000	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0401218F: KC-135s
		PROJECT 674494: <i>KC-135 Aging Aircraft Program</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 674494: <i>KC-135 Aging Aircraft Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Statement of Work	4	2010	2	2011
Market Research	2	2011	2	2011
Post RFP	2	2011	2	2011
Source Selection	2	2011	3	2011
Legal/Business Clearance	3	2011	4	2011
Contract Award	4	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 675261: <i>KC-135 Upgrades</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675261: <i>KC-135 Upgrades</i>	11.032	20.453	6.161	-	6.161	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

KC-135 CNS/ATM (Block 45) program – Block 45 addresses obsolescence and reliability and maintainability issues currently experienced by the KC-135 fleet. Funding supports a modification program performing analysis, testing, software development, prototyping, documenting source-data, and integration of a new Digital Flight Director (DFD), Radio Altimeter (RA), Autopilot (AP) and Electronic Engine Instrument Displays (EEID).

This program has associated APAF funding in Program Element 0401218F.

KC-135 Podded Large Aircraft Infrared Countermeasures (LAIRCM) – KC-135 has no defensive capability against the Man Portable Air Defense System (MANPADS) threat. LAIRCM is an evolutionary acquisition program that provides significantly improved defensive systems capability for DoD aircraft to counter the infrared (IR) MANPADS missile threat. KC-135 Podded LAIRCM is a temporary modification to one Air Reserve Component (ARC) KC-135 to perform an Operational Utility Evaluation (OUE) of a Department of Homeland Security (DHS) developed podded LAIRCM system that was originally installed on a commercial-variant aircraft. The intent of this modification program is to conduct an OUE to evaluate system suitability to meet Air Expeditionary Force (AEF) mission requirements. The contractor is providing all hardware and software at no cost to facilitate the OUE. Funding will be utilized to support aircraft modification, de-modification, and test and evaluation activities. AMC requirement for this effort is documented in AMC AF 1067, 09-039, dated 15 Dec 09.

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$0.029M in FY12.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Block 45 Engineering Manufacturing Development (EMD)	9.836	20.453	6.161	-	6.161
Description: Non-Recurring Engineering and test efforts/tasks for all Block 45 sub programs					
FY 2010 Accomplishments: Finish system design to include draft engineering technical data, verify technical problems and design anomalies that have been resolved without compromising system performance, reliability and safety to be verified during Critical Design Review (CDR). Modify the System Integration Laboratory (SIL) and conduct initial system software dry-run testing. Begin production of prototype aircraft and operational flight trainer (OFT) hardware and kits. Start developing the Modification Airworthiness Certification Criteria (MACC), Technical Orders					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 675261: <i>KC-135 Upgrades</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>		<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>						<u>Complete</u>	<u>Total Cost</u>
• PE 0401218F: <i>KC-135 APAF BA</i> 5	0.000	8.394	31.118	0.000	31.118	42.701	48.568	52.495	64.992	Continuing	Continuing

D. Acquisition Strategy

Block 45 - The strategy is a sole-source contract with Rockwell Collins to accomplish the task of performing analysis, testing, software development, prototypes, documentation of source data, and integrating a new Digital Flight Director (DFD), digital Autopilot (AP), digital Radar Altimeter (RA), and Electronic Engine Instrument Display (EEID). Rockwell Collins will be responsible for acquiring the necessary information and personnel to integrate each item stated above into the KC-135 legacy systems and for developing and subcontracting the components.

KC-135 Podded Large Aircraft Infrared Countermeasures (LAIRCM) – The intent of this program is to conduct an OUE to evaluate a commercial system’s suitability to meet Air Expeditionary Force (AEF) mission requirements. The contractor is providing all hardware and software at no cost to facilitate the OUE. Funding will be utilized to support aircraft modification, de-modification and test and evaluation activities.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 675261: <i>KC-135 Upgrades</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 45 - NRE, engineering, development, and prototype	SS/TBD	Rockwell Collins:Cedar Rapids, IA	15.515	16.000	Nov 2010	3.800	Nov 2011	-		3.800	0.000	35.315	33.860
Subtotal			15.515	16.000		3.800		-		3.800	0.000	35.315	33.860

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 45 Program Office Support	Various	Various:Various,	3.167	0.450		-		-		-	0.000	3.617	0.000
LAIRCM Installation/Removal	Various	Various:Various,	0.120	-		-		-		-	0.000	0.120	0.000
Subtotal			3.287	0.450		-		-		-	0.000	3.737	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 45 developmental ground and flight test	PO	418 FTS:Edwards AFB, CA	0.421	2.667	Nov 2010	1.922	Nov 2011	-		1.922	0.000	5.010	0.000
LAIRCM ground and flight test	PO	418 FTS:Edwards AFB, CA	0.950	-		-		-		-	0.000	0.950	0.000
Subtotal			1.371	2.667		1.922		-		1.922	0.000	5.960	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Block 45 Management Services	Various	OC-ALC/ GKCMB:Tinker AFB, OK	1.853	1.336		0.439		-		0.439	0.000	3.628	0.000
	Various		0.126	-		-		-		-	0.000	0.126	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0401218F: KC-135s

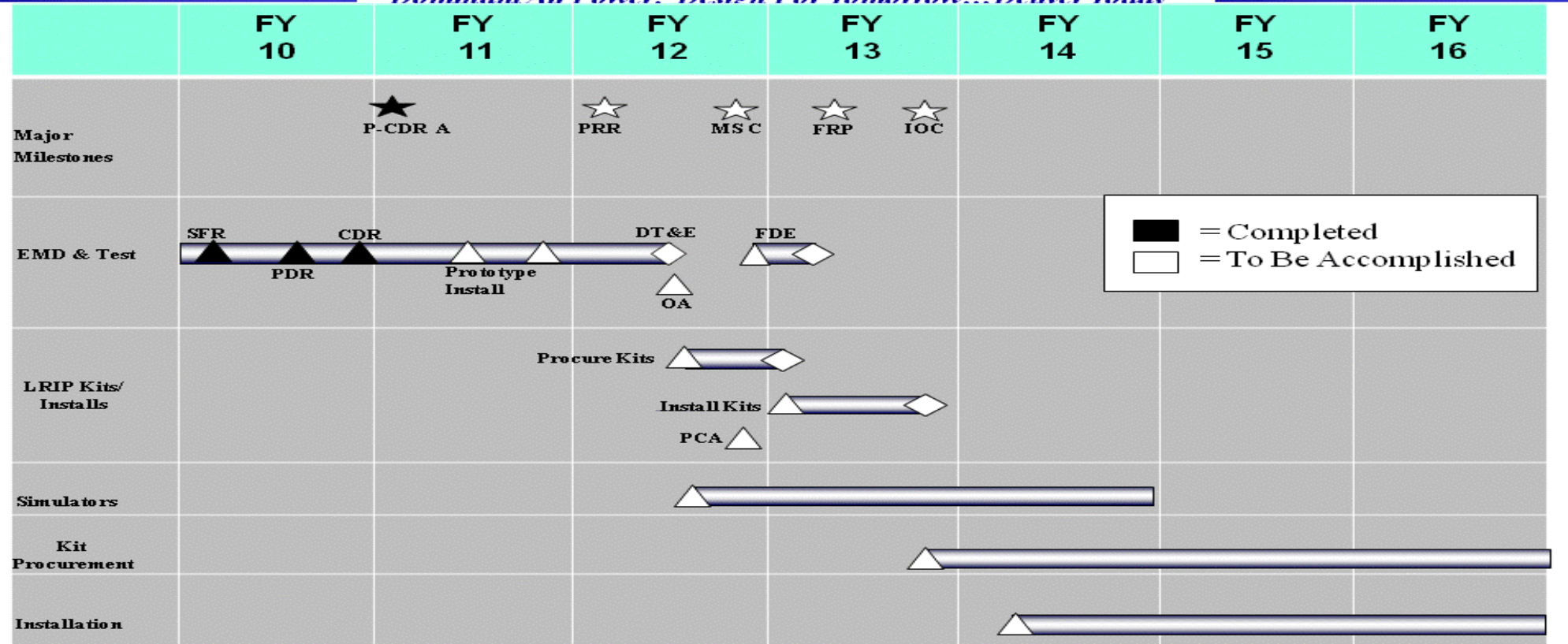
PROJECT
 675261: KC-135 Upgrades

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Program Schedule



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



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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

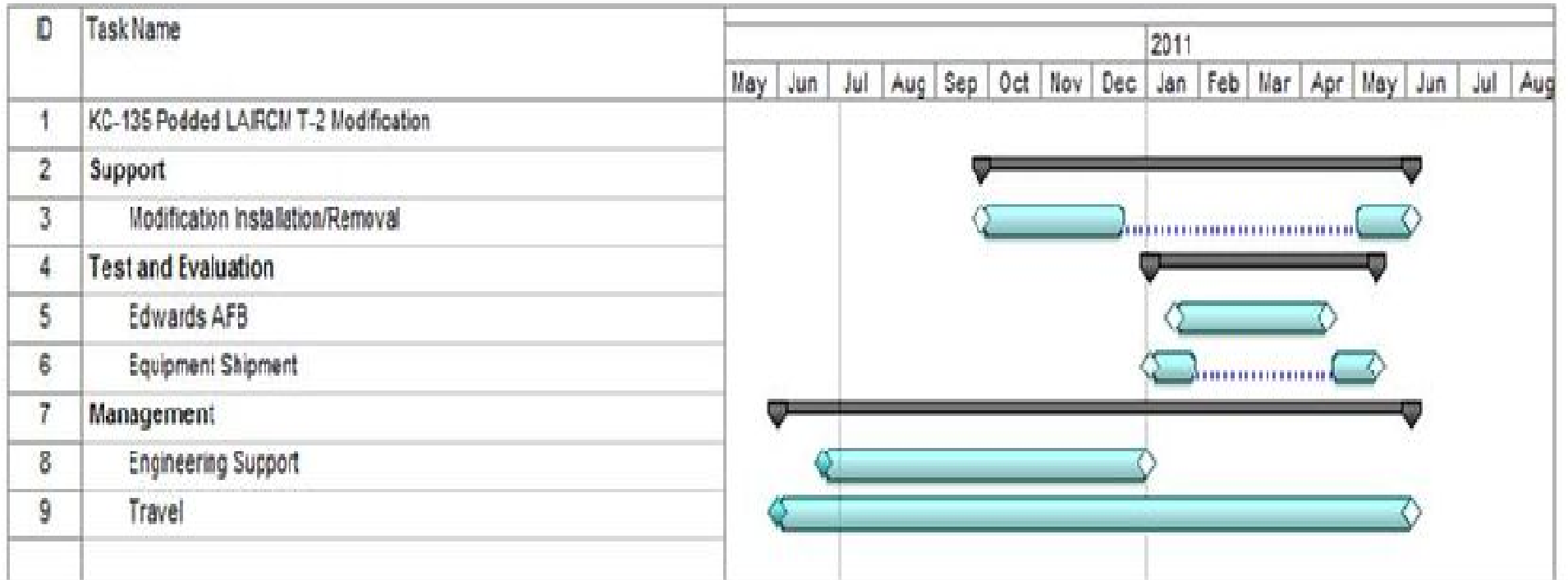
R-1 ITEM NOMENCLATURE

PE 0401218F: *KC-135s*

PROJECT

675261: *KC-135 Upgrades*

LAIRCM Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401218F: <i>KC-135s</i>	PROJECT 675261: <i>KC-135 Upgrades</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Blk 45 Engineering Manufacturing Development (EMD) Phase I	1	2010	4	2010
Blk 45 System Functional Review	2	2010	2	2010
Blk 45 Preliminary Design Review	3	2010	3	2010
Blk 45 Critical Design Review	4	2010	4	2010
Blk 45 EMD Phase II	1	2011	4	2011
Blk 45 Critical Design Review Assessment	1	2011	1	2011
Blk 45 Prototype installation	2	2011	4	2011
Blk 45 Developmental Test and Evaluation	4	2011	3	2012
Podded LAIRCM Installation/Removal	3	2010	3	2011
Podded LAIRCM Test and Evaluation - Edwards AFB, CA	2	2011	3	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	35.325	56.669	30.868	-	30.868	-	-	-	-	Continuing	Continuing
675195: <i>Aircraft Modernization Program (AMP)</i>	35.325	56.669	30.868	-	30.868	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The KC-10A Extender is an aerial refueling asset built on the commercial DC-10 airframe. The aircraft creates an air bridge enabling rapid global mobility and global strike missions. There are 59 KC-10A aircraft in the USAF tanker fleet. RDT&E funds throughout the FYDP will be used to support the Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM), Boom Control Unit (BCU) and Mode 5 modification efforts.

The KC-10 Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) program provides worldwide airspace accessibility by FY2015 for the fleet of 59 KC-10 aircraft. FAA airworthiness certification following the modification is required. An upgrade of the current Flight Management System (FMS) and Inertial Navigation System (INS) is required to meet the 2015 CNS/ATM requirements and address associated INS and FMS obsolescence issues. This capability gap is well documented in both RAND KC-10 Analysis of Alternatives (AoA) and Service Life Extension Program (SLEP) Studies. Avionics components shall use either Commercial Off-The-Shelf (COTS) or Military Off-The-Shelf (MOTS) software and hardware. CNS/ATM requirements include: Required Navigation Performance (RNP-4) Oceanic/Remote for enroute Oceanic Airspace with either 50/50 Nautical Miles (NM) or 30/30 NM separations; Basic Area Navigation (BRNAV) for enroute European Airspace (9,500ft & up); RNP 2 & 1 for enroute & terminal airspace operations; Precision-RNAV (P-RNAV) for Preferred terminal area routes in Europe (1 NM Accuracy); RNP-4 & RNP-1 for reduced separations enroute, and terminal airspace; Time of Arrival Control for Refuel rendezvous (within 30 sec); Automatic Dependent Surveillance - Broadcast (ADS-B) Out for enhanced air and ground surveillance; Global Positioning System (GPS) for enhanced navigation capability; Selective Availability Anti-Spoofing Module (SAASM) for Global Positioning System (GPS) Security; Satellite Data Link for Air Traffic Systems (ATS) and Command and Control (C2) Communications for flight in Oceanic Airspace (FL310-410); Satellite Voice for Beyond Line of Sight (BLOS) Pilot - Controller Communications C2 Operations; and Very-High Frequency Data Link (VDL) Mode-2 for Line of Sight (LOS) Pilot - Controller Communications and C2 Operations.

The KC-10 Boom Control Unit (BCU), responsible for the operation of the KC-10's primary air refueling mission, will be unsupportable due to parts obsolescence as early as 2010. Once the BCU spares pool is exhausted (estimated 2012 +/- 2 years), any KC-10 requiring a BCU repair or replacement will not be capable of performing its primary air refueling mission (boom refueling) until a BCU replacement unit is fielded. This modification effort replaces the current BCU to overcome these parts obsolescence issues, to improve diagnostics, and add the capability to provide boom position information to an external recording device (planned future recording capability). The Advanced BCU (A-BCU) will also add the capability to accept inputs from the existing, or next generation Central Air Data Computer (CADC). The A-BCU will be form, fit, function, and interface identically to the existing unit so as to be fully interchangeable.

The Mode 5 modification is a DoD-mandated (JROCOM 047-07, 5 Mar 07 directs KC-10 IOC by 2014, FOC by 2020) upgrade to the KC-10's Identify Friend or Foe (IFF) system (the primary means of aircraft identification during Air Defense operations). The Mode 5 upgrade increases anti-spoofing and exploitation capabilities, and lowers the possibility of aircraft/aircrew loss due to misidentification of friendly aircraft. The modification includes a new Mode 5 crypto applique; new IFF control

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>
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panel, a circuit card upgrade to the APX-119 transponder, support equipment upgrades and replacement/relocation of the data loader from the avionics bay to the flight deck.

The KC-10 program has associated APAF funding in Program Elements 0401219F and 0401897F.

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiency reductions total \$0.117M in FY12.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	35.325	56.669	13.791	-	13.791
Current President's Budget	35.325	56.669	30.868	-	30.868
Total Adjustments	-	-	17.077	-	17.077
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	17.077	-	17.077

Change Summary Explanation

The program has been funded to the latest cost estimate, less efficiencies. FY12 adjustments reflect a \$923K reduction for efficiencies which is not intended to impact program content, and a \$17.077M Zero-Balance-Transfer (ZBT) for an Internal Air Force transfer from APAF (Procurement) funding to RDT&E from within this same KC-10 Program Code 0401219F.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>				PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675195: <i>Aircraft Modernization Program (AMP)</i>	35.325	56.669	30.868	-	30.868	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The KC-10A Extender is an aerial refueling asset built on the commercial DC-10 airframe. The aircraft creates an air bridge enabling rapid global mobility and global strike missions. There are 59 KC-10A aircraft in the USAF tanker fleet. RDT&E funds throughout the FYDP will be used to support the Communications, Navigation and Surveillance/Air Traffic Management (CNS/ATM), Boom Control Unit (BCU) and Mode 5 modification efforts.

The KC-10 Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) program provides worldwide airspace accessibility by FY2015 for the fleet of 59 KC-10 aircraft. FAA airworthiness certification following the modification is required. An upgrade of the current Flight Management System (FMS) and Inertial Navigation System (INS) is required to meet the 2015 CNS/ATM requirements and address associated INS and FMS obsolescence issues. This capability gap is well documented in both RAND KC-10 Analysis of Alternatives (AoA) and Service Life Extension Program (SLEP) Studies. Avionics components shall use either Commercial Off-The-Shelf (COTS) or Military Off-The-Shelf (MOTS) software and hardware. CNS/ATM requirements include: Required Navigation Performance (RNP-4) Oceanic/Remote for enroute Oceanic Airspace with either 50/50 Nautical Miles (NM) or 30/30 NM separations; Basic Area Navigation (BRNAV) for enroute European Airspace (9,500ft & up); RNP 2 & 1 for enroute & terminal airspace operations; Precision-RNAV (P-RNAV) for Preferred terminal area routes in Europe (1 NM Accuracy); RNP-4 & RNP-1 for reduced separations enroute, and terminal airspace; Time of Arrival Control for Refuel rendezvous (within 30 sec); Automatic Dependent Surveillance - Broadcast (ADS-B) Out for enhanced air and ground surveillance; Global Positioning System (GPS) for enhanced navigation capability; Selective Availability Anti-Spoofing Module (SAASM) for Global Positioning System (GPS) Security; Satellite Data Link for Air Traffic Systems (ATS) and Command and Control (C2) Communications for flight in Oceanic Airspace (FL310-410); Satellite Voice for Beyond Line of Sight (BLOS) Pilot - Controller Communications C2 Operations; and Very-High Frequency Data Link (VDL) Mode-2 for Line of Sight (LOS) Pilot - Controller Communications and C2 Operations.

The KC-10 Boom Control Unit (BCU), responsible for the operation of the KC-10's primary air refueling mission, will be unsupportable due to parts obsolescence as early as 2010. Once the BCU spares pool is exhausted (estimated 2012 +/- 2 years), any KC-10 requiring a BCU repair or replacement will not be capable of performing its primary air refueling mission (boom refueling) until a BCU replacement unit is fielded. This modification effort replaces the current BCU to overcome these parts obsolescence issues, to improve diagnostics, and add the capability to provide boom position information to an external recording device (planned future recording capability). The Advanced BCU (A-BCU) will also add the capability to accept inputs from the existing, or next generation Central Air Data Computer (CADC). The A-BCU will be form, fit, function, and interface identically to the existing unit so as to be fully interchangeable.

The Mode 5 modification is a DoD-mandated (JROCOM 047-07, 5 Mar 07 directs KC-10 IOC by 2014, FOC by 2020) upgrade to the KC-10's Identify Friend or Foe (IFF) system (the primary means of aircraft identification during Air Defense operations). The Mode 5 upgrade increases anti-spoofing and exploitation capabilities, and lowers the possibility of aircraft/aircrew loss due to misidentification of friendly aircraft. The modification includes a new Mode 5 crypto applique; new IFF control

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>	PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>
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panel, a circuit card upgrade to the APX-119 transponder, support equipment upgrades and replacement/relocation of the data loader from the avionics bay to the flight deck.

The KC-10 program has associated APAF funding in Program Elements 0401219F and 0401897F.

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiency reductions total \$0.117M in FY12.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: CNS-ATM Avionics Upgrade, Boom Control Unit Development and Mode 5 Engineering Design</p> <p>Description: CNS-ATM Avionics Upgrade, Boom Control Unit Development and Mode 5 Engineering Design to fleet of 59 KC-10 aircraft</p> <p>FY 2010 Accomplishments: CNS/ATM: Milestone B (MS B) Document preparation is ongoing. At contract award, start Engineering, Manufacturing, Development (EMD). Conduct and approve Preliminary Design Review (PDR). A-BCU: Conduct and approve Critical Design Review (CDR); Integration and system testing of A-BCU; qualification and certification of A-BCU; tech order source data development; production/repair source qualification.</p> <p>FY 2011 Plans: CNS/ATM: At contract award, start Engineering, Manufacturing, Development (EMD). Conduct and approve Preliminary Design Review (PDR). Conduct and approve Critical Design Review (CDR). Test and evaluation start.</p> <p>FY 2012 Base Plans: Mode 5: Engineering design and analysis effort to develop new digital control panel and upgrade existing APX-100 to support Mode 5.</p> <p>CNS/ATM: Finish Test and Evaluation and development activities.</p> <p>FY 2012 OCO Plans:</p>	35.325	56.669	30.868	-	30.868
Accomplishments/Planned Programs Subtotals	35.325	56.669	30.868	-	30.868

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>	PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• PE 0401219F: <i>Boom Control Unit (BCU) Mod # 7727 APAF</i>	0.000	3.788	3.927	0.000	3.927	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401219F (1): <i>Mode 5 Mod # 7728 APAF</i>	0.000	0.000	0.000	0.000	0.000	4.568	4.275	1.190	0.680	Continuing	Continuing
• PE 0401219F (2): <i>CNS/ATM Mod # 7726 APAF</i>	0.000	0.000	17.394	0.000	17.394	68.700	67.356	34.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Acquisition Approach Summary. The acquisition will be in accordance with Federal Acquisition Regulation (FAR) Part 15, Contracting by Negotiation. This acquisition will seek to award to a single integrator to accomplish design/development, test and evaluation, production, and installation and utilize Performance Price Tradeoff (PPT) source selection procedures. Sufficient competition is expected since there are several contractors with experience in CNS/ATM integration on military and commercial aircraft.

A-BCU: This program is a three (3) phased sole source RDT&E effort for a Form, Fit, Function (FFF) and replacement design followed by procurement and field install for fleet.

Mode 5: Approach will be a 1 year RDT&E effort in FY12, followed by procurement and install for fleet.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force										DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>				PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>					

Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Studies and Analysis	Various	Boeing Corp:Oklahoma City, OK	1.496	-		-		-		-	0.000	1.496	0.000
Development Engineering, Design, and Integration (Boom Control Unit (BCU) Phase I)	SS/Various	Boeing Corp:Oklahoma City, OK	10.354	-		-		-		-	0.000	10.354	0.000
Development Engineering, Design, and Integration (BCU Phase II)	SS/CPIF	Boeing Corp:Oklahoma City, OK	2.010	-		-		-		-	0.000	2.010	0.000
Development Engineering, Design, and Integration (BCU Phase III)	SS/CPIF	Boeing Corp:Oklahoma City, OK	5.010	-		-		-		-	0.000	5.010	0.000
Development Engineering, Design, and Integration (Communications, Navigation, and Surveillance/Air Traffic Management (CNS/ATM))	C/FFP	Boeing Corp:Oklahoma City, OK	25.823	54.068	May 2011	25.241	Jan 2012	-		25.241	0.000	105.132	0.000
Development Engineering, Design, and Integration (Mode 5)	Various	TBD:TBD,	-	-		1.974	Jan 2012	-		1.974	0.000	1.974	0.000
Subtotal			44.693	54.068		27.215		-		27.215	0.000	125.976	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

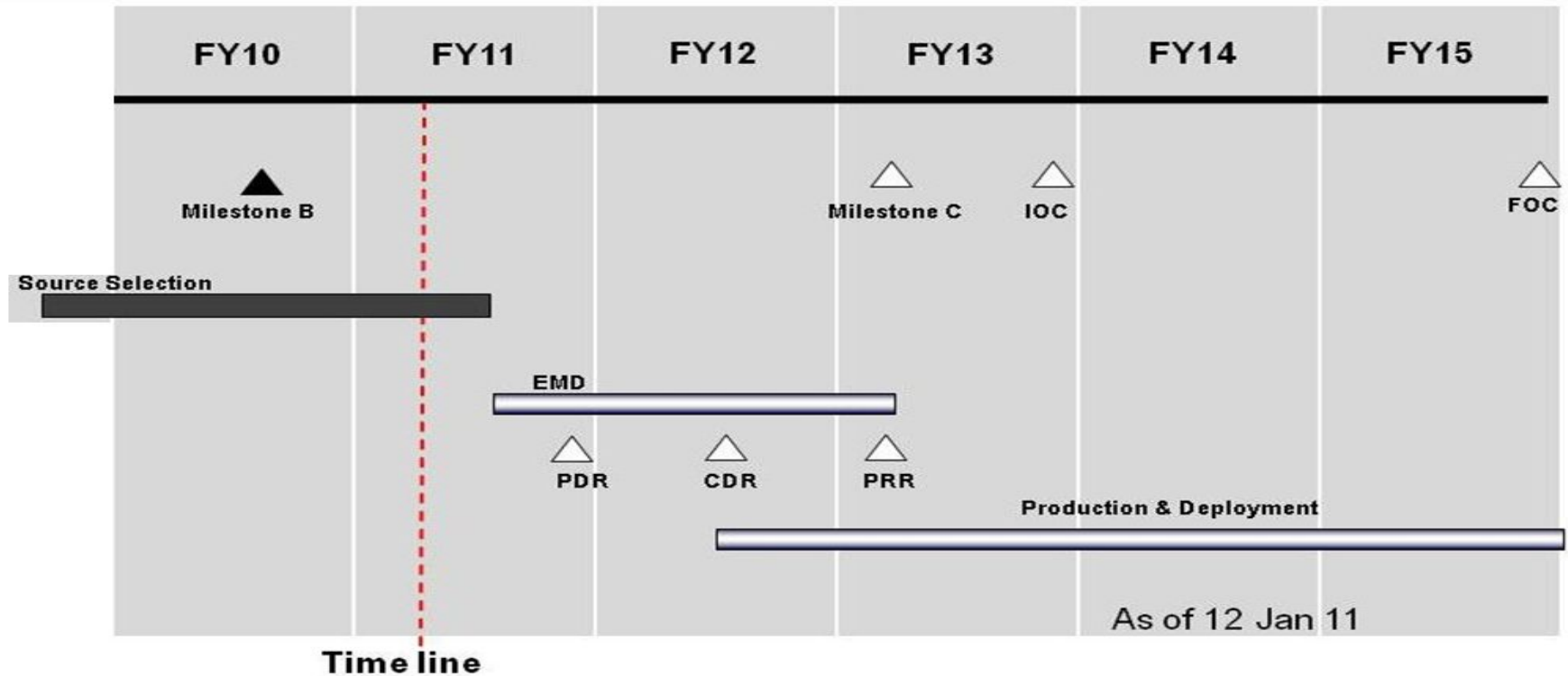
R-1 ITEM NOMENCLATURE
PE 0401219F: KC-10S

PROJECT
675195: Aircraft Modernization Program (AMP)

FOUO



KC-10 CNS/ATM Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

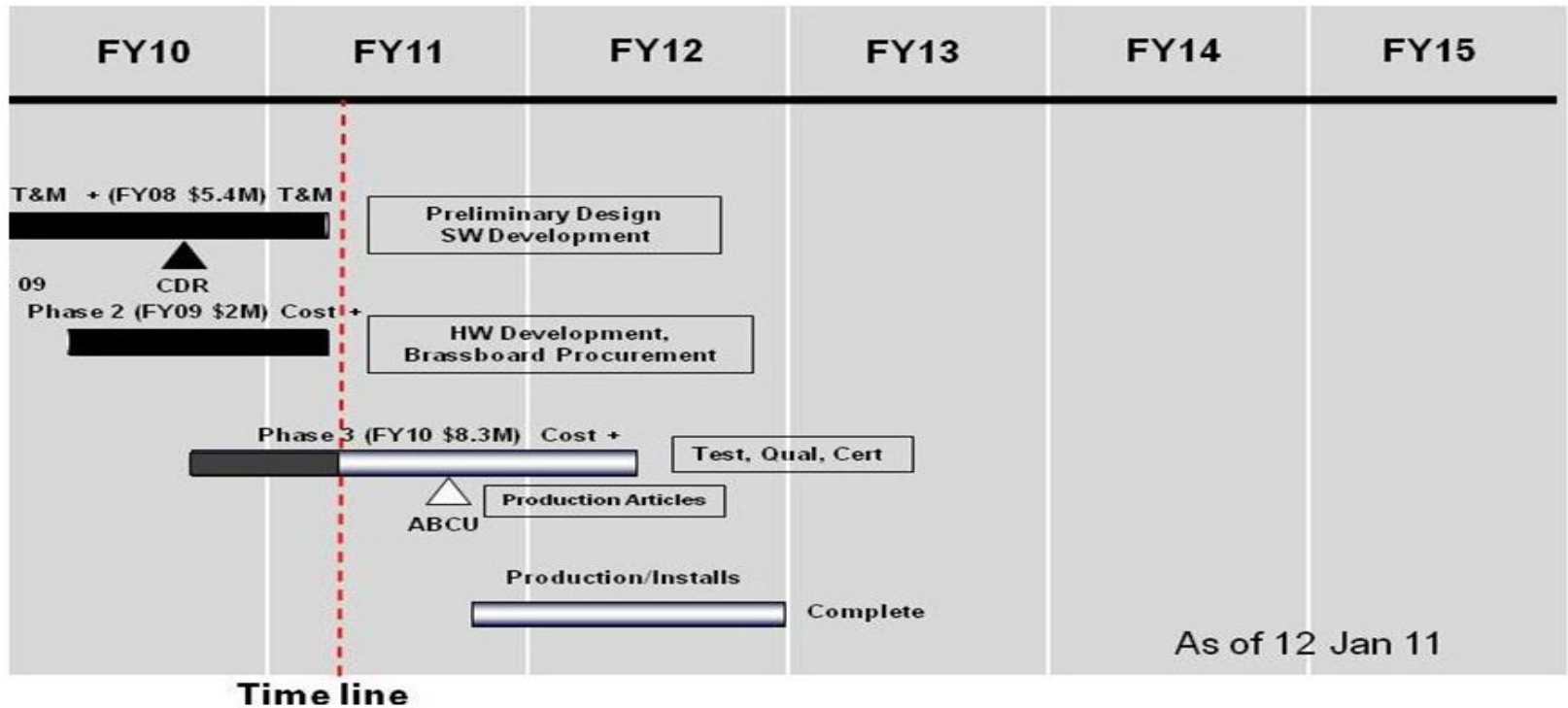
R-1 ITEM NOMENCLATURE
PE 0401219F: KC-10S

PROJECT
675195: Aircraft Modernization Program (AMP)



FOUO

KC-10 A-BCU Schedule



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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

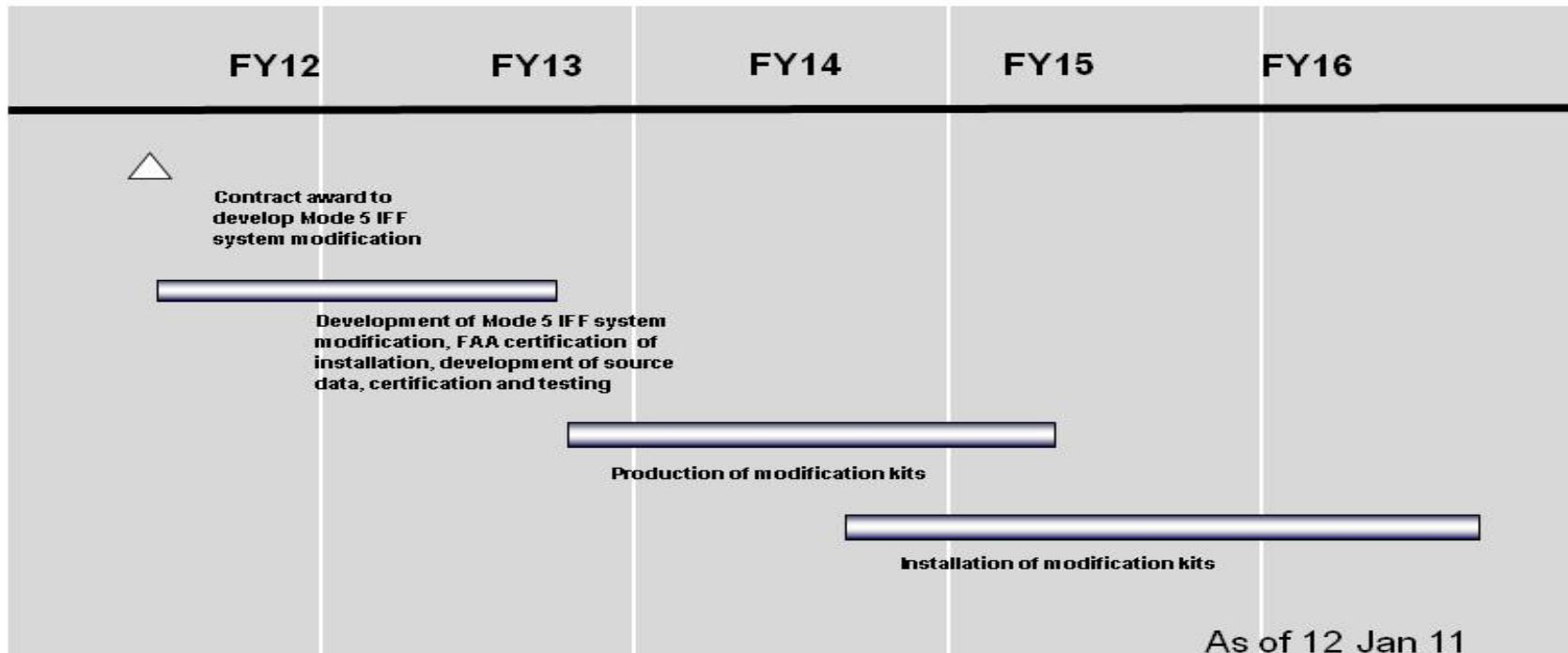
PE 0401219F: *KC-10S*

PROJECT

675195: *Aircraft Modernization Program (AMP)*

FOUO

Mode 5 Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401219F: <i>KC-10S</i>	PROJECT 675195: <i>Aircraft Modernization Program (AMP)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
CNS/ATM Source Selection	1	2010	2	2011
Contract Award/Milestone B	3	2010	4	2010
CNS/ATM Engineering Manufacturing Development (EMD)	3	2011	1	2013
Milestone C	2	2013	2	2013
CNS/ATM Production/Deployment	2	2012	4	2015
BCU Phase II Contract Award	1	2010	1	2010
BCU Phase II RDT&E	1	2010	1	2011
BCU Critical Design Review	3	2010	3	2010
BCU Phase III Contract Award	4	2010	4	2010
BCU Phase II RDT&E (1)	4	2010	4	2011
Two BCU Prototypes Complete	3	2011	3	2011
BCU Production/Installs	4	2011	4	2012
Mode 5 Contract award for engineering development of Mode 5 IFF system modification	2	2012	2	2012
Mode 5 Development activities	2	2012	4	2013
Mode 5 Production	4	2013	2	2015
Mode 5 Installations	3	2014	3	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	4.733	4.988	82.591	-	82.591	7.513	7.413	11.217	105.077	Continuing	Continuing
675355: <i>Presidential Aircraft Recapitalization</i>	4.733	4.988	3.091	-	3.091	7.513	7.413	11.217	105.077	Continuing	Continuing
676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>	-	-	79.500	-	79.500	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 425, Presidential Aircraft Replacement

FY2012 funding request supports development planning for the VC-25 Avionics Modernization Program (AMP) and the Presidential Aircraft Recapitalization (PAR) effort.

The VC-25A AMP will enable the President of the United States to perform his duties as Commander in Chief. The VC-25A aircraft must maintain one hundred percent reliability and safe, unrestricted global access both in civilian and military airfields. The AMP upgrades use a systems approach to aid pilot awareness and alleviate task saturation enhancing safety in a high technology environment. It will incorporate multiple subsystems to increase the utility and safety of the VC-25A. Installations are aligned with the aircraft heavy maintenance schedule.

PAR will recapitalize the VC-25A system and support the Office of the President in executing Constitutional roles of Commander-in-Chief, Head-of-State, and Chief Executive. The principal mission of PAR is to provide the President of the United States and the President's staff and guests with safe, comfortable, and reliable air transportation with the same level of security and communications capability as is available at the White House. As a "national level" airborne communications node providing voice, data, video, processed imagery, and network services, PAR enables the President and traveling staff to address the full range of political and military operations. Funding supports key development planning efforts and products including: systems engineering strategy and analysis; risk analysis and management; concept definition and trade studies; test and evaluation strategy; Life Cycle Cost estimates; sustainment and logistics analysis; information support and network analysis; technology and manufacturing maturity analysis and acquisition planning and analysis.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	4.733	4.988	4.986	-	4.986
Current President's Budget	4.733	4.988	82.591	-	82.591
Total Adjustments	-	-	77.605	-	77.605
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	77.605	-	77.605

Change Summary Explanation

Funding in FY12 adjusted based on updated cost estimates..

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>				PROJECT 675355: <i>Presidential Aircraft Recapitalization</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675355: <i>Presidential Aircraft Recapitalization</i>	4.733	4.988	3.091	-	3.091	7.513	7.413	11.217	105.077	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Totals include funding for Program Resources Collection Process (PRCP) Program Number 425, Presidential Aircraft Recapitalization.

This funding supports development planning for the Presidential Aircraft Recapitalization (PAR) effort. PAR will recapitalize the VC-25A system and support the Office of the President in executing Constitutional roles of Commander-in-Chief, Head-of-State, and Chief Executive. The principal mission of PAR is to provide the President of the United States and the President's staff and guests with safe, comfortable, and reliable air transportation with the same level of security and communications capability as is available at the White House. As a "national level" airborne communications node providing voice, data, video, processed imagery, and network services, PAR enables the President and traveling staff to address the full range of political and military operations. Funding supports key development planning efforts and products including: systems engineering strategy and analysis; risk analysis and management; concept definition and trade studies; test and evaluation strategy; life cycle cost estimates; sustainment and logistics analysis; information support and network analysis; technology and manufacturing maturity analysis and acquisition planning and analysis.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Development Planning	4.733	4.988	3.091	-	3.091
Description: Developmental Planning					
FY 2010 Accomplishments: Systems engineering strategy and analysis; risk reduction analysis and management; concept definition, requirements analysis and trade studies; test and evaluation strategy; life cycle cost estimates; sustainment and logistics analysis; information support and network analysis; technology and manufacturing maturity analysis; and acquisition planning.					
FY 2011 Plans: Systems engineering strategy and analysis; risk reduction analysis and management; concept definition, requirements analysis and trade studies; test and evaluation strategy; life cycle cost estimates; sustainment and					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 675355: <i>Presidential Aircraft Recapitalization</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
logistics analysis; information support and network analysis; technology and manufacturing maturity analysis; and acquisition planning. FY 2012 Base Plans: Systems engineering strategy and analysis; risk reduction analysis and management; concept definition, requirements analysis and trade studies; test and evaluation strategy; life cycle cost estimates; sustainment and logistics analysis; information support and network analysis; technology and manufacturing maturity analysis; and acquisition planning. FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	4.733	4.988	3.091	-	3.091

C. Other Program Funding Summary (\$ in Millions)												
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Acquisition schedules dependent upon approved acquisition strategy.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 675355: <i>Presidential Aircraft Recapitalization</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Government Studies	Various	ASC/XRX:Dayton, OH	4.733	4.988	Apr 2011	3.091	Mar 2012	-		3.091	Continuing	Continuing	0.000
Subtotal			4.733	4.988		3.091		-		3.091			0.000

Remarks
Costs associated with IAC development planning contracts and support contracts

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			4.733	4.988		3.091		-		3.091			0.000

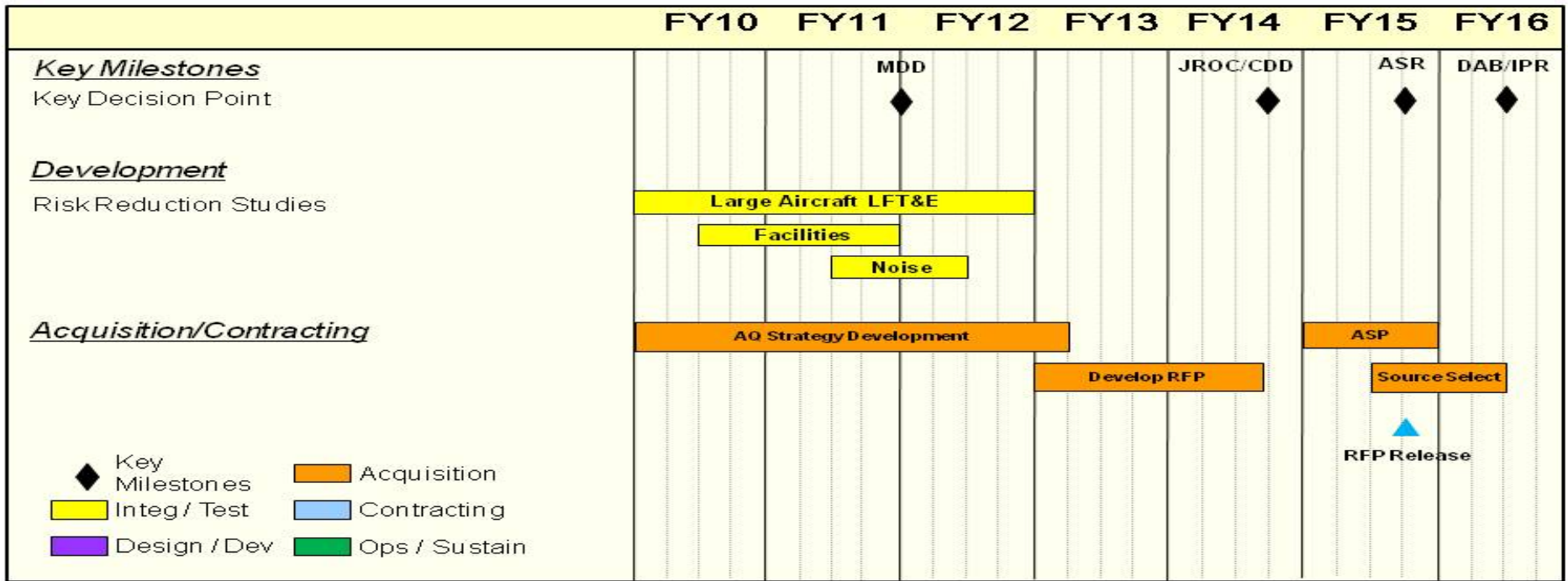
Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 675355: <i>Presidential Aircraft Recapitalization</i>



PAR Schedule



Integrity - Service - Excellence

As of: 01/06/11

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 675355: <i>Presidential Aircraft Recapitalization</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MDD	1	2012	1	2012
JROC/CDD	3	2014	3	2014
ASR	3	2015	3	2015
DAB/IPR	2	2016	2	2016
Large Aircraft LFT&E	1	2010	4	2012
Facilities Risk Reduction Study	2	2010	4	2011
Noise Reduction Study	2	2011	2	2012
Acquisition Strategy Development	1	2010	1	2013
Develop RFP	1	2013	3	2014
Acquisition Strategy Program	1	2015	4	2015
Source Selection	2	2015	2	2016
RFP Release	3	2015	1	2016

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>	-	-	79.500	-	79.500	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

FY2012 funding request supports development planning for the VC-25 Avionics Modernization Program (AMP). The VC-25A AMP will enable the President of the United States to perform his duties as Commander in Chief. The VC-25A aircraft must maintain one hundred percent reliability and safe, unrestricted global access both in civilian and military airfields. The AMP upgrades use a systems approach to aid pilot awareness and alleviate task saturation enhancing safety in a high technology environment. It will incorporate multiple subsystems to increase the utility and safety of the VC-25A. Installations are aligned with the aircraft heavy maintenance schedule.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: New Start	-	-	79.500	-	79.500
Description: FY2012 funding request supports System Integration Laboratory (SIL) engineering, Vendor engineering, and material buys for the SIL. The SIL is used as a test bed for VC-25, to ensure that all modifications to be performed on the aircraft have been proven prior to installation. Kits will be purchased and installed so that they align with the aircraft heavy maintenance schedule.					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: System Integration Laboratory (SIL) engineering, Vendor engineering, and material buys for the SIL.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	-	79.500	-	79.500

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE: 0401314F: <i>Avionics Modernization Program, APAF, BA05</i>	0.000	0.000	0.000	0.000	0.000	10.676	0.000	0.000	14.669	Continuing	Continuing
• PE: 0401314F (1): <i>Airborne Information Management System (AIMS), APAF, BA05</i>	13.854	12.565	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE: 0401314F (2): <i>Low Cost Mods, APAF, BA05</i>	0.096	0.110	0.158	0.000	0.158	0.183	0.100	0.100	0.100	Continuing	Continuing
• PE: 0401314F (3): <i>Service Bulletins, APAF, BA05</i>	0.512	0.500	0.229	0.000	0.229	0.326	0.384	0.349	0.358	Continuing	Continuing
• PE: 0401314F (4): <i>Forward Lower Lobe, APAF, BA05</i>	1.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

FY2012 funding request supports System Integration Laboratory (SIL) engineering, Vendor engineering, and material buys for the SIL. The SIL is used as a test bed for VC-25, to ensure that all modifications to be performed on the aircraft have been proven prior to installation. Kits will be purchased and installed so that they align with the aircraft heavy maintenance schedule.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering	SS/CPIF	ASC/OC:Tinker, AFB, OK	-	-		79.500	Jan 2012	-		79.500	0.000	79.500	0.000
Subtotal			-	-		79.500		-		79.500	0.000	79.500	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		79.500		-		79.500	0.000	79.500	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

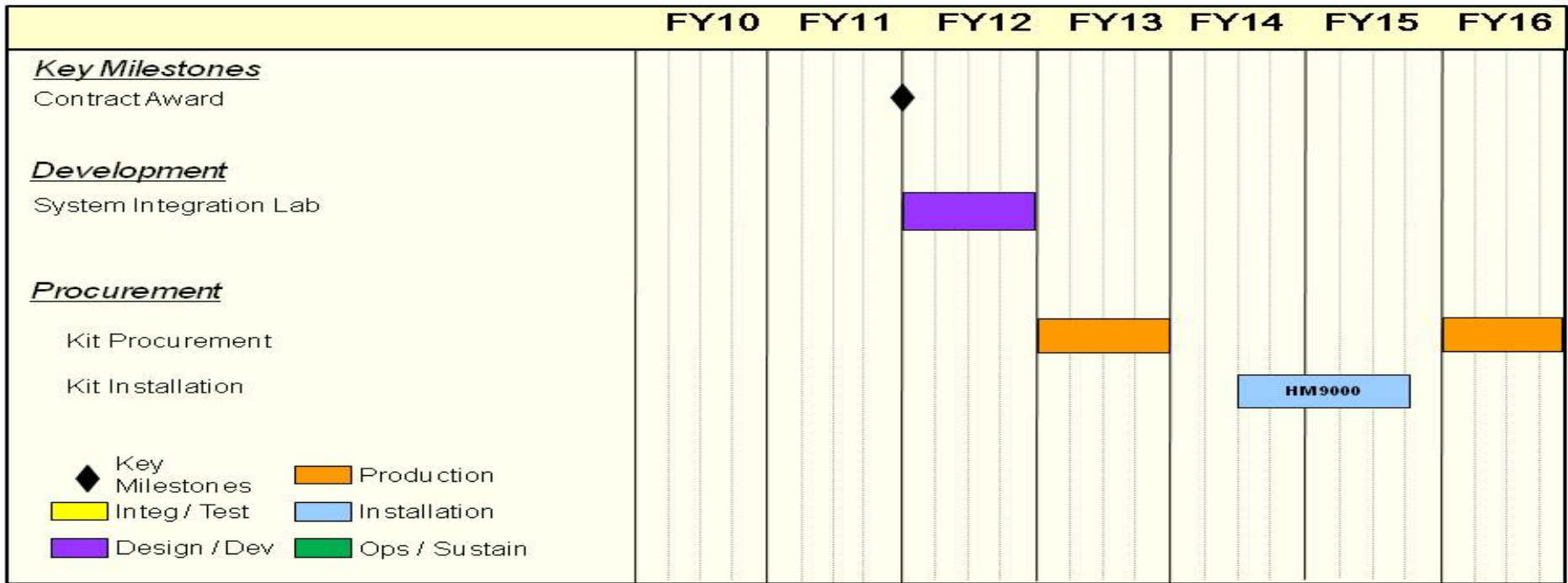
R-1 ITEM NOMENCLATURE
 PE 0401314F: *OPERATIONAL SUPPORT AIRLIFT*

PROJECT
 676024: *VC-25 AVIONICS MODERNIZATION PROGRAM*



VC-25 AMP Schedule

FY10 FY11 FY12 FY13 FY14 FY15 FY16



Integrity - Service - Excellence

As of: 01/06/11

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401314F: <i>OPERATIONAL SUPPORT AIRLIFT</i>	PROJECT 676024: <i>VC-25 AVIONICS MODERNIZATION PROGRAM</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Systems Integration Laboratory engineering	1	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	1.283	-	-	-	-	-	-	-	Continuing	Continuing
675379: <i>Light Mobility Aircraft</i>	-	1.283	-	-	-	-	-	-	-	Continuing	Continuing

Note

In FY2012, Project number 5379, Light Mobility Aircraft, efforts transferred to PE 0401139F, Light Mobility Aircraft, Project 5379, in order to more readily differentiate Light Mobility Aircraft (LiMA) efforts from Cargo-Short Takeoff and Landing (C-STOL) Aircraft efforts.

A. Mission Description and Budget Item Justification

The Light Mobility Aircraft (LiMA) program will fill an Air Force light mobility gap by acquiring Commercial-Off-The-Shelf (COTS) aircraft, which are also suitable for Building Partner Capacity (BPC) especially in lesser developed Partner Nations (PN). Suitable aircraft may be single or multi-engine, fixed-wing and capable of operating from austere, unprepared surfaces. This program supports irregular warfare efforts that help help PN defend and govern themselves by demonstrating an airlift capability that is consistent with their needs for supporting infrastructure, performance, anticipated methods of employment, acquisition and sustainment costs, and multi-role/multi-mission capability. FY2011 RDT&E funding will be used for missionization and integration of non-standard components [e.g., High Frequency (HF) communications equipment and Selective Availability Anti-Spoofing Module (SAASM Global Positioning System (GPS))] as well as key development planning efforts and products such as systems engineering strategy and analysis, risk analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition planning and analysis.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	1.283	1.312	-	1.312
Current President's Budget	-	1.283	-	-	-
Total Adjustments	-	-	-1.312	-	-1.312
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-1.312	-	-1.312

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>
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Change Summary Explanation

In FY2012, Project 5379 transfers to Program Element 0401139F.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675379: <i>Light Mobility Aircraft</i>	-	1.283	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY2012, Project number 5379, Light Mobility Aircraft, efforts transferred to PE 0401139F, Light Mobility Aircraft, Project 5379, in order to more readily differentiate Light Mobility Aircraft (LiMA) efforts from Cargo-Short Takeoff and Landing (C-STOL) Aircraft efforts.

A. Mission Description and Budget Item Justification

The Light Mobility Aircraft (LiMA) program will fill an Air Force light mobility gap by acquiring Commercial-Off-The-Shelf (COTS) aircraft, which are also suitable for Building Partner Capacity (BPC) especially in lesser developed Partner Nations (PN). Suitable aircraft may be single or multi-engine, fixed-wing and capable of operating from austere, unprepared surfaces. This program supports irregular warfare efforts that help help PN defend and govern themselves by demonstrating an airlift capability that is consistent with their needs for supporting infrastructure, performance, anticipated methods of employment, acquisition and sustainment costs, and multi-role/multi-mission capability. FY2011 RDT&E funding will be used for missionization and integration of non-standard components [e.g., High Frequency (HF) communications equipment and Selective Availability Anti-Spoofing Module (SAASM) Global Positioning System (GPS)] as well as key development planning efforts and products such as systems engineering strategy and analysis, risk analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition planning and analysis.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: LiMA Missionization	-	1.283	-	-	-
Description: Conduct Light Mobility Aircraft (LiMA) development planning and missionization activities.					
FY 2010 Accomplishments:					
FY 2011 Plans: Conduct missionization and integration of non-standard components (e.g., High Frequency (HF) communications equipment and Selective Availability Anti-Spoofing Module (SAASM) Global Positioning System (GPS)) as well as key development planning efforts and products such as systems engineering strategy and analysis, risk					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
analysis and management, test and evaluation strategy, life cycle cost estimates, sustainment and logistics analysis, and acquisition planning and analysis.					
<i>FY 2012 Base Plans:</i>					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	1.283	-	-	-

C. Other Program Funding Summary (\$ in Millions)												
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>	
• Related Activities:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401315F: <i>Light Mobility Aircraft APAF BA 3</i>	0.000	65.699	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0401139F: <i>Light Mobility Aircraft (LIMA) RDT&E AF BA 7</i>	0.000	0.000	1.308	0.000	1.308	1.324	1.342	1.369	1.394	1.394	Continuing	Continuing

D. Acquisition Strategy
A full and open competitive source selection is planned.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Light Mobility Aircraft (LiMA) Missionization	C/TBD	TBD:TBD,	-	1.283	May 2011	-		-		-	0.000	1.283	TBD
Subtotal			-	1.283		-		-		-	0.000	1.283	

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

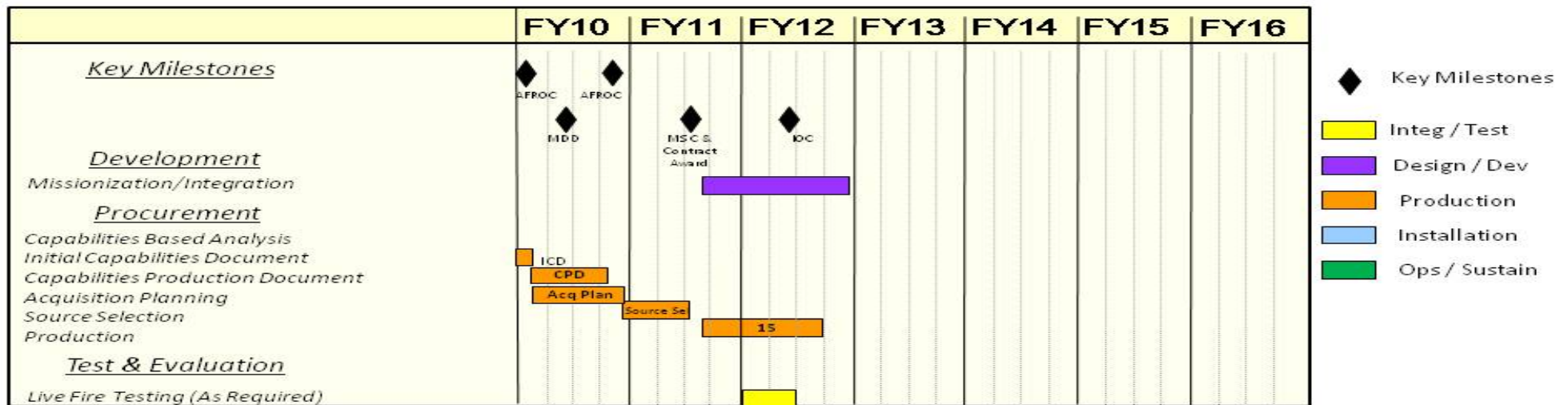
			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	1.283		-		-		-	0.000	1.283	

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>

Light Mobility Aircraft (LiMA)



For FY11, LiMA is funded in PE 040135F; for FY12 and beyond, LiMA is funded in PE 0401139F

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0401315F: <i>C-STOL AIRCRAFT</i>	PROJECT 675379: <i>Light Mobility Aircraft</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Missionization/Integration	3	2011	4	2012
Live Fire Testing	1	2012	2	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	9.693	17.670	7.118	-	7.118	7.538	7.651	7.760	7.898	Continuing	Continuing
675138: <i>ST System Development</i>	9.693	17.670	7.118	-	7.118	7.538	7.651	7.760	7.898	Continuing	Continuing

Note

FY 2011 funding totals includes \$10.325M requested for Overseas Contingency Operations.

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 Air Force Special Operations Command's (AFSOC's) Battlefield Airmen. BAO Kit Increment II will enhance the three core capabilities of Line of Sight (LOS) targeting, Non Line of Sight (XLOS) 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, BAO Kit Increment II, will build upon the HMI and Battlefield Air Targeting Micro Air Vehicle (BATMAV) efforts and deliver enhanced capability for the dismounted soldier in terms of dramatic weight reduction and increased mission effectiveness across the conflict spectrum. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	11.354	7.345	7.118	-	7.118
Current President's Budget	9.693	17.670	7.118	-	7.118
Total Adjustments	-1.661	10.325	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-1.583	-			
• SBIR/STTR Transfer	-0.030	-			
• Other Adjustments	-0.048	10.325	-	-	-

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>
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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 675138: *ST System Development*
Congressional Add: *Digital Data Link*

	FY 2010	FY 2011
	1.507	-
Congressional Add Subtotals for Project: 675138	1.507	-
Congressional Add Totals for all Projects	1.507	-

Change Summary Explanation

FY 2011 funding contains \$10.325M for Overseas Contingency Operations.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>	PROJECT 675138: <i>ST System Development</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675138: <i>ST System Development</i>	9.693	17.670	7.118	-	7.118	7.538	7.651	7.760	7.898	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note
FY 2011 funding totals include \$10.325M requested for Overseas Contingency Operations.

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 Air Force Special Operations Command's (AFSOC's) Battlefield Airmen. BAO Kit Increment II will enhance the three core capabilities of Line of Sight (LOS) targeting, Non Line of Sight (XLOS) 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, BAO Kit Increment II, will build upon the HMI and Battlefield Air Targeting Micro Air Vehicle (BATMAV) efforts and deliver enhanced capability for the dismounted soldier in terms of dramatic weight reduction and increased mission effectiveness across the conflict spectrum. This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: BAO Kit Development	0.791	1.140	1.835	-	1.835
Description: Continue BAO Kit system and equipment development					
FY 2010 Accomplishments: Continue system test and evaluation efforts					
FY 2011 Plans: Continue program office operations effort					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>		PROJECT 675138: <i>ST System Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue BAO Kit system and equipment development					
FY 2012 OCO Plans:					
Title: Human Machine Interface					
Description: Power Generation management; examples are exploring fuel cell prototypes for power generation of HMI and development of universal batteries for radios.					
FY 2010 Accomplishments: Exploring fuel cell prototypes for power generation of HMI in order to extend operational life and development of universal batteries for radios.					
FY 2011 Plans: Continuing to explore fuel cell prototypes for power generation of HMI and development of universal batteries for radios.					
FY 2012 Base Plans: Continuing to explore fuel cell prototypes for power generation of HMI and development of universal batteries for radios.					
FY 2012 OCO Plans:					
Title: Non-Line of Sight (XLOS)					
Description: Non-Line of sight improves detection and targeting of enemy forces.					
FY 2010 Accomplishments: Efforts focus on delivery of data-link digitization of the signal for XLOS					
FY 2011 Plans: Continued development of non-line of sight which will improve detection and targeting of enemy forces.					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Title: Line of Sight					
Description: Development of Line of Sight- Short capability to improve detection and targeting of enemy forces					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>		PROJECT 675138: <i>ST System Development</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
This FY11 OCO focuses on completing the testing for the software for targeting and communications for the Anubis Remotely Piloted Vehicle and transitioning the capability to the warfighter.					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Title: PRC-117G Radio Waveform Development					
Description: Improves the waveforms used by the PRC-117G radio for use in the theater of operations.					
FY 2010 Accomplishments:					
FY 2011 Plans: This FY11 OCO focuses on improving the waveforms used by the PRC-117G radio for use in the theater of operations.					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Title: Anubis Development Testing					
Description: Completes the testing for the Anubis Remotely Piloted Vehicle and transitioning the capability to the warfighter.					
FY 2010 Accomplishments:					
FY 2011 Plans: This FY11 OCO focuses on completing the testing for the Anubis Remotely Piloted Vehicle and transitioning the capability to the warfighter.					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals					
	8.186	17.670	7.118	-	7.118
	FY 2010	FY 2011			
Congressional Add: Digital Data Link	1.507	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>	PROJECT 675138: <i>ST System Development</i>
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	FY 2010	FY 2011
FY 2010 Accomplishments: Secure Digital Data Link Development for small UAS.		
FY 2011 Plans:		
Congressional Adds Subtotals	1.507	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF: <i>PE 0408011F, Tactical C-E Equipment</i>	9.731	11.612	14.895	0.000	14.895	15.543	15.769	16.027	16.306	Continuing	Continuing
• APAF: <i>PE 0305234F, WASP</i>	3.597	3.253	0.000	2.472	2.472	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The evolutionary acquisition strategy will focus on meeting immediate requirements with current technology while pursuing future increments for improved accuracy, increased vertical and horizontal integration, and reduced weight. Future increments will be incorporated as funding and technology allow.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>	PROJECT 675138: <i>ST System Development</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Human Machine Interface (HMI)	C/Various	Various:Various,	1.383	1.490	Nov 2010	0.704		-		0.704	Continuing	Continuing	0.000
Line of Sight	C/TBD	TBD:TBD,	-	3.915	Feb 2011	2.279	Feb 2012	-		2.279	Continuing	Continuing	0.000
Machine-To-Machine Software Development	C/CPFF	Systems Research & Applications Corp:Dayton, Ohio,	3.211	-		2.300	Feb 2012	-		2.300	Continuing	Continuing	TBD
Non Line of Sight Targeting System (XLOS)	Various	Various:Various,	2.801	0.800	Jun 2011	-		-		-	Continuing	Continuing	0.000
Subtotal			7.395	6.205		5.283		-		5.283			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Digital Data Link Congressional Add	SS/CPAF	Various:Various,	1.507	-		-		-		-	0.000	1.507	0.000
Anubis OCO, Radio OCO, Blue Force OCO	C/CPAF	Not specified.;	-	10.325	Jun 2011	-		-		-	0.000	10.325	0.000
Subtotal			1.507	10.325		-		-		-	0.000	11.832	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	
Test Agency Support	RO	46 TS:Eglin AFB, FL	0.275	0.150	Mar 2011	0.350	Feb 2012	-		0.350	Continuing	Continuing	0.000
Integration and Certification	WR	AFRL RYT:WPAFB, OH	0.250	0.100	May 2011	0.050	Feb 2012	-		0.050	Continuing	Continuing	TBD
Subtotal			0.525	0.250		0.400		-		0.400			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>	PROJECT 675138: <i>ST System Development</i>



R-Doc BAO Kit Schedule



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

BAO Kit Schedule

As of Feb 11

	FY10	FY11	FY12	FY13	FY14	FY15	FY16
Increment II	R&D Effort						
Increment III					R&D Effort		

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0408011F: <i>SPECIAL TACTICS/COMBAT CONTROL</i>	PROJECT 675138: <i>ST System Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Increment II	1	2010	1	2013
Increment III	3	2013	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	1.456	1.514	1.531	-	1.531	1.580	1.605	1.628	1.656	Continuing	Continuing
673326: <i>Precision Measurement & Calibration</i>	1.456	1.514	1.531	-	1.531	1.580	1.605	1.628	1.656	Continuing	Continuing

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.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	1.456	1.514	1.536	-	1.536
Current President's Budget	1.456	1.514	1.531	-	1.531
Total Adjustments	-	-	-0.005	-	-0.005
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-0.005	-	-0.005

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673326: <i>Precision Measurement & Calibration</i>	1.456	1.514	1.531	-	1.531	1.580	1.605	1.628	1.656	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program develops, 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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Weapons Systems Measurement Standards	0.526	0.549	0.544	-	0.544
Description: Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.					
FY 2010 Accomplishments: Continuation of above listed activities					
FY 2011 Plans: Continuation of above listed activities					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>		PROJECT 673326: <i>Precision Measurement & Calibration</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of above listed activities FY 2012 OCO Plans: Not applicable					
Title: Electrical Measurements Description: Continue development of standards for electrical measurements to support high accuracy electronic test equipment. FY 2010 Accomplishments: Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans: Not applicable					
	0.145	0.185	0.185	-	0.185
Title: Radar Support/Communications Description: Continue development of standards for radar support, RF communication systems, and radar cross section range measurements. FY 2010 Accomplishments: Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans: Not applicable					
	0.140	0.155	0.155	-	0.155
Title: Calibration					
	0.365	0.320	0.320	-	0.320

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Description: Continue the development of improved calibration standards to support physical, mechanical and electro-mechanical support equipment.</p> <p>FY 2010 Accomplishments: Continuation of above listed activities</p> <p>FY 2011 Plans: Continuation of above listed activities</p> <p>FY 2012 Base Plans: Continuation of above listed activities</p> <p>FY 2012 OCO Plans: Not applicable</p>					
<p>Title: Radiation Hazard</p> <p>Description: Continue the development of national standards for calibration of ionizing radiation hazard instrumentation.</p> <p>FY 2010 Accomplishments: Continuation of above listed activities</p> <p>FY 2011 Plans: Continuation of above listed activities</p> <p>FY 2012 Base Plans: Continuation of above listed activities</p> <p>FY 2012 OCO Plans: Not applicable</p>	0.045	0.045	0.045	-	0.045
<p>Title: Chemical/Biological Measurements</p> <p>Description: Continue development of improved standards and procedures to support chemical/biological measurements</p> <p>FY 2010 Accomplishments:</p>	0.145	0.160	0.160	-	0.160

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans: Not applicable					
Title: Analytical Metrology Description: Continue development of standards, models and procedures to support analytical metrology applications FY 2010 Accomplishments: Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans: Not applicable	0.090	0.100	0.122	-	0.122
Accomplishments/Planned Programs Subtotals	1.456	1.514	1.531	-	1.531

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing

D. Acquisition Strategy
Primarily accomplish through intergovernmental transfer between the Department of Defense and other Federal Departments.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
National Institute of Standards & Technology	MIPR	TBD:TBD,	1.215	1.435		1.430		-		1.430	Continuing	Continuing	TBD
Department of Energy	MIPR	TBD:TBD,	0.056	-		0.022		-		0.022	Continuing	Continuing	TBD
DoD Army	MIPR	TBD:TBD,	0.040	-		-		-		-	Continuing	Continuing	TBD
AFMC	TBD	TBD:TBD,	0.020	0.079		0.079		-		0.079	Continuing	Continuing	TBD
AFMC (AEDC)	MIPR	TBD:TBD	0.125	-		-		-		-	0.000	0.125	0.000
Contract	TBD	TBD:TBD	-	-		-		-		-	Continuing	Continuing	TBD
Subtotal			1.456	1.514		1.531		-		1.531			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>

FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
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

A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702207F: <i>Depot Maintenance (Non-IF)</i>	PROJECT 673326: <i>Precision Measurement & Calibration</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.	1	2012	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	35.523	-	-	-	-	-	-	-	-	Continuing	Continuing
675367: <i>Alternative Energy</i>	35.523	-	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Alternative energy initiatives validate the operational use of alternative energy technologies for use at Air Force installations. The effort includes evaluating coal to liquid technology, wind, solar, hybrid wind diesel power production and geo-thermal ground source heat pumps. Federal law requires all federal agencies to increase the use of renewable. Annual goals for electricity generated with renewable increase every year beginning with FY07 with a final goal of 25% in 2025. This initiative provides alternative sources for electric power that decreases US dependence of foreign oil.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	35.523	-	-	-	-
Current President's Budget	35.523	-	-	-	-
Total Adjustments	-	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-	-	-

Change Summary Explanation

FY09 Congressional Earmarks to research and develop alternative energy

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675367: <i>Alternative Energy</i>	35.523	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Alternative energy initiatives validate the operational use of alternative energy technologies for use at Air Force installations. The effort includes evaluating coal to liquid technology, wind, solar, hybrid wind diesel power production and geo-thermal ground source heat pumps. Federal law requires all federal agencies to increase the use of renewable. Annual goals for electricity generated with renewable increase every year beginning with FY07 with a final goal of 25% in 2025. This initiative provides alternative sources for electric power that decreases US dependence of foreign oil.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Research and Develop Alternative Energy Initiatives</p> <p>Description: Research and Develop Alternative Energy Initiatives</p> <p>FY 2010 Accomplishments: Continuation of above listed activities</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	35.523	-	-	-	-
<p>Title: MAJOR THRUST</p> <p>Description: Research the Handling of CTL Bi-Products</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	-	-	-	-	-
<p>Title: MAJOR THRUST (1)</p> <p>Description: Demonstrate the use of Solar Photovoltaic Arrays</p>	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<i>FY 2010 Accomplishments:</i> <i>FY 2011 Plans:</i> <i>FY 2012 Base Plans:</i> <i>FY 2012 OCO Plans:</i>					
<i>Title:</i> MAJOR THRUST (2) <i>Description:</i> Explore Renewable Energy Sources <i>FY 2010 Accomplishments:</i> <i>FY 2011 Plans:</i> <i>FY 2012 Base Plans:</i> <i>FY 2012 OCO Plans:</i>	-	-	-	-	-
<i>Title:</i> MAJOR THRUST (3) <i>Description:</i> Evaluate the Concept of Hybrid Wind Diesel <i>FY 2010 Accomplishments:</i> <i>FY 2011 Plans:</i> <i>FY 2012 Base Plans:</i> <i>FY 2012 OCO Plans:</i>	-	-	-	-	-
<i>Title:</i> MAJOR THRUST (4) <i>Description:</i> Investigate the use of Biomass Gasifier to generate Electrical Energy <i>FY 2010 Accomplishments:</i> <i>FY 2011 Plans:</i> <i>FY 2012 Base Plans:</i> <i>FY 2012 OCO Plans:</i>	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals	35.523	-	-	-	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
Office of Primary Responsibility (OPR) will determine contract vehicle.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Research and Develop Alternative Energy	TBD	TBD:TBD	8.000	-		-		-		-	0.000	8.000	0.000
Subtotal			8.000	-		-		-		-	0.000	8.000	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			8.000	-		-		-		-	0.000	8.000	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
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

Research and Develop Alternative Energy	
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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0702976F: <i>Facilities Restoration & Modernization (Logistics)</i>	PROJECT 675367: <i>Alternative Energy</i>
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Research and Develop Alternative Energy	1	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	0.944	-	0.944	0.299	0.846	0.746	0.696	Continuing	Continuing
673318: <i>Product Data Systems Modernization (PDSM)</i>	-	-	0.944	-	0.944	0.299	0.846	0.746	0.696	Continuing	Continuing

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 2007 funds are for a Congressional add for the Reliability and Maintainability Information System (REMIS) and Omnibus add for Cargo Movement Operations System (CMOS). 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. CMOS is a joint-use system that integrates computer hardware, software, and communications to effectively plan, document and manage outbound and inbound cargo and passengers; and to plan, schedule, and monitor the execution of transportation activities in support of deployment and reception of forces. CMOS provides joint warfighters with an end-to-end distribution capability and real time in-transit visibility during all passenger and cargo movements. CMOS is operational at 247 US Air Force, US Army, US Navy, US Marine Corps, National Security Agency, and Defense Contract Management Agency sites, with plans to activate additional US Army sites. This RDT&E funding will be used primarily to install/implement CMOS software and provide implementation training at new US Army sites. Funding will also be used to develop new software capabilities required by US Army customers. This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	0.697	-	0.697
Current President's Budget	-	-	0.944	-	0.944
Total Adjustments	-	-	0.247	-	0.247
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	0.247	-	0.247

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673318: <i>Product Data Systems Modernization (PDSM)</i>	-	-	0.944	-	0.944	0.299	0.846	0.746	0.696	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

Aircraft Structural Integrity Management Information System (ASIMIS) serves as a focal point for data that is collected from on-board loads recording systems from each aircraft. The data is checked for validity, and then structural analysis is performed on the aircraft using the information provided. The information is reported to the ASIP manager and OEM via electronic reports or web-reporting tools that are part of ASIMIS. This data is used by the ASIP manager and OEM in planning inspection timing requirements, repair and replacement activities for critical structural components. The Mainframe Modernization effort is intended to improve the method of data storage and processing. The AFGROW and PROF efforts are intended to provide up to date and technically accurate tools for data analysis.

Auomated Computer Program Identification Numbering System (ACPINS) provides a standardized automated information system (AIS) to identify, manage, catalog, requisition and distribute Mission Critical Software (MCS) for National Security Systems (NSS) which supports combat weapons systems, tactical systems, aircraft, missiles, ships, communications, command and control and spacecraft. This system is a management tool for warfighters to determine the software requirements for their users. Software developers/configuration managers, engineers, equipment specialists, TODOs (Technical Order Distribution Offices), and Foreign Disclosure offices can manage up-to-date reports for the customers. The modernization effort will improve the quality, functionality, and update existing technologies of the ACPIN System for all users needing mission-critical software in support of all MAJCOM warfighters.

A. Mission Description and Budget Item Justification

The Aircraft Structural Integrity Management Information System (ASIMIS) and ASIP operate as directed by AFPD 63-10 and MIL-STD-1530C. EMA with AFMC/A4N is signed for FY10. ASIMIS responsibilities include: Receiving, storing and reporting recorder downloads from all aircraft. Track and report quality control data for flight data recorders (Structural Data Recorder, Crash Survivable Flight Data Recorder, etc...), monitor usage, severity and any accumulated damage by plane and base, analyze the data, calculate crack growth in key locations in the airframe structure, project crack growth in order to provide a basis for maintenance scheduling, maintain a complete flight hour and calendar date history of each aircraft. AFI 63-1001 mandates AFMC must sustain and enhance ASIMIS capability as required by participating single managers. There is a vanishing global pool of programmers with expertise in JCL, FORTRAN, ASSEMBLY, COBOL, and FOCUS languages.

This project supports the implementation of the software package Air Force Grow (AFGROW) in the ASIMIS suite of tools to support the Aircraft Structural Integrity Program (ASIP) community. AFGROW is a crack prediction software package owned and operated by LexTech Inc. Originally developed under the name ASDGRO in 1985, AFGROW was owned and operated by the United States Air Force through version 4.0012.15. AFGROW will be used by Air Force structural engineers to predict the life expectancy of a/c components for a variety of weapon systems under cyclic loading under the assumption that defects exist. AFGROW is also used to address maintenance requirements if/when damage is identified within a component. Funding will be used to provide software licenses and training ASIP managers and weapon system engineers. Funding will also be used to provide for the research and development of software upgrades to suit ASIP manager needs. The costs for development of this tool were provided by the Air Force Research Lab. Development is now beyond AFRL scope.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

This project supports the implementation of the software package Probability of Failure (PROF) in the ASIMIS suite of tools to support the Aircraft Structural Integrity Program (ASIP) community. PROF is a risk analysis software package owned and distributed by the United States Air Force. PROF is used by Air Force structural engineers to predict the probability of failure of a weapon system under specified usages. PROF provides for the ability to set inspection/maintenance schedules before failure occurs, without creating excess/unnecessary inspections that would impair mission readiness. The costs for development of this tool were provided by the Air Force Research Lab. Development is now beyond AFRL scope.

The Automated Computer Program Identification Numbering System (ACPINS) provides a standardized automated information system (AIS) to identify, manage, catalog, requisition and distribute Mission Critical Software (MCS) for National Security Systems (NSS) which supports combat weapons systems, tactical systems, aircraft, missiles, ships, communications, command and control and spacecraft. This system is a management tool for warfighters to determine the software requirements for their users. Software developers/configuration managers, engineers, equipment specialists, TODOs (Technical Order Distribution Offices), and Foreign Disclosure offices can manage up-to-date reports for the customers.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: ASIMIS Modernization</p> <p>Description: Mainframe Modernization</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <ul style="list-style-type: none"> - Mainframe to Server Migration - Web Modernization - Miscellaneous Enhancements <p>FY 2012 OCO Plans:</p>	-	-	0.444	-	0.444
<p>Title: AFGROW</p> <p>Description: AFGROW</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p> <ul style="list-style-type: none"> - Purchase Software Licensing for 4 Sites 	-	-	0.100	-	0.100

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
- Provide Funding for Training for 4 Sites - Continue Software Updating FY 2012 OCO Plans:					
Title: PROF Description: PROF FY 2010 Accomplishments: FY 2011 Plans: FY 2012 Base Plans: - Continue Software Updating FY 2012 OCO Plans:	-	-	0.100	-	0.100
Title: ACPINS Modernization Description: Modernization FY 2010 Accomplishments: FY 2011 Plans: FY 2012 Base Plans: - Functional Enhancement - Software update FY 2012 OCO Plans:	-	-	0.300	-	0.300
Accomplishments/Planned Programs Subtotals	-	-	0.944	-	0.944

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• ASIMIS: <i>Operations and Maintenance</i>	0.101	0.104	0.265	0.000	0.265	0.117	0.123	0.260	0.152	Continuing	Continuing
	0.281	0.270	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• ACPINS: <i>Operations and Maintenance</i>											

D. Acquisition Strategy

ASIMIS will migrate the mainframe code to a new, modern, more manageable, and maintainable language. The acquisition will be a Cost Plus-Fixed Fee (CPFF) contract line item on a competitively awarded contract utilizing Full and Open Competition.

The ACPINS acquisition will be a Cost Plus-Fixed Fee (CPFF) contract line item on a competitively awarded contract utilizing Full and Open Competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
PDSM	TBD	TBD:TBD,	-	-		0.944	Dec 2012	-		0.944	0.000	0.944	0.000
Subtotal			-	-		0.944		-		0.944	0.000	0.944	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.944		-		0.944	0.000	0.944	0.000

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

	FY 2010				FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016			
	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

ASIMIS Mainframe Modernization	[REDACTED]																											
ACPINS Development, Standardization & Modernization	[REDACTED]																											

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708012F: <i>Logistic Support Activities</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
ASIMIS Mainframe Modernization	1	2012	4	2016
ACPINS Development, Standardization & Modernization	2	2012	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	237.025	227.614	140.284	-	140.284	47.004	4.622	4.666	11.035	Continuing	Continuing
675208: <i>Expeditionary Combat Support System (ECSS)</i>	237.025	227.614	140.284	-	140.284	47.004	4.622	4.666	11.035	Continuing	Continuing

Note

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$7.003M in FY12.

A. Mission Description and Budget Item Justification

ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution Development, Early Operational Assessment, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>
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B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	246.483	227.614	150.329	-	150.329
Current President's Budget	237.025	227.614	140.284	-	140.284
Total Adjustments	-9.458	-	-10.045	-	-10.045
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-1.261	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-1.000	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-7.197	-	-10.045	-	-10.045

Change Summary Explanation

The ECSS Milestone Decision Authority (MDA) approved a major program restructure in December 2009 to reduce overall program risk and implement smaller initial implementation steps. This restructure preserves all planned ECSS functionality by implementing four releases with six pilots versus the original approach of three releases with no pilots. Under this revised construct, the program is pursuing separate Milestone B and C events for each release.

FY10 Funding Adjustments include Congressional rescissions, reprogrammings, and adjustments for higher Air Force priorities.

FY12 Funding Adjustments decreased due to higher Air Force priorities.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675208: <i>Expeditionary Combat Support System (ECSS)</i>	237.025	227.614	140.284	-	140.284	47.004	4.622	4.666	11.035	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution Development, Early Operational Assessment, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Product Development (ERP/COTS System Integration and OEM COTS Product Technical Support)	128.360	156.830	99.927	-	99.927
Description: ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>		PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
Development, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.					
FY 2010 Accomplishments: Continued developing the ERP/COTS product. Continued activities and completed documentation in preparation for FY 2011 Milestone B. Conducted Release 1 Pilot A and B activities to include Data Cleansing, Solution Development Labs, Functional Integration Test/System Integration Test, and Site Preparation. Executed System Integration Technical Test (SITT) and pre-production testing for Release 1 Pilot A. Continued Release 1 Pilot C activities including technical specifications and Solution Development Lab preparation and initiation. Completed Release 1 Pilot A Early Operational Assessment and User Evaluation Test. Executed Release 1 Pilot A Go-Live. Activities also included Gap Analysis, Long Lead Data Cleansing, and Risk Reduction efforts to support Release 2-4.					
FY 2011 Plans: Continue to develop the ERP/COTS product. Continue Release 1 Pilot B and initiate Release 1 Pilot C Training and Site Preparation activities. Execute Release 1 Pilot B and Pilot C System Integration Technical Test (SITT), pre-production testing, and Go-Live. Prepare for Release 1 Initial Operational Test and Evaluation (IOT&E) in FY 2012. Continue Gap Analysis and Risk Reduction efforts to support Release 2-4 activities.					
Declare Critical Change in early FY 2011. Initiate and complete Critical Change Reporting process. Execute ECSS program based on preferred alternative.					
FY 2012 Base Plans: Continue ERP/COTS product development and execute Release 1 Initial Operational Test and Evaluation (IOT&E).					
FY 2012 OCO Plans:					
Title: Support (Engineering Support, Independent Verification and Validation, Risk Reduction, Training, Data Cleansing)					
83.053 49.513 28.041 - 28.041					
Description: ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
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the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution Development, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.

FY 2010 Accomplishments:
Continued to provide support activities in support of ERP/COTS product development. Continued activities and completed documentation in preparation for FY 2011 Milestone B. Conducted Release 1 Pilot A and B activities to include Data Cleansing, Solution Development Labs, Functional Integration Test/System Integration Test, and Site Preparation. Executed System Integration Technical Test (SITT) and pre-production testing for Release 1 Pilot A. Continued Release 1 Pilot C activities including technical specifications and Solution Development Lab preparation and initiation. Completed Release 1 Pilot A Early Operational Assessment and User Evaluation Test. Executed Release 1 Pilot A Go-Live. Activities also included Gap Analysis, Long Lead Data Cleansing, and Risk Reduction efforts to support Release 2-4.

FY 2011 Plans:
Continue to provide support activities in support of ERP/COTS product development. Continue Release 1 Pilot B and initiate Release 1 Pilot C Training and Site Preparation activities. Execute Release 1 Pilot B and Pilot C System Integration Technical Test (SITT), pre-production testing, and Go-Live. Prepare for Release 1 Initial Operational Test and Evaluation (IOT&E) in FY 2012. Continue Gap Analysis and Risk Reduction efforts to support Release 2-4 activities.

Declare Critical Change in early FY 2011. Initiate and complete Critical Change Reporting process. Execute ECSS program based on preferred alternative.

FY 2012 Base Plans:

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue to provide support activities in support of ERP/COTS product development and execution of Release 1 Initial Operational Test and Evaluation (IOT&E).					
<i>FY 2012 OCO Plans:</i>					
<p><i>Title:</i> Test and Evaluation (Capabilities Integration and Test Support)</p> <p><i>Description:</i> ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution Development, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.</p> <p><i>FY 2010 Accomplishments:</i> Continued to provide Test and Evaluation efforts for ERP/COTS product development. Continued activities and completed documentation in preparation for FY 2011 Milestone B. Conducted Release 1 Pilot A and B activities to include Data Cleansing, Solution Development Labs, Functional Integration Test/System Integration Test, and Site Preparation. Executed System Integration Technical Test (SITT) and pre-production testing for Release 1 Pilot A. Continued Release1 Pilot C activities including technical specifications and Solution Development Lab preparation and initiation. Completed Release 1 Pilot A Early Operational Assessment and User Evaluation Test. Executed Release 1 Pilot A Go-Live. Activities also included Gap Analysis, Long Lead Data Cleansing, and Risk Reduction efforts to support Release 2-4.</p> <p><i>FY 2011 Plans:</i> Continue to provide Test and Evaluation efforts for ERP/COTS product development. Continue Release 1 Pilot B and initiate Release 1 Pilot C Training and Site Preparation activities. Execute Release 1 Pilot B and Pilot C System Integration Technical Test (SITT), pre-production testing, and Go-Live. Prepare for Release 1 Initial</p>	6.096	4.100	1.500	-	1.500

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Operational Test and Evaluation (IOT&E) in FY 2012. Continue Gap Analysis and Risk Reduction efforts to support Release 2-4 activities.					
Declare Critical Change in early FY 2011. Initiate and complete Critical Change Reporting process. Execute ECSS program based on preferred alternative.					
<i>FY 2012 Base Plans:</i> Provide Test and Evaluation efforts for ERP/COTS product development and execution of Release 1 Initial Operational Test and Evaluation (IOT&E).					
<i>FY 2012 OCO Plans:</i>					
<i>Title:</i> Management Services (Government and Contractor Support)	19.516	17.171	10.816	-	10.816
<i>Description:</i> ECSS is utilizing a Commercial-Off-The-Shelf (COTS) Enterprise Resource Planning (ERP) application to replace 179 wholesale and retail legacy logistics Information Technology (IT) systems. ECSS is a component of the larger eLog21 systems architecture and consists of modules that will streamline and integrate financials, order management, purchasing, inventory management, distribution, and other business functions of the Air Force onto one platform. Use of ERP/COTS products will provide the warfighter and the AF enterprise with DoD and industry best business practices and capabilities, including product support & engineering, supply chain management, expeditionary logistics Command & Control, acquisition & procurement, and maintenance, repair and overhaul. ECSS will comply with the DoD IT Standards Registry (DISR), Business Enterprise Architecture (BEA), Chief Financial Officer (CFO) Act, and the Joint Financial Management Improvement Program (JFMIP). ECSS will reside on the Global Combat Support System-Air Force (GCSS-AF) Integration Framework (IF). Release 1 FY11-13 efforts include: Pilot A, B, and C activity, Data Cleansing, Solution Development, testing, training, Site Preparation, and fielding. Activities also include gap analysis, Long Lead Data Cleansing, and risk reduction efforts to support Release 2-4.					
<i>FY 2010 Accomplishments:</i> Continued to provide Management Services supporting ERP/COTS product development. Continued activities and completed documentation in preparation for FY 2011 Milestone B. Conducted Release 1 Pilot A and B activities to include Data Cleansing, Solution Development Labs, Functional Integration Test/System Integration Test, and Site Preparation. Executed System Integration Technical Test (SITT) and pre-production testing for Release 1 Pilot A. Continued Release1 Pilot C activities including technical specifications and Solution Development Lab preparation and initiation. Completed Release 1 Pilot A Early Operational Assessment and					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>User Evaluation Test. Executed Release 1 Pilot A Go-Live. Activities also included Gap Analysis, Long Lead Data Cleansing, and Risk Reduction efforts to support Release 2-4.</p> <p>FY 2011 Plans: Continue to provide Management Services supporting ERP/COTS product development. Continue Release 1 Pilot B and initiate Release 1 Pilot C Training and Site Preparation activities. Execute Release 1 Pilot B and Pilot C System Integration Technical Test (SITT), pre-production testing, and Go-Live. Prepare for Release 1 Initial Operational Test and Evaluation (IOT&E) in FY 2012. Continue Gap Analysis and Risk Reduction efforts to support Release 2-4 activities.</p> <p>Declare Critical Change in early FY 2011. Initiate and complete Critical Change Reporting process. Execute ECSS program based on preferred alternative.</p> <p>FY 2012 Base Plans: Continue to provide Management Services supporting ERP/COTS product development and the execution of Release 1 Initial Operational Test and Evaluation (IOT&E).</p> <p>FY 2012 OCO Plans:</p>					
Accomplishments/Planned Programs Subtotals	237.025	227.614	140.284	-	140.284

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0708610F: OPAF	0.000	30.914	55.793	0.000	55.793	31.171	0.175	0.178	42.994	Continuing	Continuing
• PE 0708610F (1): O&M	38.995	54.151	84.047	0.000	84.047	72.524	74.600	72.467	64.496	Continuing	Continuing

D. Acquisition Strategy

The ECSS acquisition strategy used a two-fold approach to award a COTS software solution followed by selection of a System Integrator. ECSS COTS and System Integrator Firm-Fixed Price (FFP) contracts were awarded using Enterprise Software Initiative (ESI) Blanket Purchase Agreement (BPA) (based on GSA schedule). Under the provisions of the System Integrator contract, funds are incrementally obligated; however, the contractor cannot invoice for payment until the performance-based milestone events are achieved and accepted by the AF.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ERP/COTS System Integration	C/FFP	Computer Science Corp.:Lanham Seabrook, MD	123.360	156.030	Nov 2010	99.827	Nov 2011	-		99.827	Continuing	Continuing	TBD
OEM Technical Support (COTS Product)	C/FFP	Oracle:Reston, VA	5.000	0.800	May 2011	0.100	May 2012	-		0.100	Continuing	Continuing	TBD
Subtotal			128.360	156.830		99.927		-		99.927			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Engineering Support	Various	AFPEO/ELS:Wright-Patterson AFB, OH	14.154	6.609	Dec 2010	3.000	Dec 2011	-		3.000	Continuing	Continuing	TBD
Independent Verification & Validation (IV&V)---IV&V Support	C/FFP	AFPEO/ELS:Wright-Patterson AFB, OH	1.361	1.400	Jun 2011	1.441	Jun 2012	-		1.441	Continuing	Continuing	TBD
Global Combat Support System AF (GCSS-AF)--Risk Reduction Activities	C/Various	AFPEO/ELS:Wright-Patterson AFB, OH	1.400	1.000	Apr 2011	1.000	Apr 2012	-		1.000	Continuing	Continuing	TBD
Logistics Training Development--Training Development & Support Materials	TBD	TBD:TBD,	0.013	0.200	Jun 2011	0.200	Oct 2011	-		0.200	Continuing	Continuing	TBD
Data ETL--Legacy Data	Various	AFPEO/ELS:Numerous Locations,	66.125	40.304	Jun 2011	22.400	Jun 2012	-		22.400	Continuing	Continuing	TBD
Subtotal			83.053	49.513		28.041		-		28.041			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Capabilities Integration Environment (Development & Test)--Hardware/Software/ Contractor Support	Various	ESC/EN:Maxwell AFB, AL	4.567	3.081	Jan 2011	1.500	Jan 2012	-		1.500	Continuing	Continuing	TBD
DT&E RTO	PO	46 TS:Eglin, FL	1.529	1.019	Jun 2011	-	Jun 2012	-		-	Continuing	Continuing	TBD
Subtotal			6.096	4.100		1.500		-		1.500			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Operations	Allot	AFPEO/ELS:Wright-Patterson AFB, OH	3.466	1.919	Oct 2010	2.000	Oct 2011	-		2.000	Continuing	Continuing	TBD
FFRDC - MITRE Engineering Support	C/FFP	MITRE:Wright-Patterson AFB, OH	3.700	3.700	Oct 2010	3.816	Oct 2011	-		3.816	Continuing	Continuing	TBD
Contractor Support	Various	AFPEO/ELS:Wright-Patterson AFB, OH	12.350	11.552	Dec 2010	5.000	Dec 2011	-		5.000	Continuing	Continuing	TBD
Subtotal			19.516	17.171		10.816		-		10.816			

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals		237.025	227.614	140.284	-		140.284	

Remarks

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APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0708610F: Logistics Information
 Technology (LOGIT)

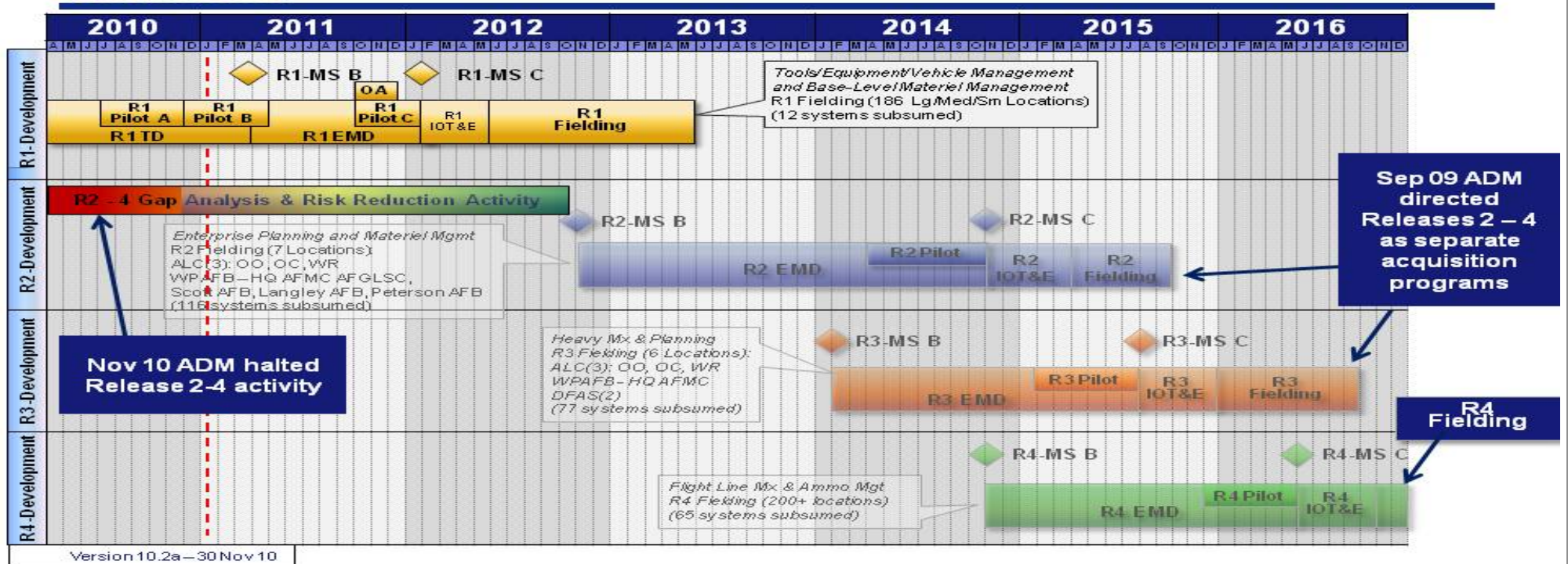
PROJECT

675208: Expeditionary Combat Support System
 (ECSS)



ECSS Program Schedule

U.S. AIR FORCE



Fourth Release and Multiple Pilots Added to Reduce Risk

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708610F: <i>Logistics Information Technology (LOGIT)</i>	PROJECT 675208: <i>Expeditionary Combat Support System (ECSS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Release 1 (R1): Technology Development	1	2010	1	2011
R1: Milestone B (MS B)	2	2011	2	2011
R1, Pilot A: Tools & Vehicle Mgmt - Go Live	4	2010	1	2011
R1, Pilot B: Equipment Mgmt - Go-Live	1	2011	3	2011
R1, Pilot C: Retail Materiel Mgmt	4	2011	2	2012
R1, Phase C: Retail Materiel Management	4	2011	4	2011
R1, Operational Assessment (OA)	4	2011	1	2012
R1, IOT&E	2	2012	3	2012
R1, Fielding	3	2012	3	2013
R2-4, Gap Analysis & Risk Reduction Activity	1	2010	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	14.230	6.141	10.990	-	10.990	5.797	6.385	6.474	6.588	Continuing	Continuing
673318: <i>Product Data Systems Modernization (PDSM)</i>	-	0.562	0.549	-	0.549	0.576	0.585	0.593	0.604	Continuing	Continuing
675042: <i>Log Application Logistics Integration (LALI)</i>	6.639	5.579	10.441	-	10.441	5.221	5.800	5.881	5.984	Continuing	Continuing
675044: <i>Logistics Systems Development (LSD)</i>	7.591	-	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element supports two active projects, 3318 and 5042, and a third, 5044, provides a budgetary accounting location for projects funded through Congressional interest. Product Data System Modernization (PDSM), (project 3318), upgrades Air Force digital data standards to commercial industry standards supporting the Joint Computer-Aided Acquisition Logistic Support (JCALS) System. Logistics Application Logistics Integration (LALI), (project 5042), is the effort to migrate existing Installations and Logistics (IL) legacy systems to the common Global Combat Support System - Air Force (GCSS-AF) Integration Framework (IF). Logistics Systems Development (LSD), (project 5044), provides a budgetary accounting location for various projects having Congressional interest.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	6.288	6.141	12.031	-	12.031
Current President's Budget	14.230	6.141	10.990	-	10.990
Total Adjustments	7.942	-	-1.041	-	-1.041
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.160	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-1.520	-			
• SBIR/STTR Transfer	-0.182	-			
• Other Adjustments	9.804	-	-1.041	-	-1.041

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>
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Congressional Add Details (\$ in Millions, and Includes General Reductions)

Project: 675044: *Logistics Systems Development (LSD)*

Congressional Add: *ALC Logistics Integration Environment*

Congressional Add: *Accelerator-Driven Non-Destructive Testing*

Congressional Add: *Engine Health Management Plus Data Repository Center*

Congressional Add: *Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing*

Congressional Add: *Tech Order Modernization*

Congressional Add Subtotals for Project: 675044

Congressional Add Totals for all Projects

	FY 2010	FY 2011
	0.800	-
	2.000	-
	2.400	-
	1.191	-
	1.200	-
Congressional Add Subtotals for Project: 675044	7.591	-
Congressional Add Totals for all Projects	7.591	-

Change Summary Explanation

In FY 2010: \$31.8M was added to PE 78611F for various projects having Congressional interest. \$24.7M of these funds were moved out of PE 78611F via reprogramming to PE 72976F. The projects moved to PE 72976F include: Demonstration and Validation of Renewable Energy Technology (\$0.8M), Alternate Energy Research and Integration (\$18.4M), Assessment of Alternate Energy for Aircraft Ground Equipment (AGE) (\$1.6M), Freedom Fuels/Coal Fuel Alliance (\$3.9M). The remaining \$7.2M of these funds will be executed out of PE 78611F Project 5044. These projects include: ALC Logistics Integration Environment (\$0.8M), Accelerator-Driven Non-Destructive Testing (\$2.0M), Engine Health Management Plus Data Repository Center (\$2.4M), Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing (\$0.8M), Technical Order Modernization (\$1.2M). The Air Force will direct these funds to the correct program office for execution. In addition, \$3.9M was added to Project 675042 Logistics Analysis Logistics Integration (LALI) to initiate the Civil Engineer's (CE) Information Technology (IT) Transformation effort to transform CE's business processes to better serve the CE customers and meet Air Force Transformational Goals.

In FY 2011: No program adjustments.

In FY 2012: \$5.8M was added to Project 675042 LALI to initiate and implement planned legacy system development for the Integrated Maintenance Data System (IMDS) and other outdated legacy logistics information technology systems which must be replaced, modified, or upgraded to sustain these systems for the warfighter.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
673318: <i>Product Data Systems Modernization (PDSM)</i>	-	0.562	0.549	-	0.549	0.576	0.585	0.593	0.604	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This project implements the Air Force Technical Order (TO) functionality. The Enhanced Technical Information Management System (ETIMS) Enterprise is an integration of custom developed software with new and existing applications/components of Electronic Technical Order Viewer, Joint Computer-aided Acquisition and Logistics Support (JCALS), and Document Automation and Production Service (DAPS) On-Demand printing and distribution service. 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. Activities also include studies and analysis to support both current and future program planning and program execution to include Nuclear Weapons Related Material (NWRM) technical data requirements.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: ETIMS</p> <p>Description: Air Force Technical Order functionality implementation of Enhanced Technical Information System (ETIMS) Enterprise. Activities also include studies and analysis to support both current and future program planning and program execution to include Nuclear Weapons Related Material (NWRM) technical data requirements.</p> <p>FY 2010 Accomplishments: ETIMS development delayed for higher Air Force priorities.</p> <p>FY 2011 Plans: Continue ETIMS enhancements and incorporate technical data activities and technical integration. Address potential nuclear related material management requirements.</p> <p>FY 2012 Base Plans:</p>	-	0.562	0.549	-	0.549

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue ETIMS enhancements and incorporate technical Data activities and technical integration. Incorporate management and support of AF technical data activities. FY 2012 OCO Plans: None.					
Accomplishments/Planned Programs Subtotals	-	0.562	0.549	-	0.549

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: <i>Not Applicable</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
ETIMS will incrementally develop enhancements to the existing project to ensure a user friendly, technically accurate, and current digital TO management solution at the point of use. The acquisition will be a Cost Plus Fixed Fee (CPFF) contract line item on a competitively awarded contract utilizing Full and Open Competition (FAR part 15).

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Manage and Support Technical Data Services	C/TBD	NGIT 754 ELSG/ ILMT:Wright-Patterson AFB, OH	-	0.200	Feb 2011	0.200	Apr 2012	-		0.200	Continuing	Continuing	TBD
Technical Data Integrator/ Developer Support	C/CPFF	SAIC 754 ELSG/ ILMT:Wright-Patterson AFB, OH	-	0.262	Feb 2011	0.249	Apr 2012	-		0.249	Continuing	Continuing	TBD
Subtotal			-	0.462		0.449		-		0.449			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
System Program Office (SPO) Operations	C/TBD	OASIS 754 ELSG/ ILMT:Wright-Patterson AFB, OH	-	0.100	Feb 2011	0.100	Apr 2012	-		0.100	Continuing	Continuing	TBD
Subtotal			-	0.100		0.100		-		0.100			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

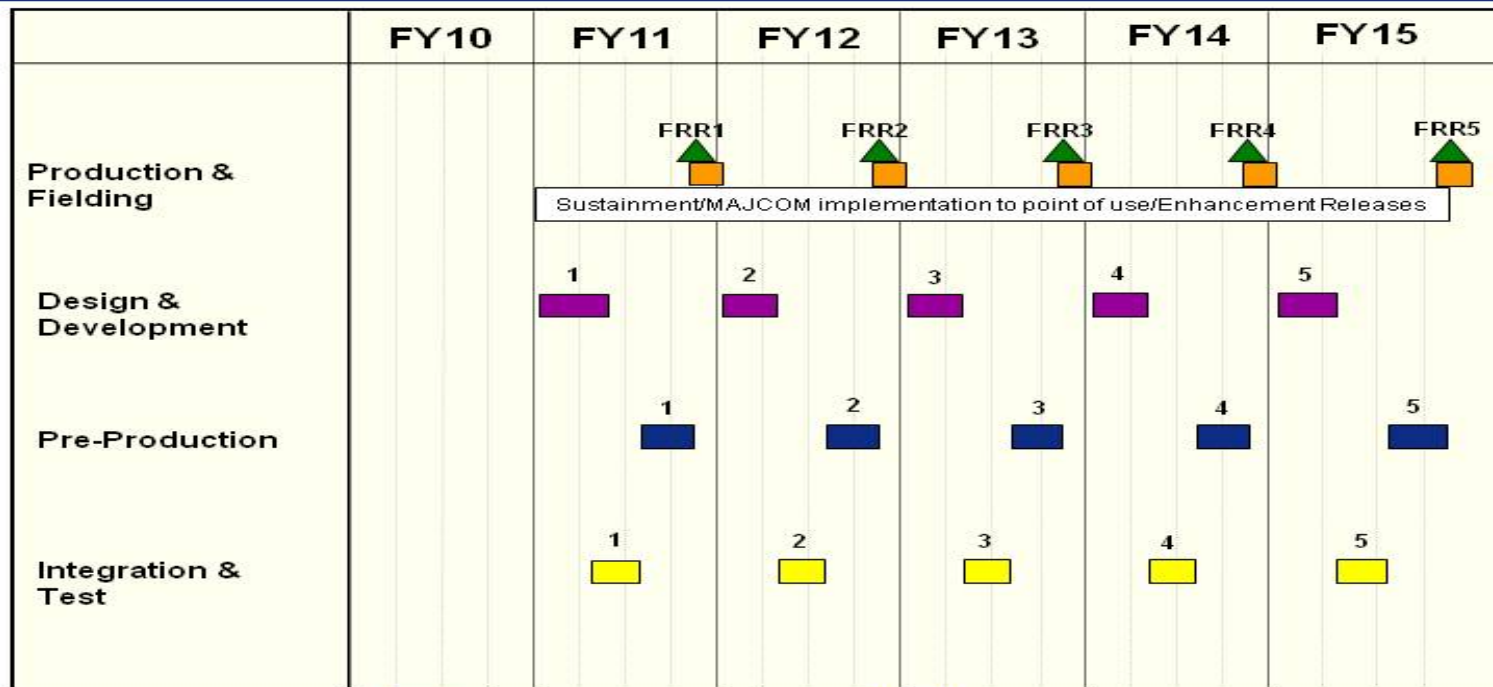
APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0708611F: Support Systems Development

PROJECT
 673318: Product Data Systems Modernization (PDSM)



Enhanced Technical Information Management System (ETIMS) Schedule



Concept activities
 Design / development
 Integration / test
 FRR – Field Readiness Review for Enhancement Releases
 Production / fielding
 Pre-Production
 Key events

Depicted by installation/production flow

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 673318: <i>Product Data Systems Modernization (PDSM)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Production/Fielding-1	4	2011	1	2012
Field Readiness Review1 (FRR1)	4	2011	4	2011
Production/Fielding-2	4	2012	4	2012
FRR2	4	2012	4	2012
Design/Development-1	1	2011	2	2011
Design/Development-2	1	2012	2	2012
Pre-Production-1	3	2011	4	2011
Pre-Production-2	3	2012	4	2012
Integration & Test-1	2	2011	3	2011
Integration & Test-2	2	2012	3	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logistics Integration (LALI)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675042: <i>Log Application Logistics Integration (LALI)</i>	6.639	5.579	10.441	-	10.441	5.221	5.800	5.881	5.984	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Logistics Application Logistics Integration (LALI) funding provides development in support of eLog21 initiatives. As the logistics transforms and streamlines its processes, new enterprise focused enablement is required. LALI supports the transformation initiatives like Repair Network Integration, Global Logistics Support Center, Weapon Systems Enterprise View, Equipment and Vehicle Enterprise views of data to make senior decisions. LALI funding enables these efforts to move away from localized systems, to enterprise tools. Continue Business Process Re-Engineering by use of the Service Development and Delivery Plan and to provide data discovery and migration support of Expeditionary Combat Support System (ECSS), PE 78611F. Provide studies and analysis of current and future state Service Oriented Architecture (SOA) and Platform as a Service (PaaS) capabilities. Activities in this Project also include FY2009 Congressional Adds for non-LALI work. The AF has directed these funds to the correct program office for execution.

In FY10 this Project also included the Civil Engineer's (CE) Information Technology (IT) Transformation effort. The CE IT Transformation's mission is to transform CE's business processes to better serve the CE customers and meet Air Force Transformational Goals. The plan is to leverage industry best practices, optimize core business processes, and replace existing outdated IT capabilities with a set of commercial off-the-shelf (COTS) software solutions and a service provider to deploy and maintain the system. This COTS solution will provide a robust, enterprise-wide CE capability and will consist of an integrated set of embedded, configurable best business practices and capabilities to support a number of CE missions to include the following: Real Property Management; Work and Supply Management, Project Management, Energy Management, Housing Management, Financial Management, Environmental Management, Planning, Emergency Services, Fire Operations and EOD. Starting in FY12, CE IT Transformation will be funded in PE 0901279F, Facilities Operations-Administrative, in Project 671017, CE IT Transformation.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Logistics Application Logistics Integration (LALI)	6.639	5.579	10.441	-	10.441
Description: LALI funding provides development in support of eLog21 initiatives. As the logistics transforms and streamlines its processes, new enterprise focused enablement is required. LALI supports the transformation initiatives like Repair Network Integration, Global Logistics Support Center, Weapon Systems Enterprise View, Equipment and Vehicle Enterprise views of data to make senior decisions. LALI funding enables these efforts to move away from localized systems, to enterprise tools. Continue Business Process Re-Engineering by					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logistics Integration (LALI)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>use of the Service Development and Delivery Plan and to provide data discovery and migration support of Expeditionary Combat Support System (ECSS), PE 78611F. Provide studies and analysis of current and future state Service Oriented Architecture (SOA) and Platform as a Service (PaaS) capabilities. The following LALI projects will continue: LALI Program Management Office (PMO) Support, LALI PMO Tasks (Supporting Integration and Development), LALI Systems Engineering Base Support & Test development Range, LALI Systems Engineering Contractor Support (Product Development), LALI Integration Task Contracts, LALI Service Oriented Architecture (SOA) Support, LALI Community of Interest (COI) Support.</p> <p><i>FY 2010 Accomplishments:</i> Performed Business Process Re-Engineering by use of a Services Development and Delivery Plan (SDDP) on new IT Projects. Produced bounded user requirements through a Performance Requirement Model (PRM) and Business Requirements Model (BRM) for Deployment Readiness Service and Munitions View. Continued multi-year LALI effort to migrate Logistics Installations and Mission Support legacy systems to the common Global Combat Support System – Air Force Data Services (GCSS-AFDS).</p> <p>Initiate Project 675042 LALI planning and scheduling activities in association with the Civil Engineer's (CE) Information Technology (IT) Transformation effort.</p> <p><i>FY 2011 Plans:</i> LIMS-EV Continue Business Process Re-Engineering by use of the Service Development and Delivery Plan and to provide data discovery and migration support of Expeditionary Combat Support System (ECSS), PE 78611F. Provide studies and analysis of current and future state Service Oriented Architecture (SOA) and Platform as a Service (PaaS) capabilities. Continue CE IT Transformation activities.</p> <p>Perform activities in association with the Civil Engineer's (CE) Information Technology (IT) Transformation effort. Leveraged industry best practices, optimize core business processes, and replace existing outdated IT capabilities with a commercial off-the-shelf (COTS) software solution and a service provider to deploy and maintain the system. This COTS solution will provide a robust, enterprise-wide CE capability and will consist of an integrated set of embedded, configurable best business practices and capabilities to support a number of CE missions to include the following: Real Property Management; Work & Supply Management, Project Management, and Energy Management.</p> <p><i>FY 2012 Base Plans:</i></p>					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logistics Integration (LALI)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continue to support Business Process Re-Engineering by use of for new IT requirements. Continue support of ECSS. Continue to support LIMS studies and analysis of SOA and PaaS. Continue to develop, implement, update, and support legacy and follow-on logistics systems.					
Complete Project 675042 LALI activities in association with the Civil Engineer's (CE) Information Technology (IT) Transformation effort. Complete concept design development and testing activities prior to Initial Operational Capability.					
Initiate IMDS/Legacy modernization for Combat Ammunition System(CAS) to modify the inventory program, Deployment Readiness Service spiral developments, IMDS-TBA upgrade to training modules, IMDS-EMOC munitions control Integration interfaces.					
<i>FY 2012 OCO Plans:</i> None.					
Accomplishments/Planned Programs Subtotals	6.639	5.579	10.441	-	10.441

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: <i>Not Applicable</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

The Engineering & Integration Architecture (EIPA) Flight of the 643rd Electronic Systems Squadron (ELSS) manages the logistics systems engineering and integration issues for the Air Force. EIPA performs a set of activities required by the 754th GCSS-AF to deliver world-class capabilities to our customers. This includes enterprise architecture, engineering technical and functional support of services for the development, integration, installation of modernized Logistics Information Systems, maintenance, and deactivation of redundant systems. The focus is on facilitating the improvement of the systems efficiency through integration and technology insertion and exploiting GCSS-AF provided data services and business intelligence as we move to Service Oriented Architecture (SOA) based exposure of data.

Legacy IT programs will incrementally develop enhancements for such programs as IMDS and others to enable continued required capabilities.

LALI will continuously develop logistics enterprise systems using common software and hardware products requiring a small number of interfaces. These products will be competitively acquired using a variety of fixed price and cost plus contracts.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	PE 0708611F: <i>Support Systems Development</i>	675042: <i>Log Application Logistics Integration (LALI)</i>

The CE IT Transformation effort will apply a two phase acquisition process. Phase I will consist of selecting a software product and conducting software configuration. Phase II will select a service provider to test, deploy, and maintain the solution.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logistics Integration (LALI)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Provide LALI Systems Engineering Base Support & Test Development Range	C/TBD	AF/A4/7: Pentagon, DC	0.053	-		-		-		-	0.000	0.053	0.053
Continue LALI Program Management Office (PMO) Support	C/TBD	AF/A4/7: Pentagon, DC	1.020	0.060	Mar 2011	0.061	Mar 2012	-		0.061	Continuing	Continuing	TBD
Continue LALI PMO Tasks (Supporting Integration and Development)	C/TBD	AF/A4/7: Pentagon, DC	2.205	1.309	Mar 2011	1.325	Mar 2012	-		1.325	Continuing	Continuing	TBD
Continue LALI Systems Engineering Contractor Support (Product Development)	C/TBD	AF/A4/7: Pentagon, DC	5.721	1.890	Mar 2011	1.920	Mar 2012	-		1.920	Continuing	Continuing	TBD
Continue LALI Integration Task Contracts	C/TBD	AF/A4/7: Pentagon, DC	0.261	0.126	Mar 2011	0.128	Mar 2012	-		0.128	Continuing	Continuing	TBD
LALI Service Oriented Architecture (SOA) Support	MIPR	AF/A4/7: Pentagon, DC	0.500	1.097	Mar 2011	1.111	Mar 2012	-		1.111	Continuing	Continuing	TBD
LALI Community of Interest (COI) Support	MIPR	AF/A4/7: Pentagon, DC	0.500	1.097	Mar 2011	1.111	Mar 2012	-		1.111	Continuing	Continuing	TBD
IMDS/Legacy Modernization	TBD	AF/A4/7: Pentagon, DC	-	-		4.785	Apr 2012	-		4.785	0.000	4.785	5.800
CE IT Transformation	TBD	AF/A4/7: Pentagon, DC	3.945	-	Apr 2011	-		-		-	0.000	3.945	TBD
Subtotal			14.205	5.579		10.441		-		10.441			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

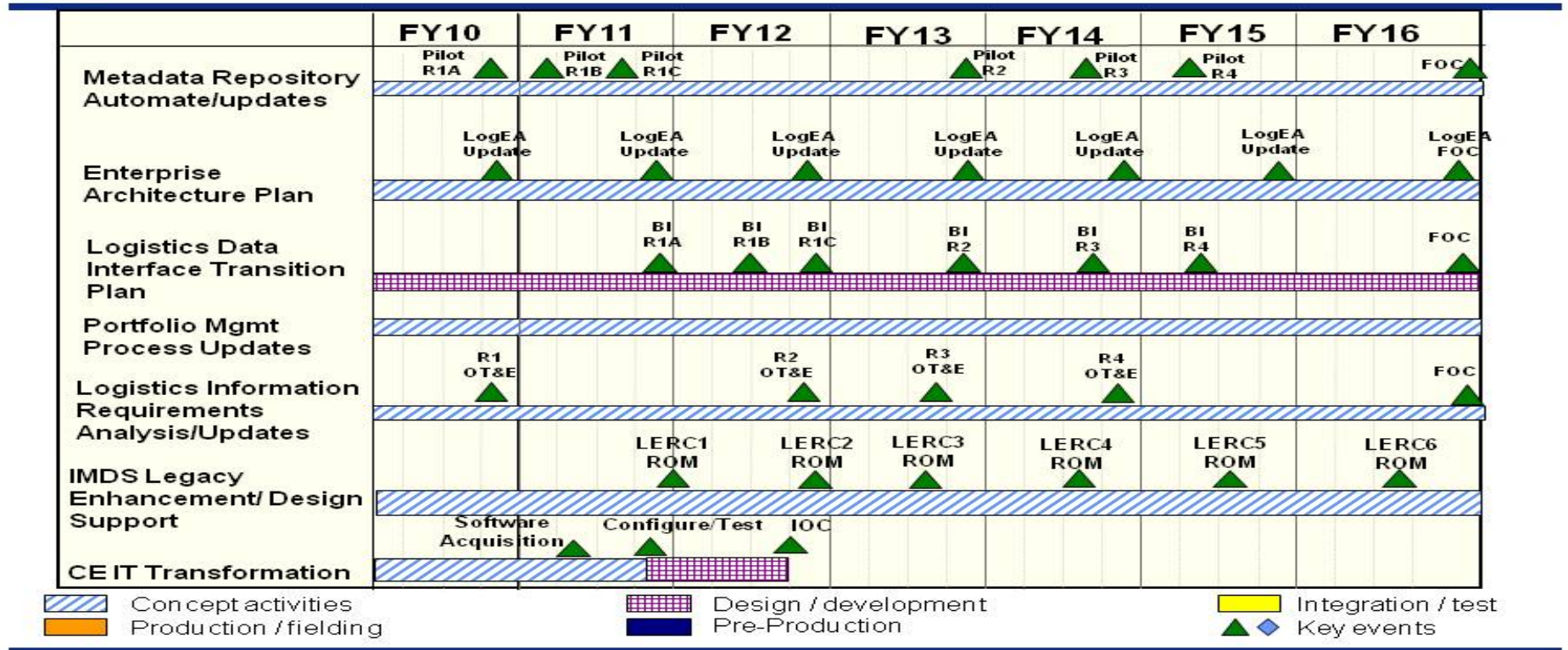
PE 0708611F: Support Systems Development

PROJECT

675042: Log Application Logistics Integration (LALI)



Logistics Application Logistics Integration (LALI) Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logistics Integration (LALI)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Metadata Repository (Automate/Updates)	1	2010	4	2012
Metadata Repository (Automate/Updates) Pilot R1A	4	2010	4	2010
Metadata Repository (Automate/Updates) Pilot R1B	1	2011	1	2011
Metadata Repository (Automate/Updates) Pilot R1C	3	2011	3	2011
Logistics Enterprise Architecture (LogEA) Plan	1	2010	4	2012
LogEA Update01	4	2010	4	2010
LogEA Update02	4	2011	4	2011
LogEA Update03	4	2012	4	2012
Logistics Data Interface (Log DI) Transition Plan	1	2010	4	2012
Business Intelligence (BI) R1A	4	2011	4	2011
BI R1B	2	2012	3	2012
BI R1C	4	2012	4	2012
Portfolio Management Process Updates	1	2010	4	2012
Logistics Information Requirements (LogIR) Analysis/Updates	1	2010	4	2012
LogIR Operational Test & Evaluation (OT&E) Release 1 (R1)	4	2010	4	2010
LogIR OT&E Pilot R2	4	2012	4	2012
IMDS Legacy Enhancement/Design Support (LEDS)	1	2010	4	2012
IMDS LEDS, Legacy Enhancement Release Cost 1 (LERC1) Rough Order of Magnitude (ROM)	4	2011	1	2012
IMDS LEDS, LERC2 ROM	4	2012	4	2012
CE IT Transformation Concept & Design Development	1	2010	4	2012
CE IT Transformation Software Aquisition	4	2010	4	2011
CE IT Transformation Configure and Test	4	2011	4	2012

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675042: <i>Log Application Logisitics Integration (LALI)</i>

Events	Start		End	
	Quarter	Year	Quarter	Year
CE IT Transformation Initial Operational Capability (IOC)	4	2012	4	2012

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675044: <i>Logistics Systems Development (LSD)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675044: <i>Logistics Systems Development (LSD)</i>	7.591	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Logistics Systems Development (LSD) is a budgetary accounting location for various LSD projects having Congressional interest.

In FY 2010 these LSD projects include ALC Logistics Integration, Engine Health Management Plus Data Repository Center, Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing, and Technical Order Modernization. The Air Force will direct these funds to the correct program office for execution.

The following projects were transferred via technical adjustments from PE 78611F to PE 72976F: Accelerator-Driven Non-Destructive Testing, Alternate Energy Research and Integration, Assessment of Alternate Energy for Aircraft Ground Equipment (AGE), Demonstration and Validation of Renewable Energy Technology, and Freedom Fuels/Coal Fuel Alliance.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011
Congressional Add: ALC Logistics Integration Environment	0.800	-
FY 2010 Accomplishments: Initiate ALC Logistics Integration Environment project.		
FY 2011 Plans: Continue ALC Logistics Integration Environment project.		
Congressional Add: Accelerator-Driven Non-Destructive Testing	2.000	-
FY 2010 Accomplishments: Initiate Accelerator-Driven Non-Destructive Testing project.		
FY 2011 Plans: Continue Accelerator-Driven Non-Destructive Testing project.		
Congressional Add: Engine Health Management Plus Data Repository Center	2.400	-
FY 2010 Accomplishments: Initiate Engine Health Management Plus Data Repository Center project.		
FY 2011 Plans: Continue Engine Health Management Plus Data Repository Center project.		
Congressional Add: Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing	1.191	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675044: <i>Logistics Systems Development (LSD)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011
<i>FY 2010 Accomplishments:</i> Initiate Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing project.		
<i>FY 2011 Plans:</i> Continue Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing project.		
<i>Congressional Add:</i> Tech Order Modernization	1.200	-
<i>FY 2010 Accomplishments:</i> Initiate Tech Order Modernization project.		
<i>FY 2011 Plans:</i> Continue Tech Order Modernization project.		
Congressional Adds Subtotals	7.591	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• N/A: <i>Not Applicable</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Logistics Systems Development (LSD) is a budgetary accounting location for various LSD projects having Congressional interest.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675044: <i>Logistics Systems Development (LSD)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
ALC Logistics Integration Congressional Add	TBD	AFMC:WPAFB, OH	0.800	-		-		-		-	0.000	0.800	0.000
Accelerator-Driven Non-Destructive Testing Congressional Add	TBD	AFMC:WPAFB, OH	2.000	-		-		-		-	0.000	2.000	0.000
Engine Health Management Plus Data Repository Center Congressional Add	TBD	AFMC:WPAFB, OH	2.400	-		-		-		-	0.000	2.400	0.000
Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing Congressional Add	TBD	AFMC:WPAFB, OH	0.800	-		-		-		-	0.000	0.800	0.000
Technical Order Modernization Congressional Add	TBD	AFMC:WPAFB, OH	1.200	-		-		-		-	0.000	1.200	0.000
Subtotal			7.200	-		-		-		-	0.000	7.200	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675044: <i>Logistics Systems Development (LSD)</i>



Logistics Systems Development (LSD) Schedule

	FY10	FY11	FY12	FY13	FY14	FY15	FY16
ALC Logistics Integration Environment	■						
Accelerator-Driven Non-Destructive Testing	■						
Engine Health Management Plus Data Repository Center	■						
Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing	■						
Technical Order Modernization	■						

- Concept activities
- Design / development
- Integration / test
- Production / fielding
- Operations / sustainment
- △◇ Key events

FY10 Staffer Brief

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0708611F: <i>Support Systems Development</i>	PROJECT 675044: <i>Logistics Systems Development (LSD)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
LSD Congressional Add - ALC Logistics Integration	1	2010	4	2011
LSD Congressional Add - Accelerator-Driven Non-Destructive Testing	1	2010	4	2011
LSD Congressional Add - Engine Health Management Plus Data Repository Center	1	2010	4	2011
LSD Congressional Add - Mitigating RoHS Lead-Free Issues in Aerospace Circuit Board Manufacturing	1	2010	4	2011
LSD Congressional Add - Technical Order Modernization	1	2010	4	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				PE 0804743F: <i>OTHER FLIGHT TRAINING</i>							
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	0.777	0.667	0.322	-	0.322	0.349	0.347	0.346	-	Continuing	Continuing
675303: <i>ADSS Development</i>	0.777	0.667	0.322	-	0.322	0.349	0.347	0.346	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Program supports the Air Education and Training command (AETC) Decision Support System (ADSS) which is an automated information system that provides AETC leadership and staff with key management information about training production status, including monitoring and assessment of training. The data and reports from ADSS provide the vital feedback mechanism essential to an effective programming and management process. The hardware and software components of ADSS interact and communicate via the DOD standard communications infrastructure. The system uses DOD information transfer assets that provide seamless communications within and across systems and media. Recent changes in funding use laws requires compliance with the NDAA and resulting AFI 65-601 allocation/ use of development funds. ADSS development funds must now use 3600 funds vice previously used 3400 funds. New law does not allow use of 3400 funds for RDT&E actions. Per direction in the memorandum from SAF/FMBM dated 15 Aug 07, and IAW DoD FRM Vol 2A, 010212 B1, all developmental activities involved in bringing a program to its system objective are to be funded in RDT&E. This program is Budget Activity 7 - Operational System Development.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	0.805	0.667	0.322	-	0.322
Current President's Budget	0.777	0.667	0.322	-	0.322
Total Adjustments	-0.028	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.028	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804743F: <i>OTHER FLIGHT TRAINING</i>	PROJECT 675303: <i>ADSS Development</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675303: <i>ADSS Development</i>	0.777	0.667	0.322	-	0.322	0.349	0.347	0.346	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Program supports the Air Education and Training command (AETC) Decision Support System (ADSS) which is an automated information system that provides AETC leadership and staff with key management information about training production status, including monitoring and assessment of training. The data and reports from ADSS provide the vital feedback mechanism essential to an effective programming and management process. The hardware and software components of ADSS interact and communicate via the DOD standard communications infrastructure. The system uses DOD information transfer assets that provide seamless communications within and across systems and media. Recent changes in funding use laws requires compliance with the NDAA and resulting AFI 65-601 allocation/ use of development funds. ADSS development funds must now use 3600 funds vice previously used 3400 funds. New law does not allow use of 3400 funds for RDT&E actions. Per direction in the memorandum from SAF/FMBM dated 15 Aug 07, and IAW DoD FRM Vol 2A, 010212 B1, all developmental activities involved in bringing a program to its system objective are to be funded in RDT&E. This program is Budget Activity 7 - Operational System Development.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: ADSS	0.777	0.667	0.322	-	0.322
Description: Development of AETC Decision Support System (ADSS)					
FY 2010 Accomplishments: Continue development of AETC Decision Support System (ADSS)					
FY 2011 Plans: Continue development of AETC Decision Support System (ADSS)					
FY 2012 Base Plans: Continue development of AETC Decision Support System (ADSS)					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	0.777	0.667	0.322	-	0.322

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804743F: <i>OTHER FLIGHT TRAINING</i>	PROJECT 675303: <i>ADSS Development</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Contract will be awarded with full and open competition.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804743F: <i>OTHER FLIGHT TRAINING</i>	PROJECT 675303: <i>ADSS Development</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Developmental Efforts for AETC ADSS	Various	TBD:TBD,	0.777	0.667	Dec 2011	0.322	Dec 2012	-		0.322	Continuing	Continuing	TBD
Subtotal			0.777	0.667		0.322		-		0.322			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.777	0.667		0.322		-		0.322			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

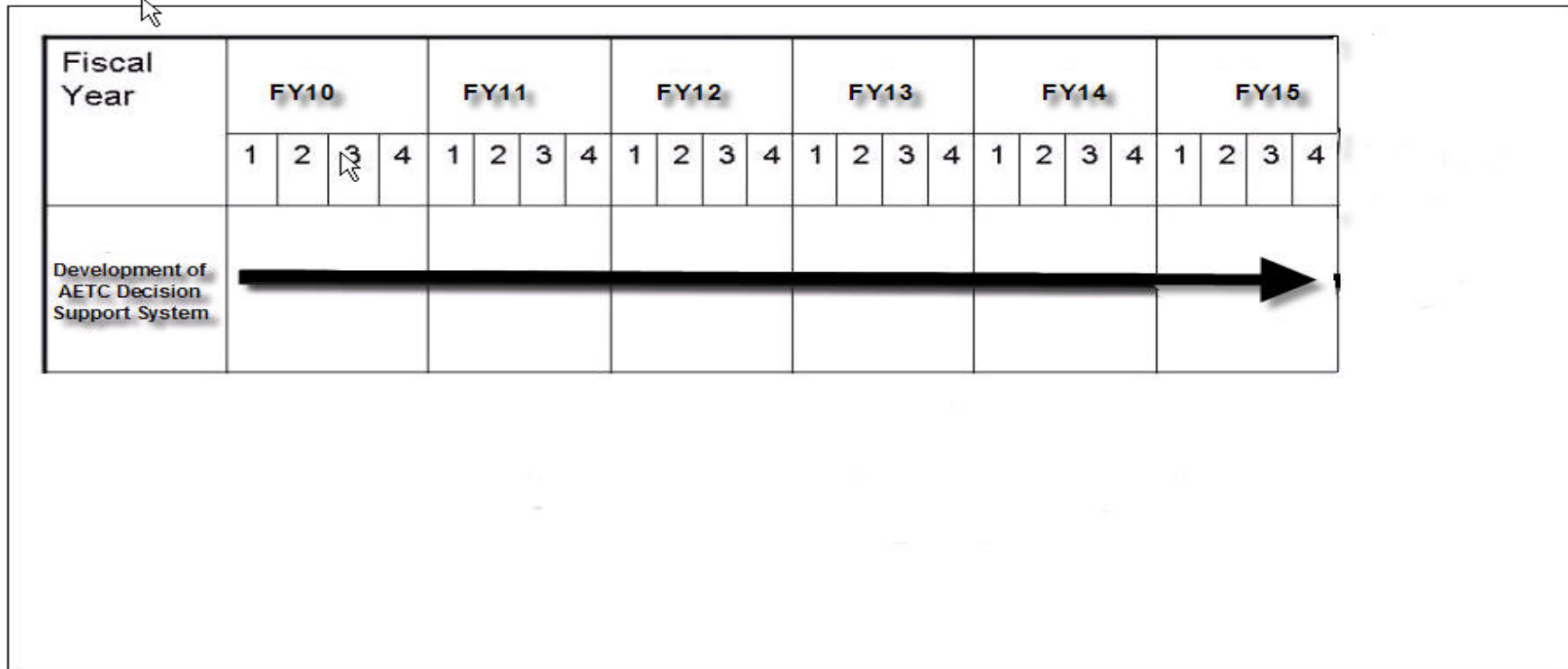
R-1 ITEM NOMENCLATURE

PE 0804743F: *OTHER FLIGHT TRAINING*

PROJECT

675303: *ADSS Development*

ADSS DEVELOPMENT



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804743F: <i>OTHER FLIGHT TRAINING</i>	PROJECT 675303: <i>ADSS Development</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development of AETC Decision Support System (ADSS)	1	2010	4	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	3.108	0.009	0.011	-	0.011	0.068	0.024	0.025	-	Continuing	Continuing
675124: <i>M&S Foundations</i>	3.108	0.009	0.011	-	0.011	0.068	0.024	0.025	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint 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 this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	3.220	9.000	-	-	-
Current President's Budget	3.108	0.009	0.011	-	0.011
Total Adjustments	-0.112	-8.991	0.011	-	0.011
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.112	-8.991	0.011	-	0.011

Change Summary Explanation

FY11:
- Due to technical error; Air Force requested a technical adjustment

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>	PROJECT 675124: <i>M&S Foundations</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675124: <i>M&S Foundations</i>	3.108	0.009	0.011	-	0.011	0.068	0.024	0.025	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint 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 this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Air Force Modeling and Simulation Tool Kit (AFMSTT)</p> <p>Description: Continue Air Force Modeling and Simulations Tool Kit (AFMSTT) Air Warfare Simulation (AWSIM) Upgrades</p> <p>FY 2010 Accomplishments: Integration of Battlefield Air Operations Kit and the Indirect Fire Forward Air Controller Trainer (I-FACT) into AFMSTT</p> <p>FY 2011 Plans: NA</p> <p>FY 2012 Base Plans:</p> <p>FY 2012 OCO Plans:</p>	1.565	-	-	-	-
<p>Title: Operations Support</p> <p>Description: Continue basic operations support, systems acquisition, engineering and development studies/efforts</p> <p>FY 2010 Accomplishments:</p>	0.445	0.009	0.011	-	0.011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>	PROJECT 675124: <i>M&S Foundations</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Virtual Predator integration on the Nevada Test and Training Range FY 2011 Plans: Continue to ops support study effort FY 2012 Base Plans: Continue to ops support study effort FY 2012 OCO Plans:					
Title: Space Distributed Mission Operations Center (DMOC)_ CONOPS Description: Begin/Continue Concept of Operations for Space DMOC into JNTC Live -Virtual-Constructive events FY 2010 Accomplishments: Integration of space effects models into the joint training environment/development of validated and authoritative space modeling and simulation data FY 2011 Plans: NA FY 2012 Base Plans: FY 2012 OCO Plans:	1.098	-	-	-	-
Accomplishments/Planned Programs Subtotals	3.108	0.009	0.011	-	0.011

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• PE 0804757: <i>Joint National Training Center, APAF</i>	5.130	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
	4.164	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force	DATE: February 2011
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APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>	PROJECT 675124: <i>M&S Foundations</i>
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C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u> <u>Base</u>	<u>FY 2012</u> <u>OCO</u>	<u>FY 2012</u> <u>Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• PE 0804757 (1): <i>Joint National Training Center, OPAF</i>											

D. Acquisition Strategy

The acquisition strategy is competitive, with cost plus fixed fee and fixed price contracts

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>	PROJECT 675124: <i>M&S Foundations</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Air Force Modeling and Simulations Tool Kit (AFMSTT)	C/Various	L3:Mesa, AZ	1.565	-		-		-		-	0.000	1.565	0.000
Distributed Mission Operations Center - Space (DMOC-S)	C/Various	SPARTA:Schriever AFB, CO	1.098	-		-		-		-	0.000	1.098	0.000
Ops Support, System Acq, Engineering & Development Studies	C/Various	Various:Various,	0.445	0.009	Mar 2011	0.011	Mar 2012	-		0.011	0.000	0.465	0.000
Subtotal			3.108	0.009		0.011		-		0.011	0.000	3.128	0.000

Remarks
Due to an inadvertent error the Air Force requests a technical adjustment changing R-1 Line NO. 237 "Joint National Training Center" to \$0.0M

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force							DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			R-1 ITEM NOMENCLATURE PE 0804757F: <i>JOINT NATIONAL TRAINING CENTER</i>				PROJECT 675124: <i>M&S Foundations</i>			
	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract		
Project Cost Totals	3.108	0.009	0.011	-	0.011	0.000	3.128	0.000		

Remarks

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804772F: <i>TRAINING DEVELOPMENTS</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	1.707	-	-	-	-	-	-	-	-	Continuing	Continuing
675311: <i>Continuous Learning</i>	1.707	-	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

Program develops specialized training, instructional systems development, and common use training centers. Additionally, develops training course materials, career ladder training, and Career Development Courses (CDC's) as well as tasks and training analysis, trainer development flights, and AF Occupational Measurement Squadron (AFOMS). Program further provides Continuous Learning (CL) and establishes formal systematic approach for insertion of new technologies into education training systems. CL develops, employs and utilizes advanced technologies such as Visualization, Virtual Environment, Artificial Intelligence and Speech Recognition for increase effective learning. Specifically, supports studies, contractor support, equipment, software, travel required for design, development and implementation of CL.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	1.769	-	-	-	-
Current President's Budget	1.707	-	-	-	-
Total Adjustments	-0.062	-	-	-	-
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.062	-			
• Other Adjustments	-	-			

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804772F: <i>TRAINING DEVELOPMENTS</i>	PROJECT 675311: <i>Continuous Learning</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675311: <i>Continuous Learning</i>	1.707	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Program develops specialized training, instructional systems development, and common use training centers. Additionally, develops training course materials, career ladder training, and Career Development Courses (CDC's) as well as tasks and training analysis, trainer development flights, and AF Occupational Measurement Squadron (AFOMS). Program further provides Continuous Learning (CL) and establishes formal systematic approach for insertion of new technologies into education training systems. CL develops, employs and utilizes advanced technologies such as Visualization, Virtual Environment, Artificial Intelligence and Speech Recognition for increase effective learning. Specifically, supports studies, contractor support, equipment, software, travel required for design, development and implementation of CL.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Program Development	1.707	-	-	-	-
Description: Development of specialized training, instructional systems development and common use training centers.					
FY 2010 Accomplishments: Development of specialized training, instructional systems development and common use training centers.					
FY 2011 Plans:					
FY 2012 Base Plans:					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	1.707	-	-	-	-

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Not applicable

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804772F: <i>TRAINING DEVELOPMENTS</i>	PROJECT 675311: <i>Continuous Learning</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804772F: <i>TRAINING DEVELOPMENTS</i>	PROJECT 675311: <i>Continuous Learning</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Development of Specialized Skill Training	Various	TBD:TBD,	1.519	-		-		-		-	Continuing	Continuing	TBD
Subtotal			1.519	-		-		-		-			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Support for Spiral 1 Activities	SS/CPAF	CACI:Chantilly, VA	0.188	-		-		-		-	Continuing	Continuing	TBD
Subtotal			0.188	-		-		-		-			

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Program Management Support	TBD	TBD:TBD	-	-		-		-		-	0.000	0.000	0.000
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			1.707	-		-		-		-			

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0804772F: <i>TRAINING DEVELOPMENTS</i>	PROJECT 675311: <i>Continuous Learning</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Development of Specialized Skill Training	1	2010	4	2010

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0808716F: <i>OTHER PERSONNEL ACTIVITIES</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	0.113	0.116	0.113	-	0.113	0.117	0.119	0.121	0.124	Continuing	Continuing
675141: <i>DEOMI Faculty Research</i>	0.113	0.116	0.113	-	0.113	0.117	0.119	0.121	0.124	Continuing	Continuing

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 and engineering analysis. The research methodology and analysis 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.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	0.116	0.116	0.118	-	0.118
Current President's Budget	0.113	0.116	0.113	-	0.113
Total Adjustments	-0.003	-	-0.005	-	-0.005
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-0.003	-	-0.005	-	-0.005

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0808716F: <i>OTHER PERSONNEL</i> <i>ACTIVITIES</i>	PROJECT 675141: <i>DEOMI Faculty Research</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675141: <i>DEOMI Faculty Research</i>	0.113	0.116	0.113	-	0.113	0.117	0.119	0.121	0.124	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

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 and engineering analysis. The research methodology and analysis 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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Research	0.113	0.116	0.113	-	0.113
Description: Conduct research on military and civilian equal opportunity issues.					
FY 2010 Accomplishments: Continue conducting research on military and civilian equal opportunity issues.					
FY 2011 Plans: Continue conducting conduct research on military and civilian equal opportunity issues.					
FY 2012 Base Plans: Continue conducting research on military and civilian equal opportunity issues.					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	0.113	0.116	0.113	-	0.113

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Grants will be awarded competitively.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0808716F: <i>OTHER PERSONNEL</i> <i>ACTIVITIES</i>	PROJECT 675141: <i>DEOMI Faculty Research</i>

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0808716F: <i>OTHER PERSONNEL ACTIVITIES</i>	PROJECT 675141: <i>DEOMI Faculty Research</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
DEOMI	TBD	Various:Various,	0.113	0.116	Mar 2011	0.113	Mar 2012	-		0.113	Continuing	Continuing	TBD
Subtotal			0.113	0.116		0.113		-		0.113			

Remarks
Contract method will be a grant

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			0.113	0.116		0.113		-		0.113			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0808716F: *OTHER PERSONNEL*
 ACTIVITIES

PROJECT

675141: *DEOMI Faculty Research*

ENGINEERING ANALYSIS

Fiscal Year	FY09				FY10				FY11				FY12				FY13				FY14				FY15			
	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
Receive Proposal		▲				▲				○				○				○				○				○		
Award Grant			▲				▲				○				○				○				○				○	

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0808716F: <i>OTHER PERSONNEL</i> <i>ACTIVITIES</i>	PROJECT 675141: <i>DEOMI Faculty Research</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Receive Grants	1	2010	2	2016
Award Grants	3	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	11.123	6.107	2.483	-	2.483	2.014	2.035	2.065	-	Continuing	Continuing
675196: <i>Joint Technology Exploitation</i>	11.123	6.107	2.483	-	2.483	2.014	2.035	2.065	-	Continuing	Continuing

Note

The program funding includes reductions for Overhead Reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$3.598M in FY12.

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.

Program is in Budget Activity 7 because it provides for development and testing in support of recovery capability.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	11.376	6.107	6.081	-	6.081
Current President's Budget	11.123	6.107	2.483	-	2.483
Total Adjustments	-0.253	-	-3.598	-	-3.598
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.253	-			
• Other Adjustments	-	-	-3.598	-	-3.598

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>				PROJECT 675196: <i>Joint Technology Exploitation</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675196: <i>Joint Technology Exploitation</i>	11.123	6.107	2.483	-	2.483	2.014	2.035	2.065	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

PRMS currently in use at COCOM Rescue Coordination Centers and AF AOCs. JPRA oversaw development of PRMS during ACTD and fielding to COCOMs and Services. ACTD Transition Plan did not identify responsibility for funding further development of PRMS. PRMS is critical piece of Personnel Recovery capability for operations in CENTCOM AOR and for other MCOs worldwide. JPRA executes DoD Executive Agent for Personnel Recovery, CDRUSJFCOM, responsibilities to assess current and future technologies for application to shortfalls in COCOM and Service Personnel Recovery capabilities

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: MAJOR THRUST 1</p> <p>Description: Isolated Personnel Location, Survivability & Evasion Aid Development</p> <p>FY 2010 Accomplishments: Continuation of above listed activities</p> <p>FY 2011 Plans: Continuation of above listed activities</p> <p>FY 2012 Base Plans: Continuation of above listed activities</p> <p>FY 2012 OCO Plans:</p>	3.000	1.500	-	-	-
<p>Title: MAJOR THRUST 2</p> <p>Description: Personnel Recovery Mission Software Improvement</p> <p>FY 2010 Accomplishments: Continuation of above listed activities</p> <p>FY 2011 Plans: Continuation of above listed activities</p> <p>FY 2012 Base Plans:</p>	2.350	0.220	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>		PROJECT 675196: <i>Joint Technology Exploitation</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of above listed activities					
FY 2012 OCO Plans:					
Title: MAJOR THRUST 3					
Description: Survival Radio Command & Control Tech Integration Study					
FY 2010 Accomplishments: Continuation of above listed activities					
FY 2011 Plans: Continuation of above listed activities					
FY 2012 Base Plans: Continuation of above listed activities					
FY 2012 OCO Plans:					
Title: MAJOR THRUST 4					
Description: Interagency/Coalition Command & Control Interoperability Tech Study					
FY 2010 Accomplishments: Continuation of above listed activities					
FY 2011 Plans: Continuation of above listed activities					
FY 2012 Base Plans: Continuation of above listed activities					
FY 2012 OCO Plans:					
Title: MAJOR THRUST 5					
Description: Recovery Force Survivability Study					
FY 2010 Accomplishments:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>	PROJECT 675196: <i>Joint Technology Exploitation</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans:					
Title: MAJOR THRUST 6 Description: Personnel Recovery Tactics, Techniques & Procedures for Urban Operations FY 2010 Accomplishments: Continuation of above listed activities FY 2011 Plans: Continuation of above listed activities FY 2012 Base Plans: Continuation of above listed activities FY 2012 OCO Plans:	3.673	3.485	0.823	-	0.823
Accomplishments/Planned Programs Subtotals	11.123	6.107	2.483	-	2.483

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing

D. Acquisition Strategy
Contracts will be awarded through full and open competition.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>	PROJECT 675196: <i>Joint Technology Exploitation</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Isolated Personnel Location, Survivability & Evasion Aid Development	TBD	TBD:TBD,	5.747	1.485	Apr 2011	0.500	Apr 2012	-		0.500	Continuing	Continuing	0.100
Personnel Recovery Mission Software Improvement	TBD	TBD:TBD,	0.350	0.220	Mar 2011	0.500	Mar 2012	-		0.500	Continuing	Continuing	0.440
Survival Radio Command & Control Tech Integration Study	TBD	TBD:TBD,	0.200	0.202	Apr 2011	0.300	Apr 2012	-		0.300	Continuing	Continuing	0.040
Interagency/Coalition Command & Ctrl Interoperability Tech Study	TBD	TBD:TBD,	0.400	0.400	Apr 2011	0.200	Apr 2012	-		0.200	Continuing	Continuing	0.100
Recovery Force Survivability Study	TBD	TBD:TBD,	0.500	0.300	Jun 2011	0.100	Jun 2012	-		0.100	Continuing	Continuing	0.100
Subtotal			7.197	2.607		1.600		-		1.600			0.780

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Personnel & Recovery Tactics, Techniques & Procedures	TBD	TBD:TBD,	3.926	3.500	Jun 2011	0.883	Jun 2012	-		0.883	Continuing	Continuing	0.100
Subtotal			3.926	3.500		0.883		-		0.883			0.100

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0901202F: *JOINT PERSONNEL RECOVERY AGENCY (JPRA)*

PROJECT

675196: *Joint Technology Exploitation*

JPRA

Fiscal Year	FY08				FY09				FY10				FY11				FY12				FY13				FY14				FY15			
	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
PRMS/Tech Assessment		▲				▲				▲				▲				▲				▲				▲				▲		
PRESS			▲				▲				▲				▲				▲				▲				▲				▲	

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901202F: <i>JOINT PERSONNEL RECOVERY AGENCY (JPRA)</i>	PROJECT 675196: <i>Joint Technology Exploitation</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Improvement	1	2010	4	2016
Integration/Interoperability/Survivability Studies	2	2010	4	2016
Urban Operations	2	2010	4	2016
Aid Development	1	2010	4	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY			R-1 ITEM NOMENCLATURE								
3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>			PE 0901218F: <i>Civilian Compensation Program</i>								
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	8.140	7.811	1.508	-	1.508	1.554	1.577	1.599	1.621	Continuing	Continuing
674139: <i>Civilian Compensation Program</i>	8.140	7.811	1.508	-	1.508	1.554	1.577	1.599	1.621	Continuing	Continuing

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.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	8.174	7.811	1.513	-	1.513
Current President's Budget	8.140	7.811	1.508	-	1.508
Total Adjustments	-0.034	-	-0.005	-	-0.005
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings		-			
• SBIR/STTR Transfer	-0.034	-			
• Other Adjustments	-	-	-0.005	-	-0.005

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force									DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0901218F: <i>Civilian Compensation Program</i>				PROJECT 674139: <i>Civilian Compensation Program</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
674139: <i>Civilian Compensation Program</i>	8.140	7.811	1.508	-	1.508	1.554	1.577	1.599	1.621	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

This program 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.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Civilian Compensation	8.140	7.811	1.508	-	1.508
Description: Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.					
FY 2010 Accomplishments: Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.					
FY 2011 Plans: Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.					
FY 2012 Base Plans: Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.					
FY 2012 OCO Plans: Not applicable.					
Accomplishments/Planned Programs Subtotals	8.140	7.811	1.508	-	1.508

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901218F: <i>Civilian Compensation Program</i>	PROJECT 674139: <i>Civilian Compensation Program</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

Not Applicable.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901218F: <i>Civilian Compensation Program</i>	PROJECT 674139: <i>Civilian Compensation Program</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Continue development of compensation plan	TBD	TBD:TBD,	8.140	7.811	Aug 2011	1.508	Aug 2012	-		1.508	Continuing	Continuing	TBD
Subtotal			8.140	7.811		1.508		-		1.508			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			8.140	7.811		1.508		-		1.508			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

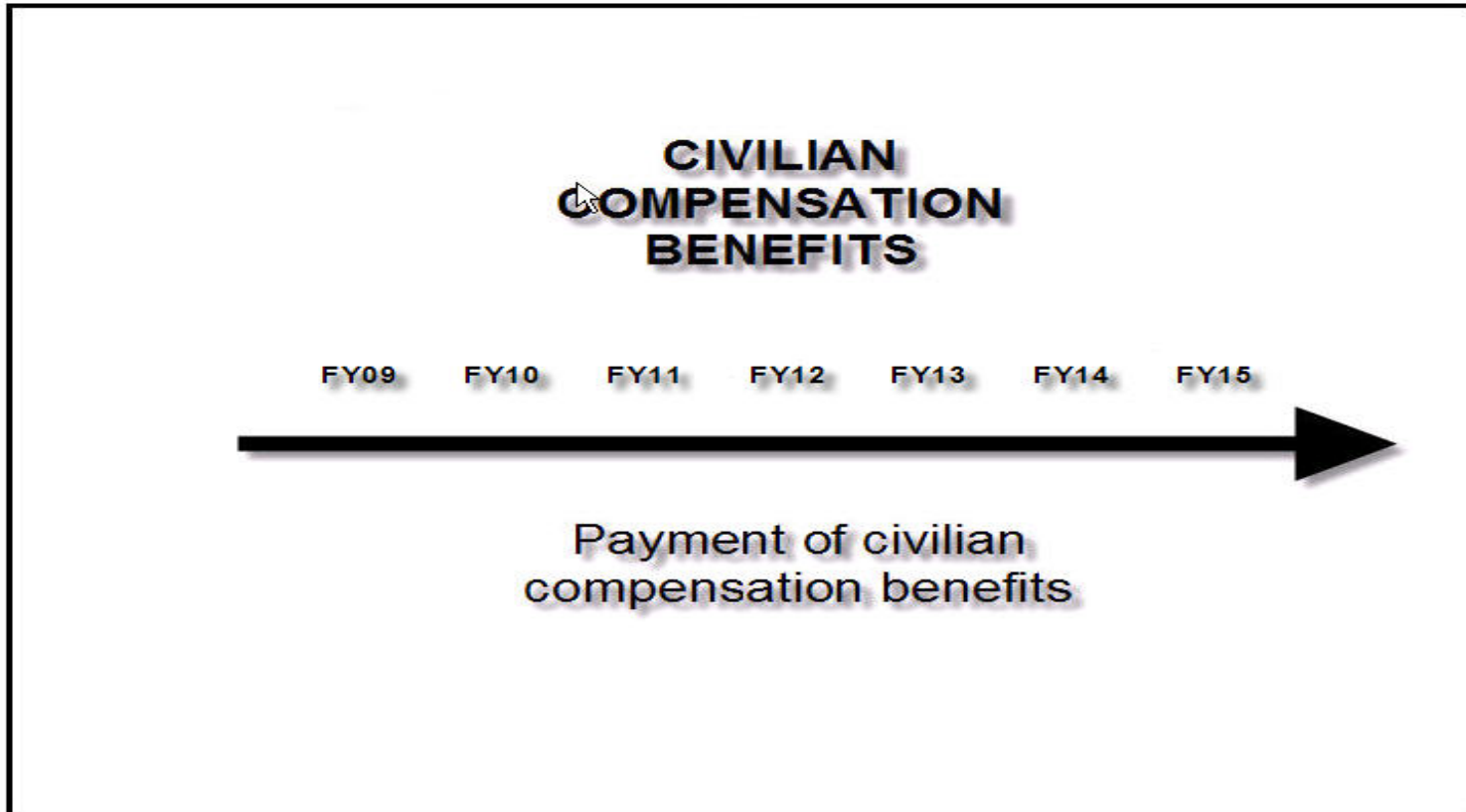
3600: *Research, Development, Test & Evaluation, Air Force*
BA 7: *Operational Systems Development*

R-1 ITEM NOMENCLATURE

PE 0901218F: *Civilian Compensation Program*

PROJECT

674139: *Civilian Compensation Program*



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901218F: <i>Civilian Compensation Program</i>	PROJECT 674139: <i>Civilian Compensation Program</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Continue development of compensation program	1	2010	3	2016

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL ADMINISTRATION</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	10.123	11.179	8.041	-	8.041	7.619	7.438	7.142	7.243	Continuing	Continuing
675194: <i>Force Development Transformation</i>	10.123	11.179	8.041	-	8.041	7.619	7.438	7.142	7.243	Continuing	Continuing

A. Mission Description and Budget Item Justification

Personnel Services Delivery (PSD), 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, which includes the Military Personnel Data System (MilPDS) and other AF unique applications, into a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). PSD is supported through the AF enterprise architecture using Enterprise Resource Planning (ERP) and other Commercial Off The Shelf (COTS) products. PSD provides the Air Force unique HR capabilities not delivered in DIMHRS, and ensures MilPDS and other legacy systems are compatible with DIMHRS. PSD supports the migration of legacy applications (those not subsumed by DIMHRS) and other information technology support to a Service Oriented Architecture (SOA)-based data services environment. Activities also include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	10.123	11.179	7.926	-	7.926
Current President's Budget	10.123	11.179	8.041	-	8.041
Total Adjustments	-	-	0.115	-	0.115
• Congressional General Reductions				-	
• Congressional Directed Reductions				-	
• Congressional Rescissions	-	-			
• Congressional Adds				-	
• Congressional Directed Transfers				-	
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	0.115	-	0.115

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force								DATE: February 2011			
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL ADMINISTRATION</i>				PROJECT 675194: <i>Force Development Transformation</i>			
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675194: <i>Force Development Transformation</i>	10.123	11.179	8.041	-	8.041	7.619	7.438	7.142	7.243	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Personnel Services Delivery (PSD), 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, which includes the Military Personnel Data System (MilPDS) and other AF unique applications, into a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). PSD is supported through the AF enterprise architecture using Enterprise Resource Planning (ERP) and other Commercial Off The Shelf (COTS) products. PSD will provide the Air Force unique HR capabilities not delivered in DIMHRS, and will ensure MilPDS and other legacy systems are compatible with DIMHRS. PSD will support the migration of legacy applications (those not subsumed by DIMHRS) and other information technology support to a SOA-based data services environment. Activities also include studies and analysis to support both current program planning and execution and future program planning. This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: Human Resource Applications	8.000	7.000	5.000	-	5.000
Description: Develop AF Human Resource Applications to automate and create self-service capabilities to deliver personnel services.					
FY 2010 Accomplishments: Develop AF Human Resource Applications to automate and create self-service capabilities to deliver personnel services.					
FY 2011 Plans: Develop AF Human Resource Applications to automate and create self-service capabilities to deliver personnel services.					
FY 2012 Base Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force			DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL</i> <i>ADMINISTRATION</i>	PROJECT 675194: <i>Force Development Transformation</i>			
B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Develop AF Human Resource Applications to automate and create self-service capabilities to deliver personnel services.					
FY 2012 OCO Plans:					
Title: Infrastructure	1.000	2.100	1.500	-	1.500
Description: Develop a GCSS-AF compliant systems enterprise infrastructure to transition from MilPDS to DIMHRS.					
FY 2010 Accomplishments:					
FY 2011 Plans: Develop a GCSS-AF compliant systems enterprise infrastructure to transition from MilPDS to DIMHRS. This effort will integrate Air Force-unique, web-enabled, self-service capabilities with existing functionality.					
FY 2012 Base Plans: Develop a GCSS-AF compliant systems enterprise infrastructure to transition from MilPDS to DIMHRS. This effort will integrate Air Force-unique, web-enabled, self-service capabilities with existing functionality.					
FY 2012 OCO Plans:					
Title: Test & Evaluation/Systems Engineering	1.123	2.079	1.541	-	1.541
Description: Direct Mission Support for Test and Evaluation					
FY 2010 Accomplishments: Direct Mission Support for Test and Evaluation					
FY 2011 Plans: Direct Mission Support for Test and Evaluation					
FY 2012 Base Plans: Direct Mission Support for Test and Evaluation					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	10.123	11.179	8.041	-	8.041

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL</i> <i>ADMINISTRATION</i>	PROJECT 675194: <i>Force Development Transformation</i>

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012</u>			<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To</u>	
			<u>Base</u>	<u>OCO</u>	<u>Total</u>					<u>Complete</u>	<u>Total Cost</u>
• Other Procurement: <i>AF WSC</i> <i>834010 General Information</i> <i>Technologies</i>	0.698	0.684	0.695	0.000	0.695	0.708	0.719	0.731	0.000	Continuing	Continuing
• Operations and Maintenance: <i>AF</i>	36.157	19.516	15.254	0.000	15.254	9.825	11.728	15.514	0.000	Continuing	Continuing

D. Acquisition Strategy

Personnel Services Delivery employs an evolutionary acquisition strategy to deliver incremental capabilities with development contracts that are awarded in a competitive environment.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL ADMINISTRATION</i>	PROJECT 675194: <i>Force Development Transformation</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Human Resources Applications and Data Services	Various	Various:Various,	2.000	8.000	Mar 2011	4.115	Mar 2012	-		4.115	0.000	14.115	TBD
Human Resource Applications (My XDP)	C/FFP	Centech Group:Falls Church, VA	2.000	2.079	Mar 2011	2.500	Aug 2012	-		2.500	0.000	6.579	TBD
SOA Governance	Various	Lockheed Martin:Gaithersburg, MD	1.754	-		-		-		-	0.000	1.754	TBD
Subtotal			5.754	10.079		6.615		-		6.615	0.000	22.448	

Remarks
SOA Governance Contract Method & Type is an IDIQ contract; IDIQ was not included in Contract Method & Type menu, therefore, TBD was selected.

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Hardware/Software Test & Evaluation	C/CPAF	Lockheed Martin:Gaithersburg, MD	2.369	0.600	Jan 2011	0.926	Aug 2012	-		0.926	Continuing	Continuing	TBD
Subtotal			2.369	0.600		0.926		-		0.926			

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

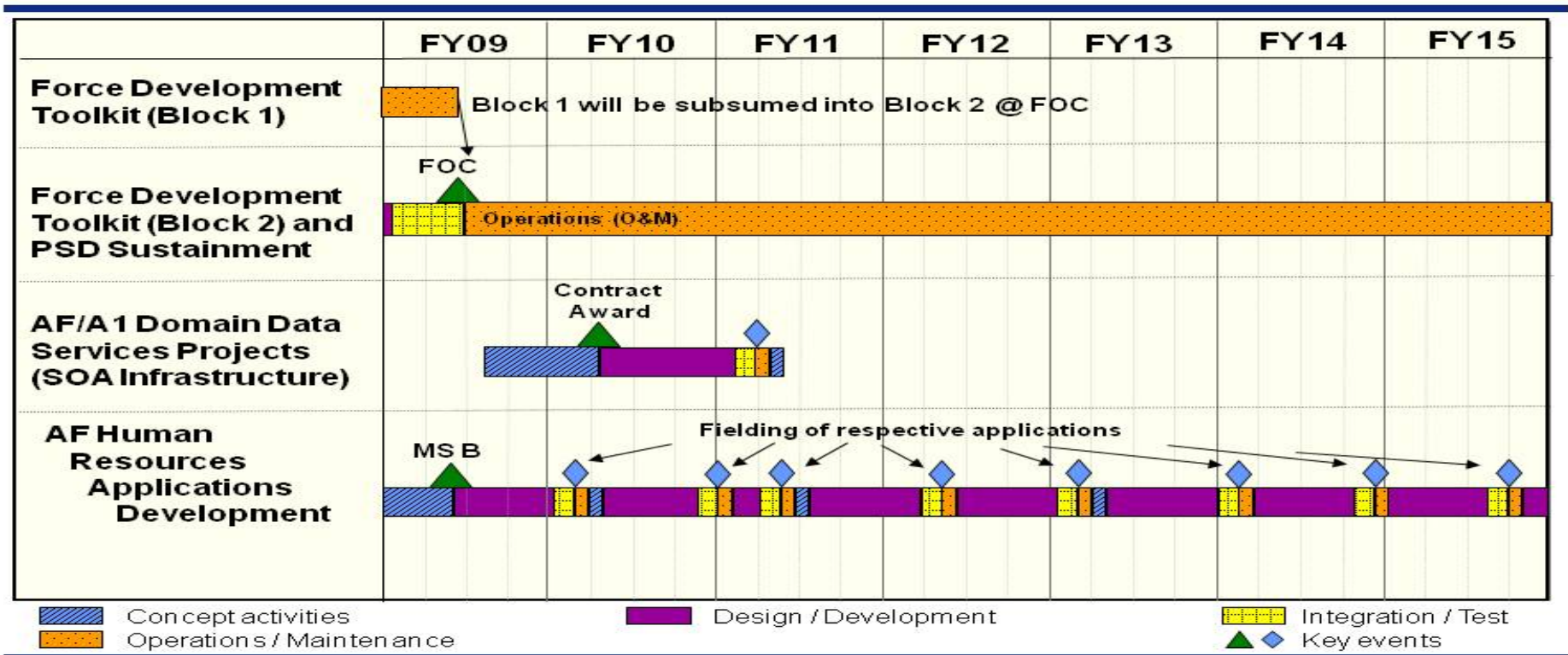
DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY
 3600: Research, Development, Test & Evaluation, Air Force
 BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE
 PE 0901220F: PERSONNEL
 ADMINISTRATION

PROJECT
 675194: Force Development Transformation

Personnel Services Delivery Schedule



PB10 R-Docs

As of 15 Apr 09

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901220F: <i>PERSONNEL</i> <i>ADMINISTRATION</i>	PROJECT 675194: <i>Force Development Transformation</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
FDTK (Block 1 & 2) FOC	2	2010	2	2016
Domain Data Services Projects Contract Award	2	2010	2	2010
Domain Data Services Project Release	3	2010	2	2011
AF Human Resources Application Development MS B	2	2010	2	2016
AF Human Resources Applications Development Cycle	2	2010	4	2012
AF Human Resources Applications Releases	1	2010	2	2012

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901226F: <i>AF STUDIES AND ANALYSIS AGENCY</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	0.928	-	0.928	1.050	1.035	1.197	1.385	Continuing	Continuing
676009: <i>M & S DEVELOPMENT</i>	-	-	0.928	-	0.928	1.050	1.035	1.197	1.385	Continuing	Continuing

A. Mission Description and Budget Item Justification

HQ USAF/A9, Studies & Analyses, Assessments and Lessons Learned (L2), provides Air Force senior leadership (up to and including the SECAF/CSAF) with independent and objective analytic insights, risk assessments, and lessons learned. AF/A9 also provides analyses to underpin strategic planning, operational requirements, modernization and recapitalization of systems and programs, and the Planning, Programming, Budgeting and Execution (PPBE) processes. AF/A9 is the lead of the AF Analytic Community and the Secretary for the Air Force Standard Analysis Toolkit. AF/A9 staff champions AF efforts with the DoD modeling community through the DoD Analytic Agenda.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	0.928	-	0.928
Total Adjustments	-	-	0.928	-	0.928
• Congressional General Reductions	-	-	-	-	-
• Congressional Directed Reductions	-	-	-	-	-
• Congressional Rescissions	-	-	-	-	-
• Congressional Adds	-	-	-	-	-
• Congressional Directed Transfers	-	-	-	-	-
• Reprogrammings	-	-	-	-	-
• SBIR/STTR Transfer	-	-	-	-	-
• Other Adjustments	-	-	0.928	-	0.928

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901226F: <i>AF STUDIES AND ANALYSIS AGENCY</i>	PROJECT 676009: <i>M & S DEVELOPMENT</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676009: <i>M & S DEVELOPMENT</i>	-	-	0.928	-	0.928	1.050	1.035	1.197	1.385	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

HQ USAF/A9, Studies & Analyses, Assessments and Lessons Learned (L2), provides Air Force senior leadership (up to and including the SECAF/CSAF) with independent and objective analytic insights, risk assessments, and lessons learned. AF/A9 also provides analyses to underpin strategic planning, operational requirements, modernization and recapitalization of systems and programs, and the Planning, Programming, Budgeting and Execution (PPBE) processes. AF/A9 is the lead of the AF Analytic Community and the Secretary for the Air Force Standard Analysis Toolkit. AF/A9 staff champions AF efforts with the DoD modeling community through the DoD Analytic Agenda.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Modeling & Simulation Development</p> <p>Description: Models and simulations (M&S) are key ingredients that allow the analytic community to advise decision-makers with repeatable, high quality, quantifiable and justifiable information/options to use in evaluating alternatives and assessing risks. HQ USAF/A9 uses and has developed a wide range of Engagement, Mission and Campaign level tools to assist analysts in examining a wide range of problems (e.g. STORM, CFAM, BRAWLER, etc) and then presenting results to a wide audience up to and including the SecAF/CSAF. These tools serve across the entire AF Analytic Community and many are also staples across all of DoD. As new technologies are introduced to the battlefield (Digital Electronic Jammers, maneuvering Surface-to-Surface Missiles, Directed Energy Weapons, etc.) along with evolving warfighting techniques and support operations, the range covered by existing analytic tools needs to be expanded as well. M&S creation and enhancement can require extensive research in how to implement the emerging weapons capabilities as well as demand development of software techniques to implement the changes.</p> <p>Additionally, new focus areas such as Space, Irregular Warfare, Information Operations, Cyberwarfare and ISR are mandating tools of their own to examine and these also require new exploration and development. These focus areas will need to be examined in isolation and cross-domain through populating data in existing models.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans:</p>	-	-	0.928	-	0.928

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901226F: <i>AF STUDIES AND ANALYSIS</i> AGENCY	PROJECT 676009: <i>M & S DEVELOPMENT</i>
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B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
FY12 efforts will have 3 focus areas. The first focus area will be researching how to effectively upgrade existing major use military models (like STORM, CFAM, BRAWLER) so they will not only be ready to examine emerging weapons technologies for near term analytic requirements, but meet the long term challenges for the analytic community as well. This research will then transition to developing new techniques to keep the existing tools at the cutting edge of analysis. The second focus area will be to research, better define and then examine all space asset missions followed by developing techniques to make better tradeoffs in terrestrial/space cross-mission analyses. The final focus area will be to explore new modeling techniques to build better, quicker and more verifiable data to support existing tools. This will likely entail creating smaller process-based models that will be easier to operate and update by government personnel.					
<i>FY 2012 OCO Plans:</i>					
Accomplishments/Planned Programs Subtotals	-	-	0.928	-	0.928

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

All efforts will be awarded under existing Task Order contracts capable of accepting R&D dollars. Due to size of effort (small) and need for flexibility (high) to adjust R&D to emerging capabilities (friendly and enemy), AF/A9 does not see awarding a specific contract in the first year of this effort (FY12).

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force											DATE: February 2011		
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>				R-1 ITEM NOMENCLATURE PE 0901226F: <i>AF STUDIES AND ANALYSIS</i> AGENCY				PROJECT 676009: <i>M & S DEVELOPMENT</i>					
Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-	-	-	-	-	-	0.000	0.000	0.000	
Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Development	TBD	Not specified.:	-	-		0.928	Jan 2012	-		0.928	0.000	0.928	0.000
Subtotal			-	-	-	0.928		-		0.928	0.000	0.928	0.000
Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-	-	-	-	-	-	-	0.000	0.000	0.000
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-	-	-	-	-	-	-	0.000	0.000	0.000
Project Cost Totals			-	-	-	0.928		-		0.928	0.000	0.928	0.000
Remarks													

Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force

DATE: February 2011

APPROPRIATION/BUDGET ACTIVITY

3600: Research, Development, Test & Evaluation, Air Force
BA 7: Operational Systems Development

R-1 ITEM NOMENCLATURE

PE 0901226F: AF STUDIES AND ANALYSIS
AGENCY

PROJECT

676009: M & S DEVELOPMENT



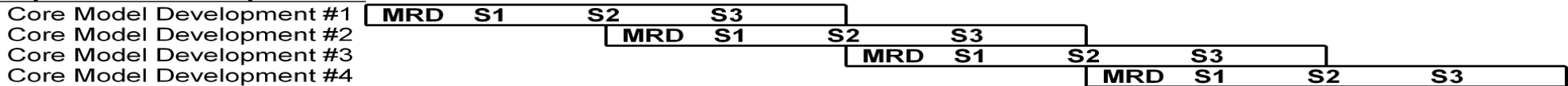
U.S. AIR FORCE

AF/A9 M&S Development Investment Plan

Note: Quarterly Reports Required For All Initiatives

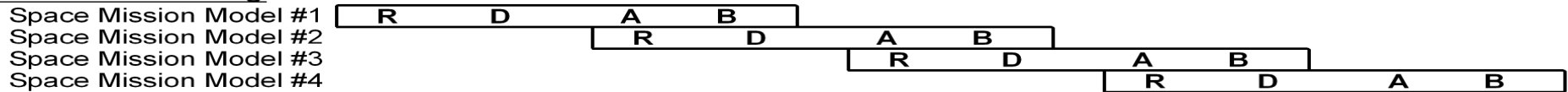
2012				2013				2014				2015				2016			
Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4

Keep Core Models Up-to-Date



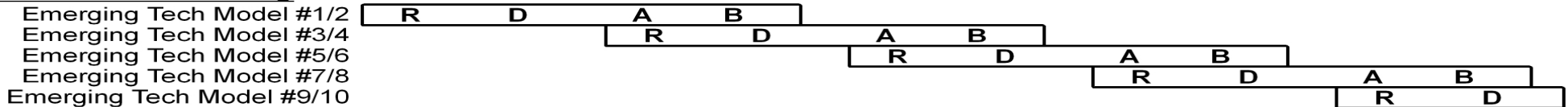
Core Models Include: STORM, Brawler, EADSIM, CFAM, CBLP, AMOS. Order and amount spent on each model and spiral will vary with emerging technologies being modeled such as Electronic Warfare, Cyberwarfare, etc as well as computer/language developments.

Space Mission Modeling



Space Mission Modeling sequencing to be based on the Space Modeling Roadmap expectd in March 2011. Mission Models will be designed for independent analysis and to support cross-domain studies. Areas identified to date include: ISR, Communications, Precision Navigation/Timing, Counter-Space

Space Mission Modeling



Emerging Technology/Data Development Models to include: Capabilities Comparison, Resource planning, Process Modeling using COTS products, Air Base Defense Tech, Aeromedical Requirements Modeling and Terrestrial ISR. Sequencing/additions based on Analytic Community needs.

For Existing M&S -- MRD - Model Research and Design, Sx - Sprial Development Phase 'x'; Deliveries of updated models expected after each Spiral. For New M&S -- R - Research/Process Development, D - Development of Tools, A - Alpha Testbed, B - Beta Testbed, Delivery after 'Beta' feedback.

Milestones (Key Decision Points) before Spiral 1/2 starts for Existing M&S. Milestones for New M&S is before Development and after Alpha testing.

Integrity - Service - Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901226F: <i>AF STUDIES AND ANALYSIS</i> AGENCY	PROJECT 676009: <i>M & S DEVELOPMENT</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Modeling & Simulation Development	1	2012	2	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY				R-1 ITEM NOMENCLATURE							
3600: <i>Research, Development, Test & Evaluation, Air Force</i>				PE 0901279F: <i>Facilities Operations - Administrative</i>							
BA 7: <i>Operational Systems Development</i>											
COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	12.118	-	12.118	3.491	1.304	1.327	1.351	Continuing	Continuing
671017: <i>CE IT Transformation</i>	-	-	12.118	-	12.118	3.491	1.304	1.327	1.351	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Civil Engineer's (CE) IT Transformation program's mission is to transform CE's business processes to better serve the CE customers and meet AF Transformational Goals. The plan is to leverage industry best practices, optimize core business processes, and replace existing outdated IT capabilities with a set of commercial off-the-shelf (COTS) software solutions and a service provider to deploy and maintain the system. This COTS solution will provide a robust, enterprise-wide CE capability and will consist of an integrated set of embedded / configurable best business practices and capabilities to support the following CE missions: Real Property Management; Work & Supply Management, Project Management, Energy Management, Housing Management, Financial Management, Environmental Management, Planning, Emergency Services, Fire Operations and EOD.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	-	-	12.118	-	12.118
Current President's Budget	-	-	12.118	-	12.118
Total Adjustments	-	-	-	-	-
• Congressional General Reductions					
• Congressional Directed Reductions					
• Congressional Rescissions	-	-			
• Congressional Adds					
• Congressional Directed Transfers					
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-	-	-

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901279F: <i>Facilities Operations - Administrative</i>	PROJECT 671017: <i>CE IT Transformation</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
671017: <i>CE IT Transformation</i>	-	-	12.118	-	12.118	3.491	1.304	1.327	1.351	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Civil Engineer's (CE) IT Transformation program's mission is to transform CE's business processes to better serve the CE customers and meet AF Transformational Goals. The plan is to leverage industry best practices, optimize core business processes, and replace existing outdated IT capabilities with a set of commercial off-the-shelf (COTS) software solutions and a service provider to deploy and maintain the system. This COTS solution will provide a robust, enterprise-wide CE capability and will consist of an integrated set of embedded / configurable best business practices and capabilities to support the following CE missions: Real Property Management; Work & Supply Management, Project Management, Energy Management, Housing Management, Financial Management, Environmental Management, Planning, Emergency Services, Fire Operations and EOD.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
<p>Title: Software Procurement</p> <p>Description: Procurement of COTS software.</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: Procurement of COTS software for multiple spirals.</p> <p>FY 2012 OCO Plans:</p>	-	-	3.694	-	3.694
<p>Title: Configuration and Test</p> <p>Description: Configure and test COTS software</p> <p>FY 2010 Accomplishments:</p> <p>FY 2011 Plans:</p> <p>FY 2012 Base Plans: Configure and test COTS software for multiple spirals.</p> <p>FY 2012 OCO Plans:</p>	-	-	8.424	-	8.424

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901279F: <i>Facilities Operations - Administrative</i>	PROJECT 671017: <i>CE IT Transformation</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals	-	-	12.118	-	12.118

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

<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0901279F: Facilities Operati...: O&M	0.000	0.000	9.177	0.000	9.177	17.626	19.985	20.152	20.530	Continuing	Continuing
• PE 0901378F: Facilities Sustain...: O&M	0.000	0.000	48.145	0.000	48.145	35.093	26.019	19.763	13.244	Continuing	Continuing
• PE 0708611F: Support Systems De...: RDT&E	3.945	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy
For each new capability, a two step acquisition will be applied as required. Phase I of the acquisition will consist of selecting a software product and conducting software configuration. Phase II is to select a service provider to test, integrate, deploy and maintain the solution, thereby eliminating CE legacy systems.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901279F: <i>Facilities Operations - Administrative</i>	PROJECT 671017: <i>CE IT Transformation</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Software Acquisition	TBD	TBD:TBD,	-	-		3.694	Sep 2012	-		3.694	Continuing	Continuing	0.000
Configuration and Testing	TBD	TBD:TBD,	-	-		8.424	Mar 2012	-		8.424	Continuing	Continuing	0.000
Subtotal			-	-		12.118		-		12.118			0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		12.118		-		12.118			0.000

Remarks

APPROPRIATION/BUDGET ACTIVITY

3600: *Research, Development, Test & Evaluation, Air Force*
 BA 7: *Operational Systems Development*

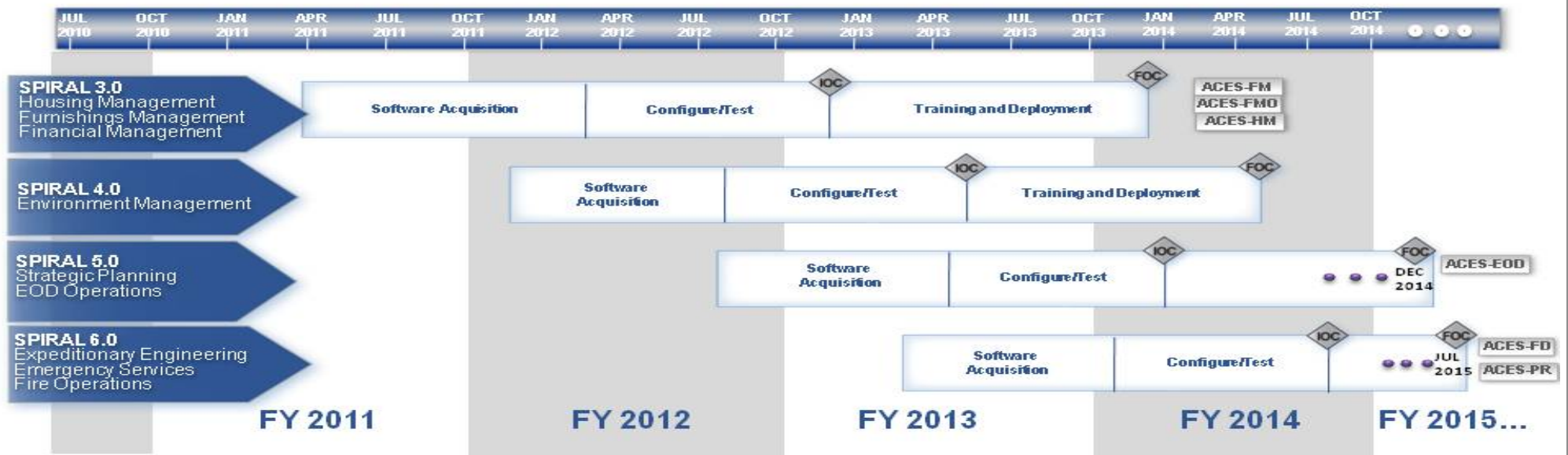
R-1 ITEM NOMENCLATURE

PE 0901279F: *Facilities Operations - Administrative*

PROJECT

671017: *CE IT Transformation*

CE IT Transformation Schedule



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901279F: <i>Facilities Operations - Administrative</i>	PROJECT 671017: <i>CE IT Transformation</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software Acquisition	4	2012	3	2013
Configure and Test	2	2012	3	2013

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	53.972	49.816	101.317	-	101.317	98.673	90.567	80.709	55.255	Continuing	Continuing
672222: <i>Program Budget Enterprise Service</i>	-	-	1.495	-	1.495	1.495	-	-	-	Continuing	Continuing
675036: <i>Financial Information Resource System (FIRST)</i>	13.337	4.727	-	-	-	-	-	-	-	Continuing	Continuing
675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>	40.635	45.089	99.822	-	99.822	97.178	90.567	80.709	55.255	Continuing	Continuing

Note

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.544M in FY12, \$1.884M in FY13, \$1.507M in FY14, \$1.386M in FY15 and \$1.347M in FY16.

A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software development effort originally intended to build a single Air Force system for programming and budget formulation. The current development activity will provide a modernized system for programming that will allow the sunset of the legacy Program Data System (PDS). FIRST supports processes for force programming, formulation of budget requirements, and deliberation of budget options. These activities encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the Air Force budget. 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.

Defense Enterprise Accounting and Management System (DEAMS) is a commercial-off-the-shelf (COTS) Oracle based software configuration effort that will provide an auditable modern accounting and finance system. DEAMS is a Joint AF and United States Transportation Command (USTRANSCOM) Enterprise Resource Program (ERP) that 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. DEAMS Increment 1, originally Spirals 1 and 2, was released to Scott AFB, Illinois as a Technology Demonstration. In July 2007, Spiral 1 was successfully fielded and used by over 700 users at Scott AFB and ANG units. Spiral 1 provides commitment accounting capability and has been used for three successive year-end closeouts (FY07-FY09). In May 2010, Spiral 2 was released to approximately 1,100 users at Scott AFB and DFAS-Limestone. Spiral 2 provides full general accounting capability to include investment funding, commitment accounting and cost accounting. Spiral 2 was successfully used to complete the FY10 end-of-year closeout and concludes the Technology Demonstration of DEAMS. Recent restructuring due to a critical change have integrated Spirals 3 and 4, originally Increment 2, into Increment 1. Although Spiral 3 and 4 have been rolled into Increment 1, no program requirements were modified as a result of the aforementioned critical change. Spirals 3 and 4 will leverage the

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE
3600: <i>Research, Development, Test & Evaluation, Air Force</i>	PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>
BA 7: <i>Operational Systems Development</i>	

capability released in Spirals 1 and 2 and will rollout world-wide to the remainder of USTRANSCOM and Operating AF Bases. Spiral 5, now Increment 2, will rollout to Air Force Space Command (AFSPC) and Air Force Material Command (AFMC) and will provide full general accounting capabilities with inclusion of AFSPC and AFMC unique requirements, such as Foreign Military Sales and Contingency Operations. DEAMS is compliant with the Clinger-Cohen Act, Business Enterprise Architecture (BEA), and integrates into Global Combat Support System-Air Force (GCSS-AF). Activities also include studies and analysis to support current program planning, execution, and future program planning.

The Program and Budget Enterprise Service (PBES) is a software development effort that will utilize a Service Orientated Architecture (SOA) to deliver budgeting and programming capability for the United States Air Force. PBES will replace legacy systems such as the Automated Budget Interactive Data Environment System (ABIDES) and the Resource Allocation Programming Information Decision System (RAPIDS) and will support the budget formulation and force programming process. PBES will leverage existing data sources to provide needed capability in small incremental steps rather than a single system delivery. PBES will give the Air Force a flexible system to keep up with constantly changing budget requirements.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Previous President's Budget	55.991	49.816	-	-	-
Current President's Budget	53.972	49.816	101.317	-	101.317
Total Adjustments	-2.019	-	101.317	-	101.317
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-0.334	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-1.685	-			
• Other Adjustments	-	-	101.317	-	101.317

Change Summary Explanation

FY 2012 funding increase from Previous President's Budget to Current Budget Estimate Submission reflects required funding for various DEAMS RDT&E activities to include Program Management, System Development, DISA/GCSS-AF Support, and System Implementation & Fielding. These activities will allow Spiral 3&4 functionality development; provide Spiral 2 Help Desk Support; provide by DISA and GCSS-AF hardware and software support for production and COOP environments; initiate change management and role mapping efforts in advance of Spiral 3/4 rollout; and accomplish initial Spiral 5 blueprinting efforts. Additionally, PBES requires funding to perform RDT&E development activities associated with a new start program.

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 672222: <i>Program Budget Enterprise Service</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
672222: <i>Program Budget Enterprise Service</i>	-	-	1.495	-	1.495	1.495	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Program and Budget Enterprise Service (PBES) is a software development effort that will utilize a Service Orientated Architecture (SOA) to deliver budgeting and programming capability for the United States Air Force. PBES will replace legacy systems such as the Automated Budget Interactive Data Environment System (ABIDES) and the Resource Allocation Programming Information Decision System (RAPIDS) and will support the budget formulation and force programming process. PBES will leverage existing data sources to provide needed capability in small incremental steps rather than a single system delivery. PBES will give the Air Force a flexible system to keep up with constantly changing budget requirements.

PBES capabilities development will include two initial phases. Phase one will encompass a data repository, the business rules that govern data element derivation, reporting, and applicable interfaces. Phase two will consist of capabilities such as cost modeling, price/program, the Functional Area Workspace (FAWS), and force programming.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: PBES Application Development	-	-	1.495	-	1.495
Description: Development of budgeting and programming capability allowing the AF to sunset outdated, legacy systems					
FY 2010 Accomplishments: None					
FY 2011 Plans: None					
FY 2012 Base Plans: Development of budgeting and programming capability allowing the AF to sunset outdated, legacy systems					
FY 2012 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 672222: <i>Program Budget Enterprise Service</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Accomplishments/Planned Programs Subtotals	-	-	1.495	-	1.495

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• N/A: <i>Not Applicable</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

PBES will be developed using an incremental approach consisting of two phases; contractual vehicle for this approach is TBD.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 672222: <i>Program Budget Enterprise Service</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PBES Development	TBD	TBD:TBD,	-	-		1.495		-		1.495	Continuing	Continuing	TBD
Subtotal			-	-		1.495		-		1.495			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

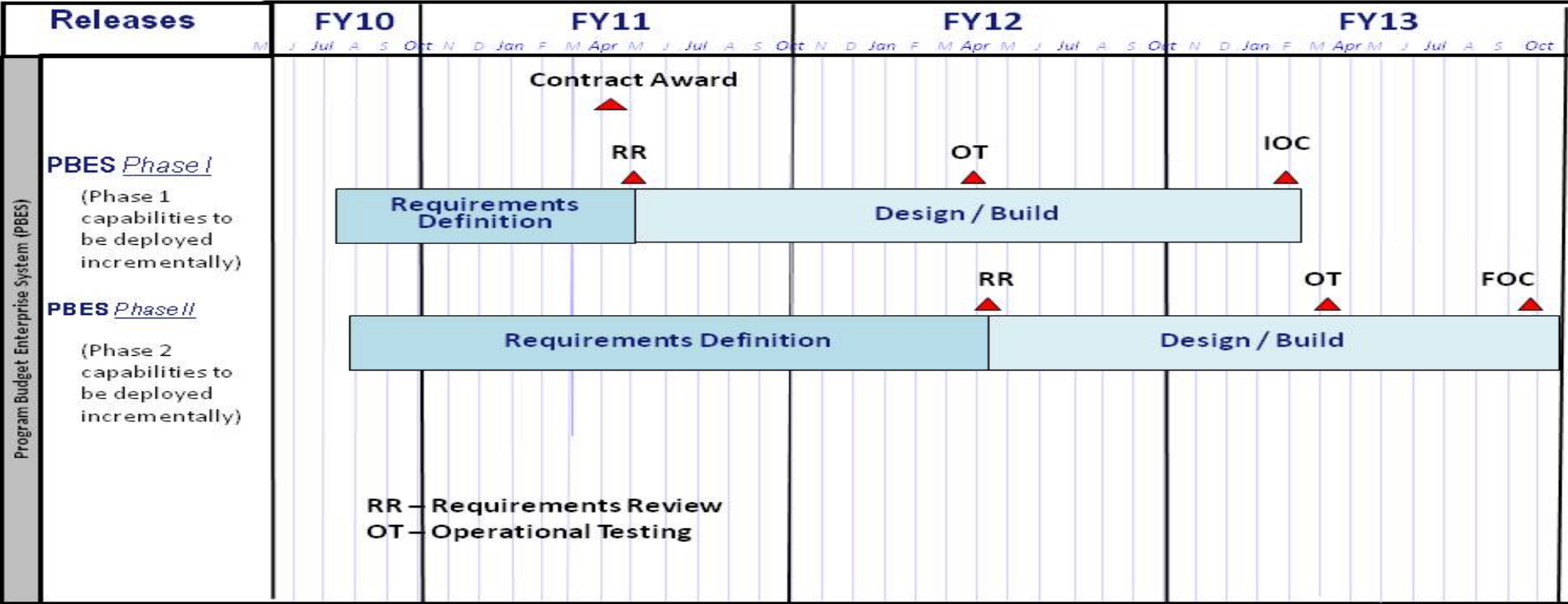
Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		1.495		-		1.495			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 672222: <i>Program Budget Enterprise Service</i>



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 672222: <i>Program Budget Enterprise Service</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Phase One Requirements Review	3	2011	3	2011
Design and Build Phase One Capabilities	3	2011	2	2013
Phase One Incremental Operational Testing	2	2012	2	2013
Phase Two Requirements Review	3	2012	3	2012
Design and Build Phase Two Capabilities	3	2012	4	2013
Initial Operational Capability	2	2013	2	2013
Phase Two Incremental Operational Testing	2	2013	4	2013
Full Operational Capability	4	2013	4	2013

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675036: <i>Financial Information Resource System (FIRST)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675036: <i>Financial Information Resource System (FIRST)</i>	13.337	4.727	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software development effort originally intended to build a single Air Force system for programming and budget formulation. The current development activity will provide a modernized system for Force Structure Data Management (FSDM) programming that will allow the sunset of the legacy Program Data System (PDS). FIRST supports processes for force programming, formulation of budget requirements, and deliberation of budget options. These activities encompasses the budget exercise process, which affects all organizational levels, and is based on core financial and selected program information used to build the Air Force budget.

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 provide the capability necessary to replace PDS. Activities will also include studies and analysis to support both current program planning and execution and future program planning activities. In July 2010, SAF/FMB decided to end the FIRST development program upon the full deployment of capability required to replace PDS. FIRST development will conclude in FY11, thus no FIRST RDT&E funding is budgeted beyond FY11. In accordance with DoDI 8500.2, Information Assurance activities are broken out for FY11-FY12.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: FIRST Application Development	10.505	2.718	-	-	-
Description: Provide FSDM capability to process FY12 PB and enable sunset of PDS legacy system					
FY 2010 Accomplishments: Application Development for FSDM capability needed to sunset PDS and accomplish current/future planning activities					
FY 2011 Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675036: <i>Financial Information Resource System (FIRST)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Complete C&A for FIRST v2.2; perform IA-related sustainment activities; maintain FISMA compliance FY 2012 Base Plans: None. FY 2012 OCO Plans: None.					
Accomplishments/Planned Programs Subtotals	13.337	4.727	-	-	-

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	<u>Cost To Complete</u>	<u>Total Cost</u>
• PE 0901538F: <i>FMIS, OPAF</i>	0.834	0.845	0.843	0.000	0.843	0.872	0.885	0.899	0.915	Continuing	Continuing
• PE 0308610F: <i>InfoMgmtAuto-Pgm3, O&M</i>	1.355	4.316	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0901538F (2): <i>FMIS, O&M</i>	0.000	0.000	3.571	0.000	3.571	3.019	3.530	3.997	3.790	Continuing	Continuing

D. Acquisition Strategy
FIRST FSDM capability is being developed using the existing Cost Plus Award (CPAF) contract. FIRST development program will end with delivery of FSDM capability leading to a full deployment decision in July 2011.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675036: <i>Financial Information Resource System (FIRST)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Application Development & Test for FSDM capability including GCSS-AF integration and current/future program planning activities	C/CPAF	Accenture:Fairborn, OH	96.375	2.718	Oct 2010	-		-		-	0.000	99.093	0.000
Subtotal			96.375	2.718		-		-		-	0.000	99.093	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Joint Interoperability Test Center (JITC)	MIPR	JITC:Fort Huachuca, AZ	0.499	-		-		-		-	Continuing	Continuing	TBD
92nd Information Operations Squadron	PO	Penetration Testing:Lackland AFB, TX	-	0.225	Jan 2011	-		-		-	0.000	0.225	0.000
346th Test Squadron	PO	Participating Test Organization:Lackland AFB, TX	-	0.138	Jan 2011	-		-		-	0.000	0.138	0.000
Responsible Test Organization (RTO)	Various	643 ELSS/EIRT:Gunter AFB, AI	0.947	-		-		-		-	Continuing	Continuing	TBD
Capabilities Integration Environment (CIE)	Various	643 ELSS/EIRT:Gunter AFB, AI	0.724	0.022	Apr 2011	-		-		-	Continuing	Continuing	TBD
Defense Information Systems Agency (DISA)	MIPR	DISA:Montgomery, AI	2.746	0.399	Nov 2010	-		-		-	Continuing	Continuing	TBD
Tech Support	Various		4.015	0.689	Jan 2011	-		-		-	Continuing	Continuing	0.000

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675036: <i>Financial Information Resource System (FIRST)</i>
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Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Quantech/ETASS/ MITRE:Dayton, OH											
Information Accreditation Services	Various	643 ELSS:Gunter AFB, OH	0.050	-		-		-		-	0.000	0.050	0.000
Subtotal			8.981	1.473		-		-		-			

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
PMA Support	Various	Quantech/ PASS:Dayton, OH	5.876	0.251	Jan 2011	-		-		-	Continuing	Continuing	TBD
PMA CCARS	Various	Various:Various,	1.964	-		-		-		-	0.000	1.964	0.000
Program Office Spt	Various	Various:Various,	1.041	0.196	Oct 2010	-		-		-	Continuing	Continuing	0.000
Cost Support	C/TBD	Tecolote/SCS Cost Estimators:Dayton, OH	-	0.089	Mar 2011	-		-		-	0.000	0.089	0.000
Subtotal			8.881	0.536		-		-		-			

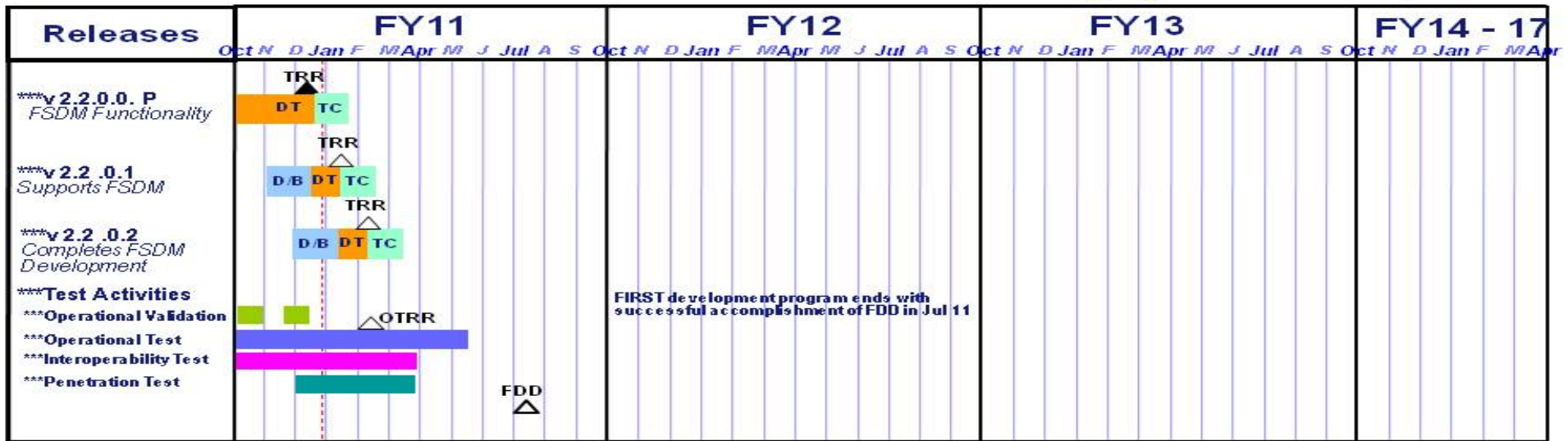
Remarks
Note:
CCARS: Comprehensive Cost and Requirement System

	Total Prior Years Cost	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	114.237	4.727	-	-	-			

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0901538F: Financial Management Information Systems (FMIS)	PROJECT 675036: Financial Information Resource System (FIRST)



Time Now

- [DT] Development Test
- [Green] Operational Validation
- [TC] Transition/Cutover
- [Blue] Operational Test
- [D/B] Design/Build
- [Magenta] Interoperability Test
- [Teal] Penetration Test

Legend
 FDD: Full Deployment Decision
 OTTR: Operational Test Readiness Review
 TRR: Test Readiness Review

Integrity – Service – Excellence

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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675036: <i>Financial Information Resource System (FIRST)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
v2.2.0.0.P Test Readiness Review (TRR)	1	2011	1	2011
v2.2.0.1 Test Readiness Review (TRR)	2	2011	2	2011
v2.2.0.2 Test Readiness Review (TRR)	2	2011	2	2011
Operational Test Readiness Review (OTRR)	2	2011	2	2011
Operational Test	1	2011	3	2011
Interoperability Test	1	2011	3	2011
Penetration Test	1	2011	3	2011
Full Deployment Decision (FDD)	4	2011	4	2011

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>	40.635	45.089	99.822	-	99.822	97.178	90.567	80.709	55.255	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

The program funding includes reductions for overhead reduction efficiencies that are not intended to impact program content. The efficiencies reductions total \$.544M in FY12, \$1.884M in FY13, \$1.507M in FY14, \$1.386M in FY15 and \$1.347M in FY16.

A. Mission Description and Budget Item Justification

Defense Enterprise Accounting and Management System (DEAMS) is a commercial-off-the-shelf (COTS) Oracle based software configuration effort that will provide an auditable modern accounting and finance system. DEAMS is a Joint AF and United States Transportation Command (USTRANSCOM) Enterprise Resource Program (ERP) that 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. DEAMS Increment 1, originally Spirals 1 and 2, was released to Scott AFB, Illinois as a Technology Demonstration. In July 2007, Spiral 1 was successfully fielded and used by over 700 users at Scott AFB and ANG units. Spiral 1 provides commitment accounting capability and has been used for three successive year-end closeouts (FY07-FY09). In May 2010, Spiral 2 was released to approximately 1,100 users at Scott AFB and DFAS-Limestone. Spiral 2 provides full general accounting capability to include investment funding, commitment accounting and cost accounting. Spiral 2 was successfully used to complete the FY10 end-of-year closeout and concludes the Technology Demonstration of DEAMS. Recent restructuring due to a critical change have integrated Spirals 3 and 4, originally Increment 2, into Increment 1. Although Spiral 3 and 4 have been rolled into Increment 1, no program requirements were modified as a result of the aforementioned critical change. Spirals 3 and 4 will leverage the capability released in Spirals 1 and 2 and will rollout world-wide to the remainder of USTRANSCOM and Operating AF Bases. Spiral 5, now Increment 2, will rollout to Air Force Space Command (AFSPC) and Air Force Material Command (AFMC) and will provide full general accounting capabilities with inclusion of AFSPC and AFMC unique requirements, such as Foreign Military Sales and Contingency Operations. DEAMS is compliant with the Clinger-Cohen Act, Business Enterprise Architecture (BEA), and integrates into Global Combat Support System-Air Force (GCSS-AF). Activities also include studies and analysis to support current program planning, execution, and future program planning.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: DEAMS Product Development	35.023	37.367	90.364	-	90.364

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>		PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
Description: Manage system integration testing and functional product testing of Increment 1 Spiral 2 Technology Demonstration. Support fielding activities to include data conversion and cutover from legacy systems to Spiral 2 operational capabilities. Identify, prioritize, and resolve software problem reports and defects. Provide hardware support (System admin and database security) and storage service by DISA. Continued development of interface to GCSS, ERP support, engineering services, change management, help desk support, etc.					
FY 2010 Accomplishments: In FY 2010, manage system integration testing and functional product testing of Increment 1 Spiral 2 Technology Demonstration. Support fielding activities to include data conversion and cutover from legacy systems to Spiral 2 Technology Demonstration. Identify, prioritize, and resolve software problem reports and defects. Hardware support (System admin and database security) and storage service provided by DISA. Continued development of interface to GCSS. Includes SI, Test Ctr, test h/w procurement, COTS s/w maint, ERP support, engineering scvs, change management, help desk support, etc.					
FY 2011 Plans: In FY 2011, operation and support of Increment 1 Spiral 1 and 2 functionality. Identify, prioritize, and resolve software problem reports and defects. Initial Blueprinting of Increment 1, Spiral 3/4. Includes SI, Test Ctr, Database administration performed by GCSS-AF, COTS s/w maint, ERP support, engineering scvs, change management, help desk support, etc.					
FY 2012 Base Plans: In FY 2012, completion of Increment 1, Spiral 3/4 high level and detail design, and start of Blueprinting of Increment 2 (Spiral 5). Includes SI, Test Ctr, procurement of hardware for development zone, COTS s/w maint, ERP support, engineering scvs, change management, help desk support, Hardware support (System admin and database security) and storage service provided by DISA.					
FY 2012 OCO Plans: None.					
Title: DEAMS T&E					
Description: The DT&E process will be a complete system test to validate system					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
	2.512	2.619	3.150	-	3.150

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force				DATE: February 2011	
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>		R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>		PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>	
B. Accomplishments/Planned Programs (\$ in Millions)					
software requirements and compliance mandates are satisfied. The DT&E efforts will be conducted at a SI test site, CIE and DISA production sites. The DEAMS Integrated Test Plan (ITP) and the Increment 1 SI Software Test Plan (STP) cover the details of DEAMS DT&E.					
FY 2010 Accomplishments: In FY 2010, support of Increment 1 Spiral 1. Increment 1 systems integrator and government testing; running test scripts which will provide insight into suitability issues and identification of any interface problems. Identify, prioritize, and resolve software problem reports and defects for the fielded system. Awarded an Independent Validation & Verification (IV&V) contract to provide an independent review of contractor performance and product. Includes CIE, RTO, JITC, AFOTEC, and IV&V efforts.					
FY 2011 Plans: In FY 2011, continue to identify, prioritize, and resolve software problem reports and defects for Spiral 2. Conduct Early Operational Assessment. Continued Integrated Test Team support.					
FY 2012 Base Plans: In FY 2012, support of Increment 1 - Increment 1 systems integrator and government testing; running test scripts which will provide insight into suitability issues and identification of any interface problems. Identify, prioritize, and resolve software problem reports and defects for the fielded system and for Spirals 3/4 activities.					
FY 2012 OCO Plans: None.					
Title: DEAMS PM Activities					
Description: PMA activities includes acquisition support services, cost estimating & analysis, help desk level 1, travel supplies and equipment, etc.					
FY 2010 Accomplishments: In FY 2010, PMA includes development of Spiral 2 (test, deployment, sustainment, requirements management, information assurance, etc). Development of Spiral 3/4 RFP and Source Selection planning.					
FY 2011 Plans:					
	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
	3.100	5.103	6.308	-	6.308

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>
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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
In FY 2011, PMA Includes Inc 1 Spiral 2 fielding and support; Increment 1, Spiral 3 and 4, Source Selection and acquisition support; End-user training and Milestone B planning. FY 2012 Base Plans: In FY 2012, PMA includes Inc 1, Spiral 1/2 and Spiral 3/4 Initial Development and acquisition support. Rollout/change management preparation. Milestone B acquisition activities. FY 2012 OCO Plans: None.					
Accomplishments/Planned Programs Subtotals	40.635	45.089	99.822	-	99.822

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• TWCF: -C	19.795	8.072	5.498	0.000	5.498	2.500	1.072	1.087	1.106	Continuing	Continuing
• TWCF (1): -O	1.837	2.459	8.262	0.000	8.262	5.329	4.382	4.456	4.530	Continuing	Continuing
• PE 0308610F: <i>InfoMgmtAuto-Pgm3, O&M</i>	0.400	1.767	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0901538F: <i>InfoMgmtAuto-Pgm3, O&M</i>	0.000	0.000	1.427	0.000	1.427	7.564	15.726	34.128	29.639	Continuing	Continuing
• PE 0901538F (4): <i>FMIS, OPAF</i>	16.650	2.379	14.824	0.000	14.824	17.468	23.852	26.347	16.267	Continuing	Continuing

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. Due to solution complexity, the Program Office is investigating Cost Plus and Firm Fixed Price contract opportunities, subject to Milestone Decision Authority approval, which allow for equitable and sensible allocation of risk between the Government and the contractor.

E. Performance Metrics
Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
DEAMS Application Development and Test for AF Increment Capability	Various	Various:Various,	32.222	9.084	Nov 2010	59.493	Nov 2011	-		59.493	Continuing	Continuing	TBD
DISA & GCSS-AF Support	MIPR	754 ELSG:Gunter AFB, AL	8.699	7.579	Oct 2010	7.297	Oct 2011	-		7.297	Continuing	Continuing	TBD
Direct Mission Support (ERP support, engineering services, change management, L2 help desk support, etc.)	Various	Various:Various,	52.341	20.704	Nov 2010	23.574	Nov 2011	-		23.574	0.000	96.619	0.000
Subtotal			93.262	37.367		90.364		-		90.364			

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Office Support (acquisition support services, L1 help desk, cost estimating & analysis, travel, supplies & equipment, etc.)	C/TBD	Not specified.:Wright-Patterson AFB, OH	11.662	5.103	Oct 2010	6.308	Oct 2011	-		6.308	0.000	23.073	0.000
Subtotal			11.662	5.103		6.308		-		6.308	0.000	23.073	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Capabilities Integration Environment (CIE)	C/TBD	754 ELSG:Gunter AFB, AL	2.323	0.630	Dec 2010	0.820	Dec 2011	-		0.820	Continuing	Continuing	TBD
Responsible Test Organization (RTO)	C/TBD	754 ELSG:Gunter AFB, AL	1.184	0.205	Dec 2010	0.445	Dec 2011	-		0.445	Continuing	Continuing	TBD
Joint Interoperability Test Center (JITC)	MIPR	JITC:Fort Huachuca, AZ	0.980	0.254	Oct 2010	0.202	Oct 2011	-		0.202	Continuing	Continuing	TBD

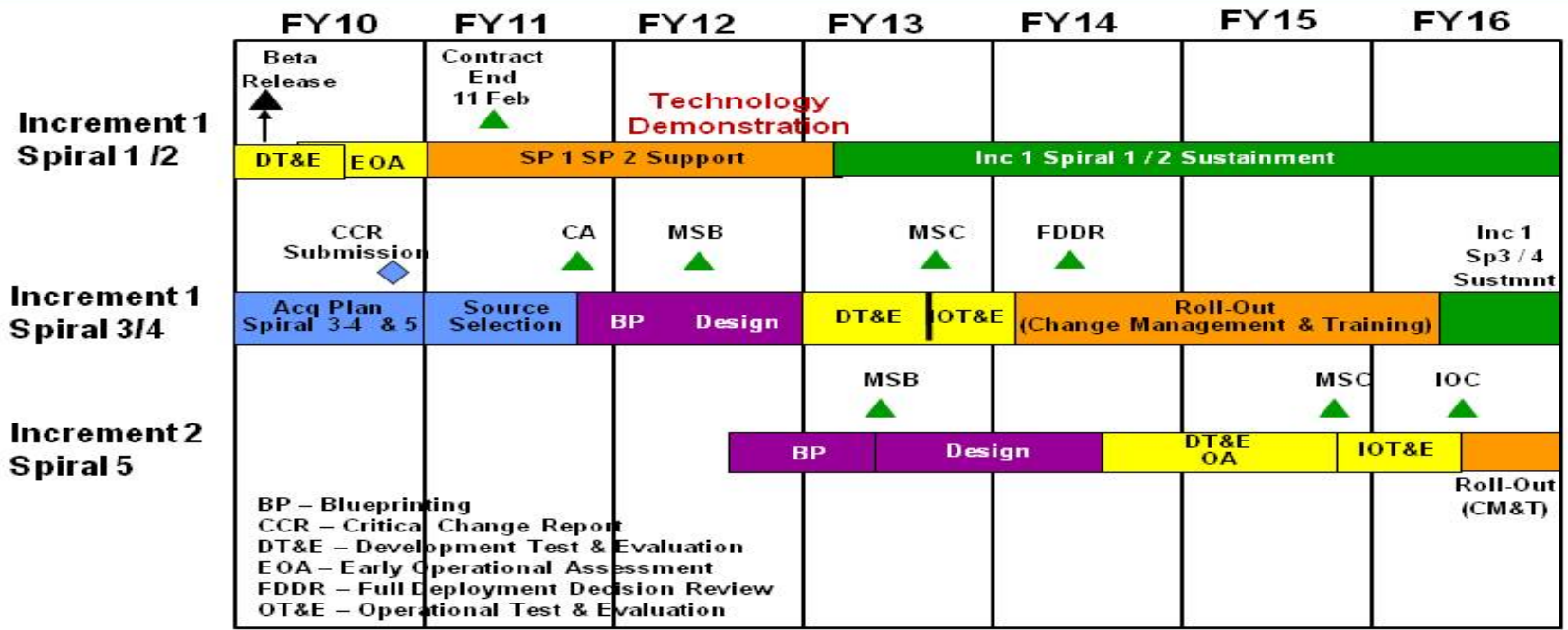
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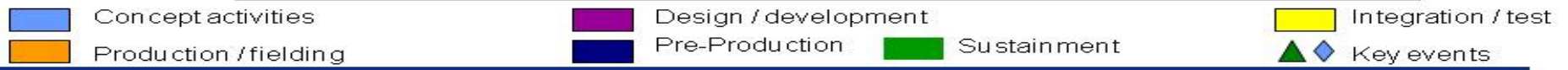
Exhibit R-4, RDT&E Schedule Profile: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: Research, Development, Test & Evaluation, Air Force BA 7: Operational Systems Development	R-1 ITEM NOMENCLATURE PE 0901538F: Financial Management Information Systems (FMIS)	PROJECT 675179: Defense Enterprise Accounting Management System - AF (DEAMS)



DEAMS Program Schedule



BP – Blueprinting
 CCR – Critical Change Report
 DT&E – Development Test & Evaluation
 EOA – Early Operational Assessment
 FDDR – Full Deployment Decision Review
 OT&E – Operational Test & Evaluation



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Exhibit R-4A, RDT&E Schedule Details: PB 2012 Air Force		DATE: February 2011
APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0901538F: <i>Financial Management Information Systems (FMIS)</i>	PROJECT 675179: <i>Defense Enterprise Accounting Management System - AF (DEAMS)</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
AF Inc 1 Spiral 1/2	1	2010	4	2012
AF Inc 1 Spiral 1/2 Beta Release	1	2010	1	2010
AF Inc 1 Spiral 1/2 DT&E	1	2010	3	2010
AF Inc 1 Spiral 1/2 EOA	3	2010	4	2010
AF Inc 1 Spiral 1/2 Support	1	2011	4	2012
AF Inc 1 Spiral 3/4	1	2010	4	2012
AF Inc 1 Spiral 3/4 Critical Change Report (CCR)	4	2010	4	2010
AF Inc 1 Spiral 3/4 Acquisition Planning	1	2010	4	2011

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Exhibit R-2, RDT&E Budget Item Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0902998F: <i>MANAGEMENT HQ - ADP SUPPORT (AF)</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
Total Program Element	-	-	0.299	-	0.299	-	-	-	-	Continuing	Continuing
676027: <i>GLOBAL FORCE MGT DATA INITATIVE</i>	-	-	0.299	-	0.299	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

No mission description provided.

B. Program Change Summary (\$ in Millions)

	<u>FY 2010</u>	<u>FY 2011</u>	<u>FY 2012 Base</u>	<u>FY 2012 OCO</u>	<u>FY 2012 Total</u>
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	0.299	-	0.299
Total Adjustments	-	-	0.299	-	0.299
• Congressional General Reductions		-			
• Congressional Directed Reductions		-			
• Congressional Rescissions	-	-			
• Congressional Adds		-			
• Congressional Directed Transfers		-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	0.299	-	0.299

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Exhibit R-2A, RDT&E Project Justification: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0902998F: <i>MANAGEMENT HQ - ADP SUPPORT (AF)</i>	PROJECT 676027: <i>GLOBAL FORCE MGT DATA INITIATIVE</i>
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COST (\$ in Millions)	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
676027: <i>GLOBAL FORCE MGT DATA INITIATIVE</i>	-	-	0.299	-	0.299	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

A. Mission Description and Budget Item Justification

Mission Description not provided.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total
Title: GLOBAL FORCE MGT DATA INITIATIVE	-	-	0.299	-	0.299
Description: GLOBAL FORCE MGT DATA INITIATIVE					
FY 2010 Accomplishments:					
FY 2011 Plans:					
FY 2012 Base Plans: GLOBAL FORCE MGT DATA INITIATIVE					
FY 2012 OCO Plans:					
Accomplishments/Planned Programs Subtotals	-	-	0.299	-	0.299

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

Line Item	FY 2010	FY 2011	FY 2012 Base	FY 2012 OCO	FY 2012 Total	FY 2013	FY 2014	FY 2015	FY 2016	Cost To Complete	Total Cost
• N/A:	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

D. Acquisition Strategy

N/A

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2012 Air Force **DATE:** February 2011

APPROPRIATION/BUDGET ACTIVITY 3600: <i>Research, Development, Test & Evaluation, Air Force</i> BA 7: <i>Operational Systems Development</i>	R-1 ITEM NOMENCLATURE PE 0902998F: <i>MANAGEMENT HQ - ADP SUPPORT (AF)</i>	PROJECT 676027: <i>GLOBAL FORCE MGT DATA INITIATIVE</i>
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Product Development (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Support (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Test and Evaluation (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-	0.000	0.000	0.000

Management Services (\$ in Millions)				FY 2011		FY 2012 Base		FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Not specified.	C/CPAF	Not specified.;	-	-		0.299		-		0.299	0.000	0.299	0.000
Subtotal			-	-		0.299		-		0.299	0.000	0.299	0.000

			Total Prior Years Cost	FY 2011		FY 2012 Base	FY 2012 OCO		FY 2012 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	-		0.299	-		0.299	0.000	0.299	0.000

Remarks

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