DEPARTMENT OF THE AIR FORCE

FISCAL YEAR (FY) 2007 BUDGET ESTIMATES

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

DESCRIPTIVE SUMMARIES, VOLUME III

BUDGET ACTIVITY 7

FEBRUARY 2006

Fiscal Year 2007 Budget Estimates
RDT&E Descriptive Summaries, Volume III
Budget Activity 7
February 2006

INTRODUCTION AND EXPLANATION OF CONTENTS

1. (U) GENERAL
   A. This document has been prepared to provide information on the United States Air Force (USAF) Research, Development, Test and Evaluation (RDT&E) program elements and projects in the FY 2007 President's Budget.
      5) All exhibits in this document have been assembled in accordance with DoD 7000.14R, Financial Management Regulation, Volume 2B, Chapter 5, Section 050402. Exceptions:
         a) Exhibit R-1, RDT&E Program, which was distributed under a separate cover due to classification.
      6) Other comments on exhibit contents in this document:
         a) Exhibits R-2/2a and R-3 provide narrative information for all RDT&E program elements and projects within the USAF FY 2007 RDT&E program with the exception of classified program elements. The formats and contents of this document are in accordance with the guidelines and requirements of the Congressional committees insofar as possible.
         b) The "Other Program Funding Summary" portion of the R-2 includes, in addition to RDT&E funds, Procurement funds and quantities, Military Construction appropriation funds on specific development programs, Operations and Maintenance appropriation funds where they are essential to the development effort described, and where appropriate, Department of Energy (DOE) costs.
         c) "Facilities Exhibits", Military Construction Project Data, (DD 1391), for improvements to and construction of government-owned facilities funded in RD&E, are included at the end of Volume III.

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

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Warfighter Rapid Acquisition Program	0203761F	1289
Wargaming and Simulation Centers	0207605F	1547
Distributed Training and Exercises	0207697F	1553
WEATHER SERVICE	0305111F	1711
Wideband MILSATCOM (Space)	0603854F	659
WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM	0303150F	1645

DEPARTMENT OF DEFENSE

FY 2007 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

02 FEB 2006

APPROPRIATION	FY 2005	FY 2006	FY 2007
Research, Development, Test & Eval, AF	20,477,909	21,671,763	24,396,767
Total Research, Development, Test & Evaluation	20,477,909	21,671,763	24,396,767

DEPARTMENT OF DEFENSE

FY 2007 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

02 FEB 2006

Summary Recap of Budget Activities	FY 2005	FY 2006	FY 2007
Basic Research	373,798	362,607	370,206
Applied Research	923,608	1,070,572	973,094
Advanced Technology Development	925,181	1,010,491	804,836
Advanced Component Development & Prototypes	1,767,113	2,201,113	2,741,701
System Development & Demonstration	4,341,382	4,830,329	4,571,330
RDT&E Management Support	1,128,533	968,297	1,042,276
Operational Systems Development	11,018,294	11,228,354	13,893,324
Total Research, Development, Test & Evaluation	20,477,909	21,671,763	24,396,767

Summary Recap of FYDP Programs			
Strategic Forces	84,178	93,243	151,821
General Purpose Forces	3,090,493	3,490,786	4,222,700
Intelligence and Communications	7,805,406	7,597,391	9,313,073
Mobility Forces	780,718	842,068	917,294
Research and Development	8,454,154	9,465,541	9,497,133
Central Supply and Maintenance	126,641	133,994	232,770
Training Medical and Other	3,246	3,320	3,491
Administration and Associated Activities	129,276	41,734	54,574
Support of Other Nations	3,797	3,686	3,911
Total Research, Development, Test & Evaluation	20,477,909	21,671,763	24,396,767

DEPARTMENT OF THE AIR FORCE

FY 2007 RDT&E PROGRAM

SUMMARY
($ IN THOUSANDS)

02 FEB 2006

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DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
1	0601102F	Defense Research Sciences	01	246,414	241,436	250,232	U
2	0601103F	University Research Initiatives	01	115,506	108,757	107,571	U
3	0601108F	High Energy Laser Research Initiatives	01	11,878	12,414	12,403	U
	Basic Research			373,798	362,607	370,206	
4	0602015F	Medical Development	02		18,434		U
5	0602102F	Materials	02	117,460	121,451	111,073	U
6	0602201F	Aerospace Vehicle Technologies	02	75,195	104,469	112,751	U
7	0602202F	Human Effectiveness Applied Research	02	83,867	108,171	92,991	U
8	0602203F	Aerospace Propulsion	02	129,190	155,673	170,885	U
9	0602204F	Aerospace Sensors	02	92,597	115,689	117,553	U
10	0602500F	Multi-disciplinary Space Technology	02	91,773	91,694		U
11	0602601F	Space Technology	02	102,928	104,392	85,594	U
12	0602602F	Conventional Munitions	02	50,821	62,061	62,105	U
13	0602605F	Directed Energy Technology	02	42,754	44,169	48,422	U
14	0602702F	Command Control and Communications	02	84,201	96,714	119,267	U
15	0602805F	Dual Use Science and Technology Program	02	3,955	986		U
16	0602890F	High Energy Laser Research	02	48,867	46,669	50,166	U
17	0207170F	Joint Helmet Mounted Cueing System (JHMCS)	02			2,287	U
	Applied Research			923,608	1,070,572	973,094	
18	0603112F	Advanced Materials for Weapon Systems	03	61,305	70,100	48,901	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
19	0603203F	Advanced Aerospace Sensors	03	41,607	39,782	55,150	U
20	0603211F	Aerospace Technology Dev/Demo	03	34,717	53,657	27,424	U
21	0603216F	Aerospace Propulsion and Power Technology	03	76,110	97,163	115,546	U
22	0603231F	Crew Systems and Personnel Protection Technology	03	29,375	34,968	32,156	U
23	0603270F	Electronic Combat Technology	03	37,883	33,342	24,436	U
24	0603311F	Ballistic Missile Technology	03	11,288	11,435		U
25	0603400F	Joint Unmanned Combat Air Systems (J-UCAS) Advanced Technology Dev and Research	03		76,691		U
26	0603401F	Advanced Spacecraft Technology	03	80,832	85,564	68,026	U
27	0603444F	Maui Space Surveillance System (MSSS)	03	56,561	47,166	6,074	U
28	0603500F	Multi-disciplinary Advanced Development Space Technology	03	47,676	55,732		U
29	0603601F	Conventional Weapons Technology	03	24,680	30,519	19,658	U
30	0603605F	Advanced Weapons Technology	03	49,782	49,821	51,336	U
31	0603723F	Environmental Engineering Technology	03		1,873		U
32	0603789F	C3I Advanced Development	03	31,595	41,124	35,785	U
33	0603801F	Special Programs	03	306,646	275,841	316,605	U
34	0603850F	Integrated Broadcast Service	03	2,235			U
35	0603924F	High Energy Laser Advanced Technology Program	03	9,490	5,713	3,713	U
36	0207418F	Tactical Airborne Control Systems	03			26	U
37	0207423F	Advanced Communications Systems	03	14,767			U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
38	0401840F	AMC Command and Control System	03	5,803			U
39	0804757F	Joint National Training Center	03	2,829			U
		Advanced Technology Development		925,181	1,010,491	804,836	
40	0603260F	Intelligence Advanced Development	04	4,567	4,761	4,776	U
41	0603287F	Physical Security Equipment	04	25,915	25,563	298	U
42	0603421F	NAVSTAR Global Positioning System III	04	33,773	85,172	315,314	U
43	0603430F	Advanced EHF MILSATCOM (SPACE)	04	607,254	655,779	633,258	U
44	0603432F	Polar MILSATCOM (SPACE)	04	894	2,154	35,685	U
45	0603438F	Space Control Technology	04	14,493	15,606	27,076	U
46	0603742F	Combat Identification Technology	04	23,634	51,146	26,517	U
47	0603790F	NATO Research and Development	04	3,819	3,916	4,095	U
48	0603791F	International Space Cooperative R&D	04	532	566	593	U
49	0603845F	Transformational SATCOM (TSAT)	04	443,960	429,244	867,102	U
50	0603850F	Integrated Broadcast Service	04	23,309	15,063	20,592	U
51	0603851F	Intercontinental Ballistic Missile	04	56,908	57,087	45,538	U
52	0603854F	Wideband Gapfiller System RDT&E (Space)	04	54,413	92,287	37,672	U
53	0603858F	Space Radar	04	67,820	98,253	266,401	U
54	0603859F	Pollution Prevention	04	4,768	10,483	2,853	U
55	0603860F	Joint Precision Approach and Landing Systems	04	12,623	10,951	10,011	U
56	0604015F	Next Generation Bomber	04	28,877	24,777	25,598	U
57	0604327F	Hard and Deeply Buried Target Defeat System (HDBTDS) Program	04	5,239	3,943		U

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FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
58	0604400F	Joint Unmanned Combat Air Systems (J-UCAS) Advanced Component and Prototype Deve	04		227,857		U
59	0604855F	Operationally Responsive Launch	04	32,142	38,519		U
60	0604856F	Common Aero Vehicle (CAV)	04	16,053	26,993	33,386	U
61	0604857F	Operationally Responsive Space	04			35,625	U
62	0207423F	Advanced Communications Systems	04		1,940		U
63	0305178F	National Polar-Orbiting Operational Environmental Satellite System (NPOESS)	04	306,120	319,053	349,311	U
		Advanced Component Development & Prototypes		1,767,113	2,201,113	2,741,701	
64	0603840F	Global Broadcast Service (GBS)	05	21,797	19,383	23,599	U
65	0604012F	Joint Helmet Mounted Cueing System (JHMCS)	05	2,245	2,870	2,792	U
66	0604222F	Nuclear Weapons Support	05	13,344	13,951	14,895	U
67	0604226F	B-1B	05	79,201	95,910	130,546	U
68	0604233F	Specialized Undergraduate Flight Training	05	2,785	8,472	3,703	U
69	0604239F	F-22	05	211,815	75,117		U
70	0604240F	B-2 Advanced Technology Bomber	05	263,550	294,898	224,177	U
71	0604261F	Personnel Recovery Systems	05			254,310	U
72	0604270F	Electronic Warfare Development	05	100,865	91,169	87,784	U
73	0604280F	Joint Tactical Radio	05	36,109	81,036		U
74	0604287F	Physical Security Equipment	05	9,381	10,994	93	U
75	0604329F	Small Diameter Bomb (SDB)	05	73,573	63,521	104,080	U
76	0604421F	Counterspace Systems	05	25,351	29,074	47,292	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
77	0604425F	Space Situation Awareness Systems	05			121,157	U
78	0604429F	Airborne Electronic Attack	05		119,262	12,421	U
79	0604441F	Space Based Infrared System (SBIRS) High EMD	05	587,121	696,562	668,902	U
80	0604443F	Alternative Infrared Space System (AIRSS)	05			102,962	U
81	0604479F	Milstar LDR/MDR Satellite Communications (SPACE) (H)	05	1,056			U
82	0604600F	Munitions Dispenser Development	05	25,870	5,952		U
83	0604602F	Armament/Ordnance Development	05	8,015	7,675	5,039	U
84	0604604F	Submunitions	05	5,682	5,397	5,759	U
85	0604617F	Agile Combat Support	05	16,989	11,211	10,095	U
86	0604618F	Joint Direct Attack Munition	05			15,450	U
87	0604706F	Life Support Systems	05	8,333	13,373	12,370	U
88	0604735F	Combat Training Ranges	05	15,712	8,794	14,363	U
89	0604740F	Integrated Command & Control Applications (IC2A)	05	21,279	18,872	167	U
90	0604750F	Intelligence Equipment	05	2,426	2,730	1,426	U
91	0604762F	Common Low Observables Verification System (CLOVerS)	05	8,940	8,568		U
92	0604800F	Joint Strike Fighter (JSF)	05	2,080,058	2,333,009	1,999,068	U
93	0604851F	Intercontinental Ballistic Missile	05	94,684	31,948		U
94	0604853F	Evolved Expendable Launch Vehicle Program (SPACE)	05	20,991	25,721	18,513	U
95	0605011F	RDT&E for Aging Aircraft	05	25,249	41,090	25,490	U
96	0605807F	Test and Evaluation Support	05		49,288	2,388	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
97	0207434F	Link-16 Support and Sustainment	05	120,633	161,345	172,625	U
98	0207443F	Family of Interoperable Operational Pictures (FIOP)	05	43,440	28,880		U
99	0207450F	E-10 Squadrons	05	390,957	391,006	390,896	U
100	0207451F	Single Integrated Air Picture (SIAP)	05			40,124	U
101	0207701F	Full Combat Mission Training	05	9,756	26,046	32,243	U
102	0305176F	Combat Survivor Evader Locator	05		17,250		U
103	0401318F	CV-22	05	14,175	39,955	26,601	U
		System Development & Demonstration		4,341,382	4,830,329	4,571,330	
104	0604256F	Threat Simulator Development	06	32,975	32,083	38,131	U
105	0604759F	Major T&E Investment	06	58,628	64,014	58,506	U
106	0605101F	RAND Project Air Force	06	30,609	27,139	25,211	U
107	0605306F	Ranch Hand II Epidemiology Study	06	4,663	4,128		U
108	0605502F	Small Business Innovation Research	06	349,650			U
109	0605712F	Initial Operational Test & Evaluation	06	27,392	34,122	34,802	U
110	0605807F	Test and Evaluation Support	06	358,584	636,369	740,134	U
111	0605860F	Rocket Systems Launch Program (SPACE)	06	21,975	26,391	14,704	U
112	0605864F	Space Test Program (STP)	06	44,705	47,308	46,310	U
113	0605976F	Facilities Restoration and Modernization - Test and Evaluation Support	06	73,015	61,080	54,683	U
114	0605978F	Facilities Sustainment - Test and Evaluation Support	06	22,011	31,650	25,579	U
115	0804731F	General Skill Training	06	311	327	305	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
116	0909900F	Financing for Expired Account Adjustments	06	218			U
117	0909980F	Judgment Fund Reimbursement	06	100,000			U
118	1001004F	International Activities	06	3,797	3,686	3,911	U
	RDT&E Management Support			1,128,533	968,297	1,042,276	
119	0605024F	Anti-Tamper Technology Executive Agency	07	7,345	7,715	8,014	U
120	0605798F	Analysis Support Group	07				
121	0101113F	B-52 Squadrons	07	29,782	26,748	71,379	U
122	0101120F	Advanced Cruise Missile	07	6,609	1,960	6,983	U
123	0101122F	Air-Launched Cruise Missile (ALCM)	07	6,495	2,218	3,736	U
124	0101313F	Strat War Planning System - USSTRATCOM	07	13,472	29,705	27,285	U
125	0101314F	Night Fist - USSTRATCOM	07	4,786	4,941	5,162	U
126	0101815F	Advanced Strategic Programs	07	8,313	9,734	22,423	U
127	0102326F	Region/Sector Operation Control Center Modernization Program	07	14,721	17,937	14,853	U
128	0203761F	Warfighter Rapid Acquisition Process (WRAP) Rapid Transition Fund	07	34,697	22,764	30,584	U
129	0207131F	A-10 Squadrons	07	29,878	56,025	80,771	U
130	0207133F	F-16 Squadrons	07	95,664	154,533	148,373	U
131	0207134F	F-15E Squadrons	07	127,112	143,572	125,062	U
132	0207136F	Manned Destructive Suppression	07	16,143	9,260	515	U
133	0207138F	F/A-22 Squadrons	07	318,369	373,124	584,290	U
134	0207141F	F-117A Squadrons	07	17,385	13,406	14,093	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
135	0207161F	Tactical AIM Missiles	07	5,346	15,416	8,850	U
136	0207163F	Advanced Medium Range Air-to-Air Missile (AMRAAM)	07	31,871	32,788	43,417	U
137	0207224F	Combat Rescue and Recovery	07	6,460	70,801		U
138	0207247F	AF TENCAP	07	17,010	11,661	11,202	U
139	0207248F	Special Evaluation Program	07	195,663	273,167	530,038	U
140	0207253F	Compass Call	07	3,952	9,907	4,469	U
141	0207268F	Aircraft Engine Component Improvement Program	07	141,803	151,082	154,319	U
142	0207277F	CSAF Innovation Program	07	1,780	1,695	1,612	U
143	0207325F	Joint Air-to-Surface Standoff Missile (JASSM)	07	43,298	66,042	40,881	U
144	0207410F	Air & Space Operations Center (AOC)	07	22,301	67,029	87,483	U
145	0207412F	Control and Reporting Center (CRC)	07	9,660	18,892	8,798	U
146	0207417F	Airborne Warning and Control System (AWACS)	07	273,971	119,746	165,820	U
147	0207418F	Tactical Airborne Control Systems	07			2,286	U
148	0207423F	Advanced Communications Systems	07	17,940	30,968	53,093	U
149	0207424F	Evaluation and Analysis Program	07	2,501	6,013		U
150	0207433F	Advanced Program Technology	07	243,801	296,063	313,251	U
151	0207438F	Theater Battle Management (TBM) C4I	07	34,948	39,787	31,835	U
152	0207445F	Fighter Tactical Data Link	07	35,668	119,965	113,388	U
153	0207446F	Bomber Tactical Data Link	07	76,568	142,800	168,168	U
154	0207448F	C2ISR Tactical Data Link	07	24,420	14,627	4,338	U

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FY 2007 RDT&E PROGRAM

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
155	0207449F	Command and Control (C2) Constellation	07	38,288	40,334	44,027	U
156	0207581F	Joint Surveillance/Target Attack Radar System (JSTARS)	07	98,394	104,321	152,696	U
157	0207590F	Seek Eagle	07	22,316	19,232	16,426	U
158	0207591F	Advanced Program Evaluation	07	408,231	286,131	437,057	U
159	0207601F	USAF Modeling and Simulation	07	10,784	25,145	23,470	U
160	0207605F	Wargaming and Simulation Centers	07	6,993	6,278	6,595	U
161	0207697F	Distributed Training and Exercises	07		4,162	6,138	U
162	0208006F	Mission Planning Systems	07	87,659	119,860	146,396	U
163	0208021F	Information Warfare Support	07	10,066	14,973	24,758	U
164	0301310F	National Air Intelligence Center	07				
165	0301314F	COBRA BALL	07				
166	0301315F	Missile and Space Technical Collection	07				
167	0301324F	FOREST GREEN	07				
168	0301386F	GDIP Collection Management	07				
169	0302015F	E-4B National Airborne Operations Center (NAOC)	07	13,801	18,639	283	U
170	0303131F	Minimum Essential Emergency Communications Network (MEECN)	07	17,973	48,327	64,109	U
171	0303140F	Information Systems Security Program	07	65,702	116,532	183,523	U
172	0303141F	Global Combat Support System	07	20,645	20,262	19,895	U
173	0303150F	Global Command and Control System	07	5,096	13,306	3,348	U
174	0303158F	Joint Command and Control Program (JC2)	07		5,125	5,818	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
175	0303601F	MILSATCOM Terminals	07	245,582	269,218	271,562	U
176	0304111F	Special Activities	07				
177	0304260F	Airborne SIGINT Enterprise	07		77,798	117,834	U
178	0304311F	Selected Activities	07				
179	0304346F	Imagery Derived MASINT	07				
180	0304347F	Overhead Non-Imaging Infrared	07				
181	0305099F	Global Air Traffic Management (GATM)	07	6,727	6,943	6,620	U
182	0305110F	Satellite Control Network (SPACE)	07	19,379	31,170	19,907	U
183	0305111F	Weather Service	07	16,848	28,222	34,899	U
184	0305114F	Air Traffic Control, Approach, and Landing System (ATCALS)	07	12,512	2,169		U
185	0305116F	Aerial Targets	07	2,909	6,547	5,203	U
186	0305124F	Special Applications Program	07				
187	0305128F	Security and Investigative Activities	07	663	484	509	U
188	0305142F	Applied Technology and Integration	07				
189	0305148F	Measurement and Signature Intelligence (MASINT) Systems/ Program	07	13,811			U
190	0305159F	Defense Reconnaissance Support Activities (SPACE)	07				
191	0305160F	Defense Meteorological Satellite Program (SPACE)	07		3,852	969	U
192	0305164F	NAVSTAR Global Positioning System (User Equipment) (SPACE)	07	93,408	123,794	131,083	U
193	0305165F	NAVSTAR Global Positioning System (Space and Control Segments)	07	128,349	184,756	177,792	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
194	0305172F	Combined Advanced Applications	07				
195	0305173F	Space and Missile Test and Evaluation Center	07			4,675	U
196	0305174F	Space Warfare Center	07	397	405	726	U
197	0305182F	Spacelift Range System (SPACE)	07	46,056	49,081	38,044	U
198	0305193F	Intelligence Support to Information Operations (IO)	07	1,087	3,566	3,813	U
199	0305202F	Dragon U-2	07	83,862	10,013		U
200	0305206F	Airborne Reconnaissance Systems	07	60,633	55,737	52,824	U
201	0305207F	Manned Reconnaissance Systems	07	23,364	18,074	10,132	U
202	0305208F	Distributed Common Ground/Surface Systems	07	31,470	34,883	120,777	U
203	0305219F	Predator UAV (JMIP)	07	82,113	64,081	61,466	U
204	0305220F	Global Hawk UAV	07	382,557	327,697	247,665	U
205	0305221F	Network-Centric Collaborative Target (TIARA)	07		8,524	8,499	U
206	0305887F	Intelligence Support to Information Warfare	07	923	961	5,163	U
207	0305906F	NCMC - TW/AA System	07	61,701	57,329	50,908	U
208	0305910F	SPACETRACK (SPACE)	07	129,438	164,190		U
209	0305913F	NUDET Detection System (SPACE)	07	34,691	32,266	60,281	U
210	0305917F	Space Architect	07	14,701	12,676		U
211	0305924F	National Security Space Office	07			13,437	U
212	0305940F	Space Situation Awareness Operations	07			31,401	U
213	0307141F	NASS, IO Technology Integration & Tool Dev	07	13,100	14,965	15,449	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
214	0308699F	Shared Early Warning (SEW)	07	3,183	3,235	2,999	U
215	0401115F	C-130 Airlift Squadron	07	158,716	232,173	248,283	U
216	0401119F	C-5 Airlift Squadrons (IF)	07	311,508	223,252	150,209	U
217	0401130F	C-17 Aircraft (IF)	07	195,042	164,781	173,781	U
218	0401132F	C-130J Program	07	13,247	6,586	40,542	U
219	0401133F	Aeromedical Evacuation	07		2,047		U
220	0401134F	Large Aircraft IR Countermeasures (LAIRCM)	07	69,069	58,596	34,916	U
221	0401218F	KC-135s	07	1,931	1,477	1,126	U
222	0401219F	KC-10s	07		13,280	4,781	U
223	0401221F	KC-135 Tanker Replacement	07	10,200	97,797	203,932	U
224	0401839F	Air Mobility Tactical Data Link	07			32,099	U
225	0408011F	Special Tactics / Combat Control	07	1,027	2,124	1,024	U
226	0702207F	Depot Maintenance (Non-IF)	07	1,328	1,388	1,457	U
227	0702239F	Avionics Component Improvement Program	07	976			U
228	0702806F	Acquisition and Management Support	07	5,110	4,735	17,706	U
229	0708011F	Industrial Preparedness	07	62,501	55,137	36,673	U
230	0708012F	Logistics Support Activities	07	962	2,760		U
231	0708610F	Logistics Information Technology (LOGIT)	07	3,000	43,384	166,338	U
232	0708611F	Support Systems Development	07	52,764	26,590	10,596	U
233	0804757F	Joint National Training Center	07		2,883	3,073	U
234	0808716F	Other Personnel Activities	07	106	110	113	U
235	0901202F	Joint Personnel Recovery Agency	07		964	992	U

DEPARTMENT OF THE AIR FORCE
FY 2007 RDT&E PROGRAM

EXHIBIT R-1

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

Date: 02 FEB 2006

Line No	Program Element Number	Item	Act	Thousands of Dollars FY 2005	FY 2006	FY 2007	SEC
236	0901218F	Civilian Compensation Program	07	14,608	7,339	7,779	U
237	0901220F	Personnel Administration	07		16,150	18,262	U
238	0901538F	Financial Management Information Systems Development	07	14,450	17,281	27,541	U
		Operational Systems Development		11,018,294	11,228,354	13,893,324	
		Total Research, Development, Test & Eval, AF		20,477,909	21,671,763	24,396,767	

PROGRAM ELEMENT COMPARISON SUMMARY

PROGRAM ELEMENT (By BUDGET ACTIVITY)		REMARKS
BUDGET ACTIVITY #1: BASIC RESEARCH (Volume 1)		
None		
BUDGET ACTIVITY #2: APPLIED RESEARCH (Volume 1)		
0602102F	Materials	In FY 2007, Project 01SP, Space Materials Development, is a new start. Efforts will transfer from PE 0602500F, Multidisciplinary Space Technology, Project 5025, Space Materials Development, in order to more effectively manage and provide oversight of the efforts.
0602201F	Aerospace Vehicle Technologies	In FY 2007, Project 6266SP, Applied Space Access Vehicle Technology, is a new start. Efforts were transferred from PE 0602500F, Multidisciplinary Space Technology, Project 625030, Applied Space Access Vehicle Technology, in order to effectively manage and provide oversight of the efforts.
0602203F	Aerospace Propulsion	In FY 2007, Project 33SP, Space Rocket Component Technology, is a new start. It will transfer from PE 0602500F, Multi-Disciplinary Space Technology, Project 5026, Rocket Propulsion Component Technology, and Project 5027, High Speed Airbreathing Propulsion Technology, in order to more effectively manage and provide oversight of the efforts. In FY 2006 and 2007, funding was increased to accelerate efforts to develop technologies to support an Air Force scramjet effort.
0602204F	Aerospace Sensors	In FY 2007, Project 44SP, Space Sensors, is a new start. Efforts will transfer from PE 0602500F, Multidisciplinary Space Technology, Project 5028, Space Sensors, Photonics and RF Processors, and Project 5029, Space Sensor and CM Technology, in order to more effectively manage and provide oversight of the efforts.

0602500F	Multi-Disciplinary Space Tech	In FY 2007, Project 5023, Laser and Imaging Space Technology, efforts transfer to PE 0602605F, Directed Energy Technology, Project 6255SP, Laser and Imaging Space Technology; Project 5025, Space Materials Development, efforts transfer to PE 0602102F, Materials, Project 6210SP, Space Materials Development; Project 5026, Rocket Propulsion Component Technology, and Project 5027, High Speed Airbreathing Propulsion Technology, efforts transfer to PE 0602203F, Aerospace Propulsion, Project 6233SP, Space Rocket Component Technology; Project 5028, Space Sensors, Photonics and Radio Frequency (RF) Processes, and Project 5029, Space Sensor and Countermeasure (CM) Technology, efforts transfer to PE 0602204F, Aerospace Sensors, Project 6244 SP, Space Sensors; Project 5030, Applied Space Access Vehicle Technology, efforts transfer to PE 0602201F, Aerospace Vehicle Technologies, Project 6222SP, Applied Space Access Vehicle Technology; and Project 5082, Optical Networking Technology, efforts transfer to PE 0602702F, Command Control and Communication, Project 6266SP, Space Optical Network Technology, in order to more effectivel
0602605F	Directed Energy Technology	In FY 2007, efforts will transfer from PE 0602500F, Multidisciplinary Advanced Development Space Technology, Project 5023, Laser and Imaging Space Tech, to this project in order to more effectively manage and provide oversight of the efforts. In FY2007, this is a new start.
0602702F	Command Control and Communications	In FY 2007, Project 6266SP, Space Optical Network Technology, is a new start. Efforts were transferred from PE 0602500F, Multidisciplinary Space Technology, Project 5082, Optical Networking Technology, in order to more effectively manage and provide oversight of the efforts.

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

0603112F	Advanced Materials for Weapon Systems	In FY 2007, Project 77SP, Advanced Space Materials, is a new start. Efforts will be transferred from PE 0603500F, Multidisciplinary Space Technology, Project 5032, Advanced Space Materials, in order to more effectively manage and provide oversight of the efforts.
0603203F	Advanced Aerospace Sensors	In FY 2007, efforts will transfer from PE 0603500F, Multidisciplinary Advanced Development Space Technology, Project 5034, Advanced Space Sensors, to this project in order to more effectively manage and provide oversight of the efforts. In FY2007, this is a new start.
0603211F	Aerospace Technology Dev/Demo	In FY 2007, Project 6399SP, Advanced Structures for Space Vehicles, is a new start. Efforts were transferred from PE 0603500F, Multidisciplinary Advanced Space Technology, Project 635062, Advanced Structures for Space Vehicles, order to effectively manage and provide oversight of the efforts.

0603216F	Aerospace Propulsion and Power Technology	In FY 2007, a portion of the funding in Projects 2480 and 4921 was shifted to Project 5098. In FY 2007, Project 310SP, Space Rocket Propulsion Demonstration, is a new start and will transfer from PE 0603500F, Multi-Disciplinary Advanced Development Space Technology, Project 5033, Rocket Propulsion Demonstration, in order to more effectively manage and provide oversight of the efforts. In 2007, funding increases to support ground demonstrations and fabricate test vehicles for out-year flight demonstrations.
0603400F	J-UCAS Joint Program Office	In FY2007-11, the J-UCAS program is being terminated and $1,830.5M is being realigned to PE0604402N.
0603500F	Multi-Disciplinary Adv Dev Space Tech	In FY 2007, Project 5031, efforts transfer to PE 0603605F, Project 6311SP, Advanced Optics and Laser Space Technology; Project 5032, efforts transfer to PE 0603112F, Advanced Materials for Weapons Systems, Project 6377SP, Advanced Space Materials; Project 5033, efforts transfer to PE 0603216F, Aerospace Propulsion and Power Technology, Project 6310SP, Space Rocket Propulsion Demonstration; Project 5034, efforts transfer to PE 0603203F, Advanced Aerospace Sensors, Project 6388SP, Advanced Space Sensors; and Project 5062, efforts transfer to PE 0603211F, Aerospace Technology Development/Demonstration, Project 6399SP Advanced Structures Space Vehicles, in order to more effectively manage and provide oversight of the efforts.
0603605F	Advanced Weapons Technology	In FY 2007, efforts will transfer from PE 0603500F, Multidisciplinary Advanced Development Space Technology, Project 5031, Advanced Optics and Laser Space Tech, to this project in order to more effectively manage and provide oversight of the efforts. In FY2007, this is a new start.

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

0603851F	ICBM - DEM/VAL	In FY 2007 and beyond, Project 1024 ICBM Command & Control (C2) Applications is discontinued.
0604400F	Joint Unmanned Combat Air System (J-UCAS)	In FY2007-11, the J-UCAS program is being terminated and $1,830.5M is being realigned to PE0604402N.
0604855F	Operationally Responsive Launch	In FY 2007 this PE is being closed and the effort transferred to PE 0604857F, Operationally Responsive Space. The new PE recognizes the broader scope of not just responsive launchers, but also satellites and ranges, necessary for a responsive space system.

0604857F	Operationally Responsive Space	In FY 2007, this is a new PE. The funding is being transferred from PE 0604855F, Operationally Responsive Launch. This new PE recognizes the broader scope of not just responsive launchers, but also satellites and ranges, necessary for a responsive space system. In FY 2007, the Affordable Responsive Spacelift (ARES) effort in Project 64A016 and the Tactical Satellite (TacSat) effort in Project 64A015 are new starts to meet some of the requirements of the Operationally Responsive Space Analysis of Alternatives.

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

0207434F	Link 16 Support and Sustainment	In FY2007 and out, funding for the Single Integrated Air Picture program (SIAP) (currently residing in PE 0207434F and PE 0207443F), will be moved to PE 0207451F.
0207443F	Family of Interop Operational Pic (FIOP)	In FY2007 and out, funding for the Single Integrated Air Picture program (SIAP) (currently residing in PE 0207434F and PE 0207443F), will be moved to PE 0207451F.
0207451F	Single Integrated Air Picture (SIAP)	In FY2007, this is a new PE. All Single Integrated Air Picture (SIAP) funds from PE 0207443F Project #655187 and PE 0207434F Project #655050 were transferred to consolidate Air Force SIAP funds.
0604012F	Joint Helmet Mounted Cueing System (JHMCS)	In FY2007 and beyond, funds transferred from PE 0604012F to PE 0207170F.
0604240F	B-2 Advanced Technology Bomber	In FY2007, the B-2 Mode S/5 Identification Friend or Foe (IFF) and the Proximity Sensor Logic Unit (PSLU) are new start programs.
0604261F	Personnel Recovery Systems	In FY2007, this is a new start.
0604280F	Joint Tactical Radio Systems (JTRS)	In FY2007, Project No. 5068, Joint Tactical Radio Systems (JTRS) efforts were transferred from PE 0604280F to PE 0604280A, Joint Tactical Radio Systems (JTRS) in order to support the revised JTRS program development acquisition strategy. Refer to PE 060280A for all updates on acquisition strategy contracts and schedules. Only FY 2005 and FY 2006 actuals have been updated within this display.
0604421F	Counterspace Systems	In FY2007, this program includes a new start effort.
0604425F	Space Situation Awareness Systems	In FY 2007 this is a new PE. These projects transferred from PE 0305910F, Spacetrack, to reflect evolution of space surveillance to the Space Situation Awareness construct.
0604429F	Airborne Electronic Attack	In FY 2007, Project 655193, B-52 Stand-Off Jammer, is terminated.
0604443F	Alternative Infrared Satellite System (AIRSS)	In FY 2007, this is a new PE. In FY 2007, Project Number 65A020, Alternative Infrared Satelitte System includes new start efforts.
0604617F	Agile Combat Support	In FY2007, this program includes a new start effort.

0604618F	Joint Direct Attack Munition	In FY2007, this program includes a new start effort.
0604706F	Life Support Systems	In FY2007, this program includes new start efforts.
BUDGET ACTIVITY #6: RDT&E MANAGEMENT SUPPORT (Volume 2)		
0604759F	Major T&E Investment	In FY 2007, Project 4597, Air Force Test Investments, includes new start efforts
BUDGET ACTIVITY #7: OPERATIONAL SYSTEM DEVELOPMENT (Volume 3)		
0207170F	JHMCS	In FY2007 and beyond, funds transferred from PE 0604012F to PE 0207170F. This is a new start.
0207418F	TAC Airborne Control System	In FY 2007 this is the first time this program element (PE) has had Research, Development, Testing and Evaluation (RDT&E) funds, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.
0303131F	Minimum Essential Emergency Communications Network (MEECN)	In FY2007, this program includes a new start effort.
0303140F	Information Systems Security Program	In FY2007, former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), is being split to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stays in BPAC 674861; the AF KMI moves to the new BPAC 675231. However, since the transformational key generation/key provisioning capability will not be built into KMI until Capability Increment (CI)-3, EKMS will continue to provide this capability via a number of temporary interfaces created for that purpose.
0304260F	Airborne SIGINT Enterprise (JMIP)	In FY2007, BPACs 5180, 5182, and 5186 are new starts. This PE began in FY06 and combines signals intelligence (SIGINT) development efforts previously being accomplished in multiple USAF PEs. The funds have been distributed among all seven Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group in order to build a total SIGINT capability. This program element will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. All funds in Compass Bright are 3600 RDT&E. The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2. For BPAC 675180, these funds will be split between the RIVET JOINT, COMBAT SENT, and COBRA BALL programs.
0305173F	Space & Missile Test & Evaluation Center	In FY 2007, all funding from BPAC 4992 was transferred to new BPAC A014 - this re-name better reflects focus of efforts.

0305910F	Spacetrack	In FY 2007 these projects all transferred to PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the Space Situation Awareness construct, with two exceptions: Project 67A008 transferred to PE 0305940F, Space Situation Awareness Operations, for the same reason, and Project 67A009 was terminated in FY 2006 rather than transferred to another PE.
0305917F	Space Architect	In FY 2007 these efforts transferred to PE 0305924F, National Security Space Office, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.
0305924F	National Security Space Office	In FY 2007 this is a new PE. These efforts transferred from PE 0305917F, Space Architect, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.
0305940F	Space Situation Awareness Operations	In FY 2007 this is a new PE. This project transferred from PE 0305910F, Spacetrack, to reflect evolution of space surveillance to the new Space Situation Awareness construct.
0401219F	KC-10S	In FY2007, this program includes a new start effort.
0401839F	Airlift/Other Tactical Data Link	In FY2007, this is a new start.

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

0101815F	Advanced Strategic Programs
0207248F	Special Evaluation Program
0207424F	Evaluation and Analysis Program
0207591F	Advanced Program Evaluation
0208160F	Technical Evaluation System
0208161F	Special Evaluation System
0304311F	Selected Activities
0603801F	Special Programs
0101314F	Night Fist
0304312F	Special Applications Program
0207433F	Advanced Program Technology

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PROGRAM ASSESSMENT

PROGRAM
View Similar Programs

Defense Applied Research Program

This program supports scientific study of physical, biomedical, behavioral or other phenomena to determine the means by which a particular military need may be met. This work is a little more advanced and applied than the basic research from which it may arise.

RATING
What This Rating Means

PERFORMING

Moderately Effective

- **Program purpose and design are clear.** The purpose is to support quality science with potential application to the defense mission. The Department has established methodical processes for setting program goals and for reviewing progress.
- **Reviews of the program by external review panels are not independent of program officials.** Some reviewers are government employees with financial associations to the program areas under review.
- **A large part of the program is executed either without the benefit of military or scientific expertise in choosing the funded work or without allowing the applications process to be open to all capable researchers.** Earmarking of projects in the program has increased in the recent past and has led to these problems.

IMPROVEMENT PLAN
About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Ensuring that adequate funding exists to carry promising basic research results through the applied research phase.
- Changing the expert evaluation process to use fully independent review panels in assessing the performance of the program.
- Working with the research community and Congress to explain the need to limit claims on research grant funds to proposals that independently can meet the standards of a strict merit-review process.

LEARN MORE

- **Details and Current Status of this program assessment.**
- How all Federal programs are assessed.
- Learn more about Defense Applied Research Program.

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PROGRAM ASSESSMENT

PROGRAM
View Similar Programs

Defense Basic Research

This program supports scientific study and experimentation to increase fundamental knowledge in the physical, engineering, environmental and life sciences of potential importance to the defense mission. The program is carried out primarily through grants to universities and non-profit organizations.

RATING
What This Rating Means

PERFORMING

Effective

- **The program has clear purposes.** It helps develop technologies that provide options for new weapons, helps prevent technological suprise by adversaries and develops new scientists who will contribute to the DoD mission in the future.
- **The program is reviewed regularly by technically capable outside expets, who recommend improvements they believe should be implemented.** The experts indicate that the work is of overall high quality.
- **Research earmarks have increased dramatically in the past 15-20 years.** Such projects contribute less than typical projects to meeting the Department's mission, as they don't have to be screened for relevance or quality, and cost more to administer. Earmarks also reduce incentives for other projects to perform to peak potential, as non-earmarked projects encounter less competition for funding.

IMPROVEMENT PLAN
About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Emphasizing the use of independent review panels in assessing the performance of the program.
- Working with the research community and Congress to explain the need to limit claims on research grant funds to proposals that independently can meet the standards of a strict merit-review process.

LEARN MORE

- **Details and Current Status of this program assessment.**
- How all Federal programs are assessed.
- Learn more about Defense Basic Research.

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PROGRAM ASSESSMENT

PROGRAM
View Similar Programs

Defense Small Business Innovation Research/Technology Transfer

This program uses funding set aside specifically for small businesses to investigate the potential for new technologies to help meet the Department's mission and funds the early stage of development of such technologies by small businesses.

RATING
What This Rating Means

NOT PERFORMING

Results Not Demonstrated

- **Provides funds to small businesses, but has poor controls on unproductive spending.**
- **Continues to provide funding to companies with track records of poor performance.**
- **Overestimates commercial successes resulting from Federal support by counting additional investment on par with product sales as measures of success.** Product sales are the ultimate measure of success in the marketplace.

IMPROVEMENT PLAN
About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Tightening eligibility requirements for accepting proposals from companies and individuals that repeatedly fail to sell resulting products in the marketplace.
- Changing the way companies' past performance is assessed to ensure that it more closely matches the intent of the law (Section 638 of Title 15, USC) that the program support product commercialization.
- Seeking to get highly successful awardees to enter the mainstream of Defense contracting.

LEARN MORE

- **Details and Current Status of this program assessment.**
- How all Federal programs are assessed.
- Learn more about Defense Small Business Innovation Research/Technology Transfer.

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EXPECT FEDERAL PROGRAMS TO PERFORM WELL, AND BETTER EVERY YEAR.

PROGRAM ASSESSMENT

PROGRAM

View Similar Programs

National Security Space Weather Programs

The weather satellite programs reviewed include current operational systems and the next generation satellites under development. Weather satellites collect global high resolution visible and thermal cloud imager and other meteorological/oceanographic date supporting DoD forces and civil agencies.

RATING

What This Rating Means

PERFORMING

Adequate

- **The National Security Weather Satellite Programs are adequately meeting their mission requirements.** The current weather satellite program continues to provide the DoD assured access to weather data remote areas such as Afghanistan and Iraq.

- **The next-generation weather satellite system being developed jointly with DOC, has experienced some development challenges and cost overruns, and is currently under review by the DoD and DOC.** However, this new program will fully meet military and civil user requirements and significantly improve weather forecasting and climate prediction in the future.

IMPROVEMENT PLAN

About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Working with Commerce to address programmatic problems and analyzing system and architectural replan options based on findings from various studies provided by the program office.

LEARN MORE

- **Details and Current Status of this program assessment.**
- How all Federal programs are assessed.
- Learn more about National Security Space Weather Programs.

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EXPECT FEDERAL PROGRAMS TO PERFORM WELL, AND BETTER EVERY YEAR.

PROGRAM ASSESSMENT

PROGRAM
View Similar Programs

Space Launch

This set of programs provides the United States with satellite launch capability. The systems includes the launch vehicles, ground infrastructure and launch range capability to support satellite launches and other national security space operations.

RATING
What This Rating Means

PERFORMING
Adequate

- **The assessment found that the Evolved Expendable Launch Vehicle (EELV) program has demonstrated good progress in achieving its annual and long-term goals.** The EELV has performed flawlessly to date, with a 100% launch success rate.
- **New independent evaluations will need to be accomplished in the next cycle to evaluate the effectiveness of achieving cost, schedule and performance goals for various space launch programs.**

IMPROVEMENT PLAN
About Improvement Plans

We are taking the following actions to improve the performance of the program:

- Continue monitoring milestones for schedule compliance to ensure programmatic adjustments can be made in a timely and efficient manner without disrupting planned satellite launches.
- Ensure the satellite launch programs are flexible enought to respond to changing conditions, while maintaining the necessary capabilities described in National Space Transportation policy.

LEARN MORE

- **Details and Current Status of this program assessment.**
- How all Federal programs are assessed.
- Learn more about Space Launch.

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PE NUMBER: 0207170F
PE TITLE: JHMCS

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207170F JHMCS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	2.287	3.897	3.144	2.530	2.539	Continuing	TBD
5226 Joint Helmet Mounted Cueing System	0.000	0.000	2.287	3.897	3.144	2.530	2.539	Continuing	TBD

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

(U) A. Mission Description and Budget Item Justification

Note: The funding for JHMCS in FY06 and prior is located under PE 0604012F.

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

Milestone III was successfully approved in Jan 04, and correspondingly, the first Full Rate Production (FRP) contract was awarded May 04, followed by FRP-2 in Jun 05. Continued activities include Electronic Unit obsolescence redesign; a systems engineering approach for implementing alternate displays, such as night vision; software updates; integration; improvements to Reliability and Maintainability (R&M); system upgrade studies/analysis; other obsolescence upgrades; improved magnetic mapping processes to reduce maintenance manhours and life cycle costs; and efforts to support the transition to Performance Based Logistics Partnership (PBL/P) and depot activation.

This program is in budget activity 7 - Operational System Development, because the project in this program element support development acquisition programs or upgrades in support of operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	0.000	2.261
(U)	Current PBR/President's Budget	0.000	0.000	2.287
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY 2005 and 2006 Program Change Summary are under PE 0604012F.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207170F JHMCS	PROJECT NUMBER AND TITLE: 5226 Joint Helmet Mounted Cueing System

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5226	Joint Helmet Mounted Cueing System	0.000	0.000	2.287	3.897	3.144	2.530	2.539	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

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

(U) A. Mission Description and Budget Item Justification

Note: The funding for JHMCS in FY06 and prior is located under PE 0604012F.

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

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This program is in budget activity 7 - Operational System Development, because the project in this program element support development acquisition programs or upgrades in support of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue deficiencies resolution, reliability improvements, P3I activities, obsolescense upgrades, analysis/studies, and night vision integration	0.000	0.000	1.984
(U) Program Management and Support	0.000	0.000	0.303
(U) Total Cost	0.000	0.000	2.287

Note: FY 2005/2006 accomplishments/planned program is in PE 0604012F.

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, BA 5, PE 0604201F, Integrated Avionics Planning and Development	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	45.151
(U) RDT&E, BA 5, PE 0604012F,	2.245	2.870	0.000	0.000	0.000	0.000	0.000	0.000	5.115

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207170F JHMCS**	PROJECT NUMBER AND TITLE **5226 Joint Helmet Mounted Cueing System**

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

JHMCS

Note: Prior to FY01 JHMCS was funded as part of PE 0604201F. Funding after FY06 is in new PE 0207170F.

(U) D. Acquisition Strategy

JHMCS is an ACAT III joint USAF/USN program (USAF - executive service). The development contract structure is a Cost Plus Award Fee (CPAF). The CPAF contract is through Boeing - St. Louis for development and integration into the F-15 and F/A-18 aircraft. All other aircraft integration will be handled by the respective platform prime contractors. All major contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Development and Integration, Reliability Improvements, P3I, Obsolescense Upgrades, Analysis/Studies, and Night Vision Integration	SS, CPFF	Boeing Co. St Louis, MO	0.000	0.000		0.000		1.984		0.000	1.984	
Subtotal Product Development			0.000	0.000		0.000		1.984		0.000	1.984	0.000
Remarks:												
(U) Support												
Cost Reduction Analysis	C, T&M	Various	0.000	0.000		0.000		0.000		0.000	0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Various	Various	Various	0.000	0.000		0.000		0.000			0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Program Management and Administration	C, T&M	Various	0.000	0.000		0.000		0.303		0.000	0.303	
Subtotal Management			0.000	0.000		0.000		0.303		0.000	0.303	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		2.287		0.000	2.287	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207170F JHMCS	PROJECT NUMBER AND TITLE 5226 Joint Helmet Mounted Cueing System

JHMCS Schedule

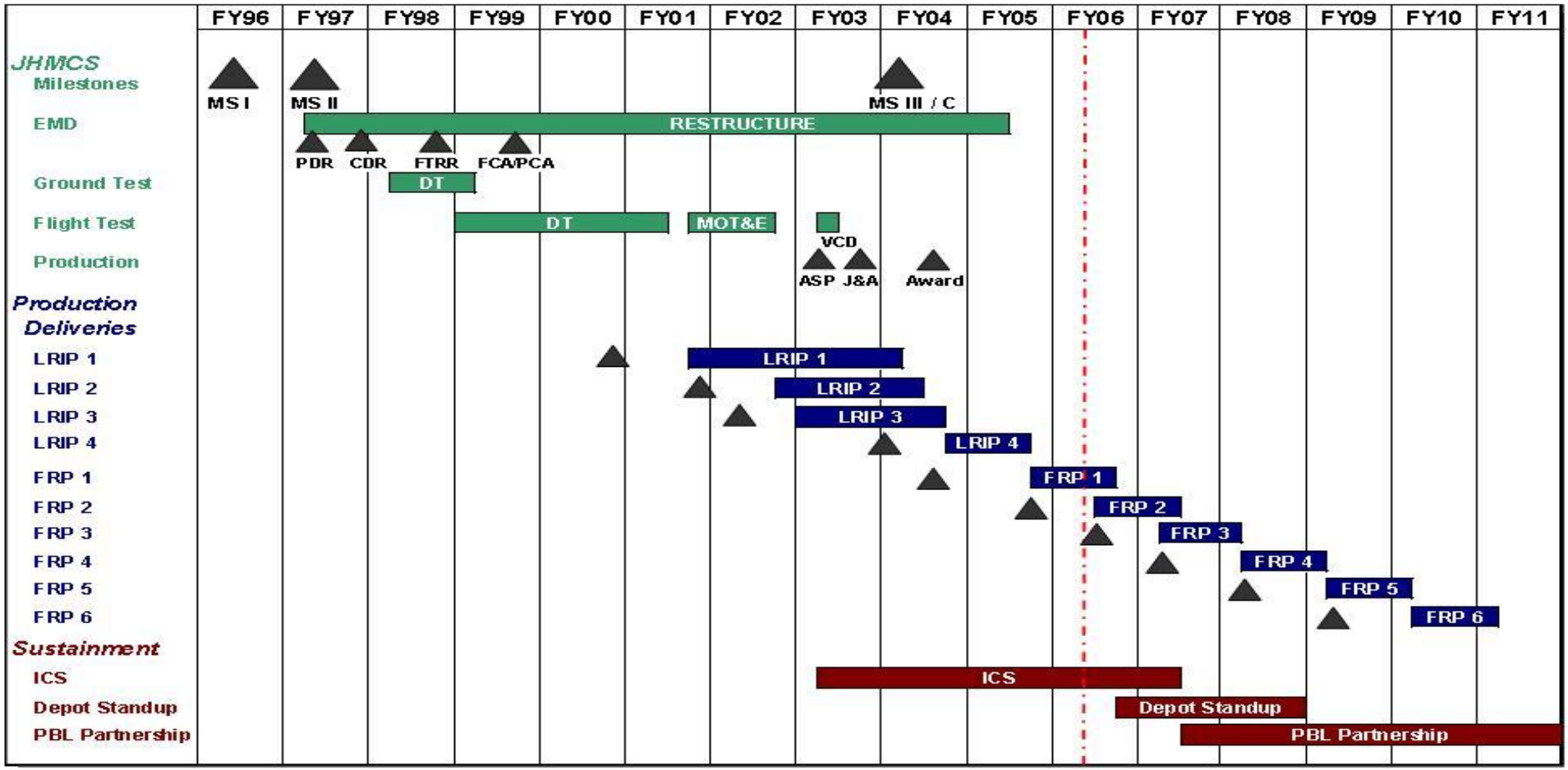

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207170F JHMCS**	PROJECT NUMBER AND TITLE **5226 Joint Helmet Mounted Cueing System**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Continue R&M Fixes/Software Updates/P3I			2-4Q
(U) FRP-4 Contract Award			2Q

FY06 and prior events can be found in PE 0604012F

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	7.345	7.715	8.014	8.013	8.014	8.199	8.339	Continuing	TBD
5066	Anti-Tamper Technology Executive Agent	7.345	7.715	8.014	8.013	8.014	8.199	8.339	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force is the DoD Executive Agent for implementing Anti-Tamper (AT) policy, developing AT technology, establishing and maintaining a data bank/library, providing proper security mechanisms, and conducting effective validation . The purpose of developing AT measures 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 Executive Agent, the Air Force will coordinate the technology development among the Services, DoD Agencies and laboratories, and with industry. The Anti-Tamper technology development will occur in the following areas: advanced sensor hardware, generic electronic hardware, signature control, access detection & denial, software, and effectiveness. In the advanced sensor hardware area, antenna arrays, focal plane arrays, & T/R modules are areas of importance for AT technology development. AT technology for other advanced sensor hardware will also be developed as required. In the general electronic hardware area, AT technology development will be evaluated first for memory circuits and processors, followed by other electronic hardware. In the signature control area, AT technology development will be evaluated for radar absorbing materials and other low observable techniques. AT technology development for other signature control areas will be evaluated on a case-by-case basis. Measures of Effectiveness (MOEs) and the verification and validation of Anti-Tamper are also areas required further development. The program management activities will coordinate the technology development and establish the Anti-Tamper data bank/library.

Anti-Tamper validation is a significant responsibility assigned to the Air Force from OSD. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to ramp-up in late FY03. Currently, there are approximately eight recognized Anti-Tamper experts throughout DoD. Based on Anti-Tamper validation requirement projections, this number needs to expand to approximately 40 DoD experts by FY07.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0605024F Anti-Tamper Technology Executive Agent

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.789	7.715	8.014
(U)	Current PBR/President's Budget	7.345	7.715	8.014
(U)	Total Adjustments	-0.444	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.006		
	Congressional Increases			
	Reprogrammings	-0.344		
	SBIR/STTR Transfer	-0.094		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0605024F Anti-Tamper Technology Executive Agent	PROJECT NUMBER AND TITLE: 5066 Anti-Tamper Technology Executive Agent	

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5066	Anti-Tamper Technology Executive Agent	7.345	7.715	8.014	8.013	8.014	8.199	8.339	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force is the DoD Executive Agent for implementing Anti-Tamper (AT) policy, developing AT technology, establishing and maintaining a data bank/library, providing proper security mechanisms, and conducting effective validation . The purpose of developing AT measures 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 Executive Agent, the Air Force will coordinate the technology development among the Services, DoD Agencies and laboratories, and with industry. The Anti-Tamper technology development will occur in the following areas: advanced sensor hardware, generic electronic hardware, signature control, access detection & denial, software, and effectiveness. In the advanced sensor hardware area, antenna arrays, focal plane arrays, & T/R modules are areas of importance for AT technology development. AT technology for other advanced sensor hardware will also be developed as required. In the general electronic hardware area, AT technology development will be evaluated first for memory circuits and processors, followed by other electronic hardware. In the signature control area, AT technology development will be evaluated for radar absorbing materials and other low observable techniques. AT technology development for other signature control areas will be evaluated on a case-by-case basis. Measures of Effectiveness (MOEs) and the verification and validation of Anti-Tamper are also areas required further development. The program management activities will coordinate the technology development and establish the Anti-Tamper data bank/library.

Anti-Tamper validation is a significant responsibility assigned to the Air Force from OSD. All DoD acquisition programs, Foreign Military Sales, and Direct Commercial Sales with critical technology/critical information are required to have an Anti-Tamper plan with appropriate validation. The resources required to review Anti-Tamper plans and conduct Anti-Tamper validation began to ramp-up in late FY03. Currently, there are approximately eight recognized Anti-Tamper experts throughout DoD. Based on Anti-Tamper validation requirement projections, this number needs to expand to approximately 40 DoD experts by FY07.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program	0.000	0.000	0.000
(U)	Anti-Tamper Technology Development	2.668	2.878	2.745
(U)	Anti-Tamper Verification & Validation	2.955	3.150	3.295
(U)	Database & Website	0.409	0.311	0.528
(U)	Program Management Activity	1.313	1.376	1.446
(U)	Total Cost	7.345	7.715	8.014

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0605024F Anti-Tamper Technology Executive Agent**	PROJECT NUMBER AND TITLE **5066 Anti-Tamper Technology Executive Agent**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) N/A

(U) D. Acquisition Strategy

Program Research and Development Announcements (PRDAs) will be used for the Anti-Tamper technology development. A sole source contract will be used for some of the technical support.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Anti-Tamper Technology Development												
AFRL/AT-SPI	PRDA			1.113		0.714		0.714		Continuing	TBD	TBD
Sandia National Lab	MIPR			0.320		0.350		1.350		Continuing	TBD	TBD
Technology Contract Activities				2.699		2.027		1.100		Continuing	TBD	TBD
Subtotal Anti-Tamper Technology Development			0.000	4.132		3.091		3.164		Continuing	TBD	TBD
Remarks:												
(U) Anti-Tamper Verification & Validation												
Air Force AT Field Agent (412 TW/EWF)	MIPR			0.400		0.450		0.550		Continuing	TBD	TBD
Navy AT Field Agent (PMR-51)	MIPR			0.550		0.600		0.700		Continuing	TBD	TBD
Army AT Field Agent (Aviation & Missile Cmd/Redstone)	MIPR			0.500		1.000		1.100		Continuing	TBD	TBD
DoD Executive Agent Field Agent (AFRL/AT-SPI)	Allot			0.850		1.400		0.553		Continuing	TBD	TBD
Sandia National Lab	MIPR			0.300		0.350		0.450		Continuing	TBD	TBD
Contingency Planning				0.218		0.400		0.400		Continuing	TBD	TBD
Subtotal Anti-Tamper Verification & Validation			0.000	2.818		4.200		3.753		Continuing	TBD	TBD
Remarks:												
(U) Education, Out-Reach, and other support												
AFMC/A9S						0.010		0.025		Continuing	TBD	TBD
AFRL/AT-SPI	Allot			0.105		0.348		0.383		Continuing	TBD	TBD
AT Course						0.016		0.016		Continuing	TBD	TBD
DAU Course						0.050		0.050		Continuing	TBD	TBD
AT PSO				0.290							0.290	
Subtotal Education, Out-Reach, and other support			0.000	0.395		0.424		0.474		Continuing	TBD	TBD
Remarks:												
(U) Management												
AFRL/AT-SPI	Allot			0.000		0.000		0.623		Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.623		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	7.345		7.715		8.014		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0605024F Anti-Tamper Technology Executive Agent**	PROJECT NUMBER AND TITLE **5066 Anti-Tamper Technology Executive Agent**

PE 060524F - Anti-Tamper

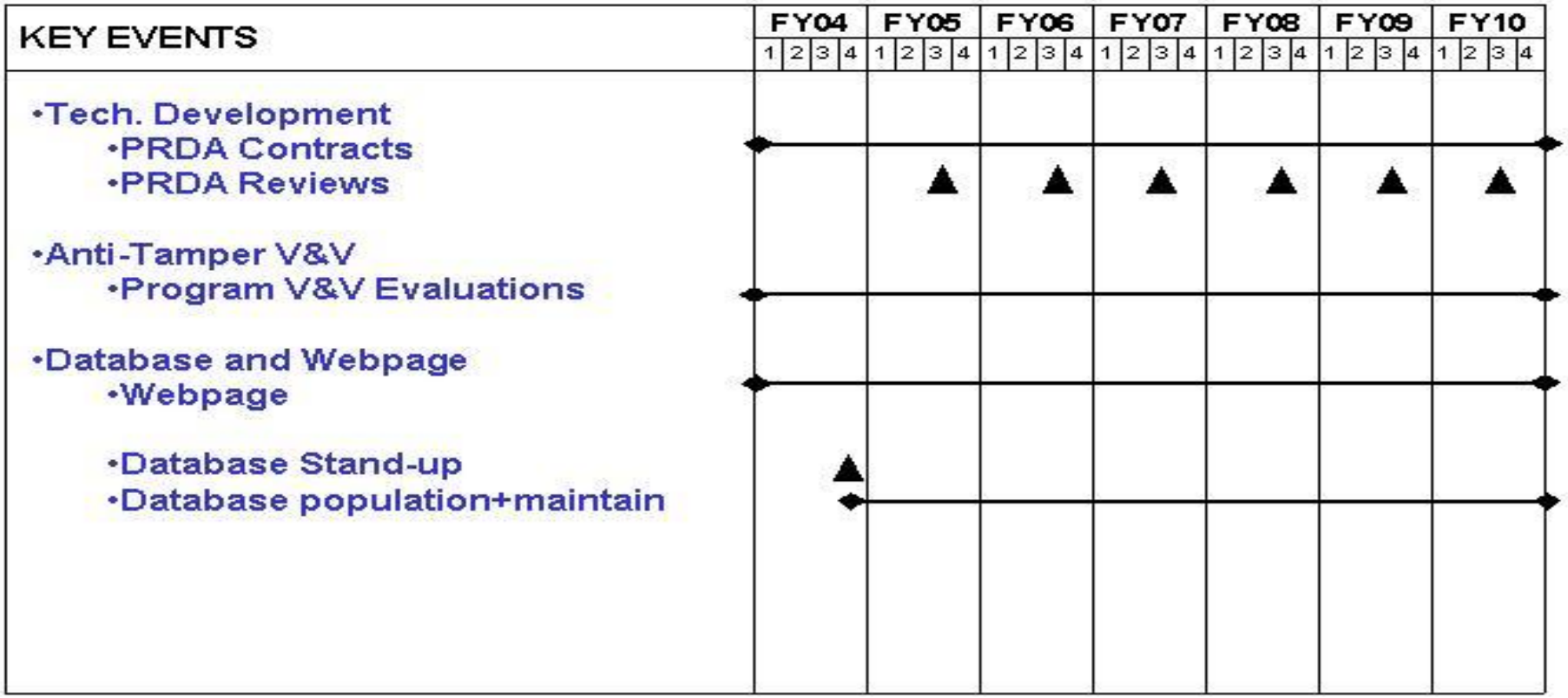

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0605024F Anti-Tamper Technology Executive Agent**	PROJECT NUMBER AND TITLE **5066 Anti-Tamper Technology Executive Agent**

PE 060524F - Anti-Tamper

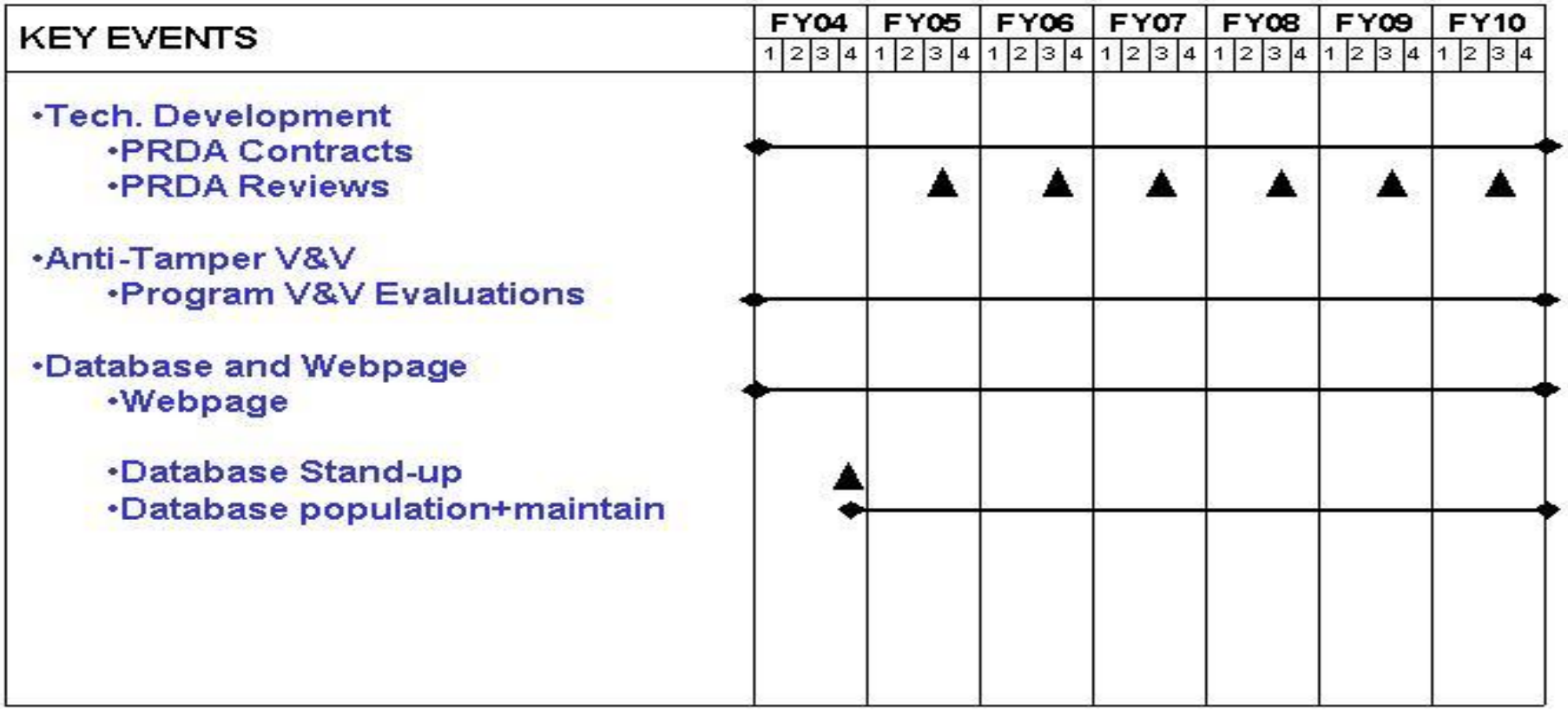

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0605024F Anti-Tamper Technology Executive Agent**	PROJECT NUMBER AND TITLE: **5066 Anti-Tamper Technology Executive Agent**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Anti-Tamper Technology Development	1-4Q	1-4Q	1-4Q
(U) -- PRDA Reviews	1-3Q	1-3Q	1-3Q
(U) -- PRDA Deliverables	4Q	4Q	4Q
(U) Anti-Tamper Verification & Validation	1-4Q	1-4Q	1-4Q
(U) Database and Website	1-4Q	1-4Q	1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	29.782	26.748	71.379	45.138	30.230	5.124	0.000	Continuing	TBD
4810	Avionics Midlife Improvement (AMI)	9.095	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5039	B-52 Modernization	20.687	26.748	71.379	45.138	30.230	5.124	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

CONECT

Modernized communications and data link capability is achieved through the through the Combat Network Communication Technology (CONECT) modification program. CONECT is a three-phased acquisition approach, which integrates several capabilities into the B-52 weapon system. CONECT full capability will be fielded commensurate with delivery of government furnished equipment (FAB-T). Phase A, Conventional In-flight Beyond Line-of-Sight (BLOS) Rapid Re-tasking (CIBRR) provides the capability for machine-to-machine interface for rapid re-tasking/re-targeting of CALCM and J-series weapons before release. This phase also provides Link 16 Tactical Data Link (TDL) capability for Line-of-Sight (LOS) in-theater TDL communication of J-series messages, and is funded for development and production through PEs 0207446F and 0207423F respectively. In addition, Phase A hardware and software will provide a computer network infrastructure to support distributed processing and control functions; upgraded Multi-Functional Color Displays (MFCDs) at all crew stations; and the ability to receive intelligence threat data from the Integrated Broadcast System/Receiver (IBS/R). Phase B will integrate the Family of Advanced BLOS Terminals (FAB-T) Extremely High Frequency (EHF) Satellite Communications (SATCOM) system hardware to receive Low Data Rate (LDR) transmitted Emergency Action Messages (EAMs) in support of STRATCOM. This phase will support limited interface between FAB-T and CIBRR but will fully integrate Link 16 Common Link Integration Processing (CLIP) software for all applicable J-series bomber messages and integrate a new interphone system. Phase C is a software-only modification to fully integrate CIBRR and FAB-T Extended Data Rate (XDR) capability complete with Internet Protocol (IP) based capabilities for Global Interface Grid (GIG) interoperability. The FAB-T terminal and antenna are architecture keystones for integration of B-52 conventional BLOS data link communication.

Trainers & CONECT

B-52 training devices are a mix of 1970's and '80's technology. Most have reached their design capacity and must be upgraded to remain useful training tools. Upgrades to training systems must occur to maintain currency with aircraft configuration. CONECT program will establish a system integration laboratory for flight simulator development of aircrew trainers. The Defensive System Station computer re-host will be part of the CONECT upgrade for CIBRR, FAB-T and Link-16 functionality. Aircrew trainers, and to a lesser extent maintenance trainers will operate in real-world, virtual training, and Distributed Mission Operations (DMO) environments.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS

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

Weapons Improvements

B-52 Modernization is also responsible for the improvement of conventional warfare capability. This effort provides development and testing to rapidly integrate weapons with a large array of properties, but not limited to: stealth, hard target penetration, standoff, adverse weather, precision strike, loiter, decoy, defense suppression, post-release/launch re-target capability, area denial, mobile targets, and multiple simultaneous attack. These capabilities will be provided through the integration of advanced weapons both internally (MIL-STD-1760 in the bomb bay) and externally.

The B-52 Modernization program will fully integrate the Advanced Targeting Pod by linking ATP control, display and target geo-location with the B-52s offensive avionics system.

Test & Evaluation

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	31.090	22.784	71.215
(U)	Current PBR/President's Budget	29.782	26.748	71.379
(U)	Total Adjustments	-1.308	3.964	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.024	-0.386	
	Congressional Increases		4.350	
	Reprogrammings	-0.420		
	SBIR/STTR Transfer	-0.864		
(U)	Significant Program Changes:			
	Congressional Add of $4.350 for MIL-STD-1760			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **4810 Avionics Midlife Improvement (AMI)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4810	Avionics Midlife Improvement (AMI)	9.095	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The B-52H Offensive Avionics System (OAS) has several subsystems which must be replaced. The Inertial Navigation System (INS) utilizes 1960 unsupportable spinning mass gyro technology. The Avionics Control Unit (ACU) is a computer system with limited processing capability and memory. The Data Transfer Unit Cartridges (DTUCs) are bulky, unreliable, and obsolete. The AMI program will use non developmental components and technology to replace these subsystems and their associated software, significantly increasing OAS reliability, maintainability, supportability. Reliability, DMS deficiencies, and performance improvements to the OAS are also addressed in this program. Funding is provided for engineering and planning studies for potential future weapon system enhancements (weapons, sensors, and avionics) and for weapon system operation/safety, supportability, maintainability, reliability, and Total Ownership Cost (TOC) improvements.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Design, development of replacement software	1.300		
(U) Ground and Flight Test	7.669		
(U) System Program Office Support	0.126		
(U) Total Cost	9.095	0.000	0.000

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E	9.095							0.000	
(U)	Other APPN									
(U)	Aircraft Procurement (BP1100)	41.962	36.270	18.251						

(U) D. Acquisition Strategy

The AMI program contracted with Boeing Wichita for aircraft hardware integration and Flight Management System and the Stores Management Overlay software development. Boeing works with selected vendors which will provide EMD hardware. The Government will subsequently contract with these specific vendors for procurement of production hardware to support aircraft installations.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **4810 Avionics Midlife Improvement (AMI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing, Wichita	CONTRACT										0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
OC-ALC/LH	PMA										0.000	
OC-ALC/LAS	206										0.000	
OO-ALC/LIR	616										0.000	
SER/CASU	MIPR										0.000	
Miscellaneous	BTR/SIBR										0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
419 FLTS	Project Order			9.095							9.095	
Subtotal Test & Evaluation			0.000	9.095		0.000		0.000		0.000	9.095	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	9.095		0.000		0.000		0.000	9.095	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 4810 Avionics Midlife Improvement (AMI)

Program Status Schedule

Rapidly delivering war-winning capability

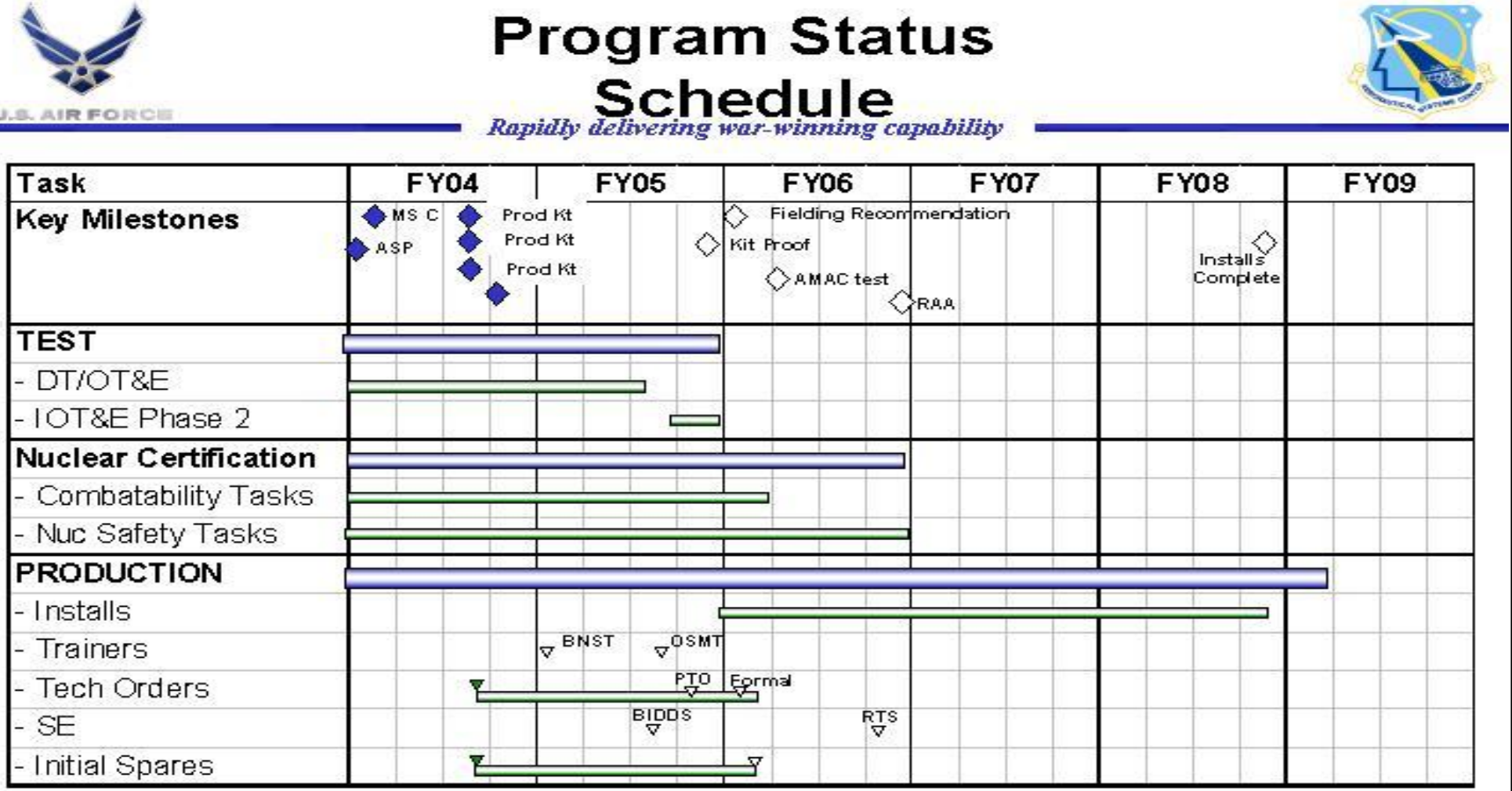

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101113F B-52 SQUADRONS**	PROJECT NUMBER AND TITLE **4810 Avionics Midlife Improvement (AMI)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Ground & Flight Test	1-3Q		
(U) Kit Proof	4Q		
(U) Production	1-4Q		
(U) Trainers	2-4Q		

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS

PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5039 B-52 Modernization	20.687	26.748	71.379	45.138	30.230	5.124	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

CONECT

Modernized communications and data link capability is achieved through the through the Combat Network Communication Technology (CONECT) modification program. CONECT is a three-phased acquisition approach, which integrates several capabilities into the B-52 weapon system. CONECT full capability will be fielded commensurate with delivery of government furnished equipment (FAB-T). Phase A, Conventional In-flight Beyond Line-of-Sight (BLOS) Rapid Re-tasking (CIBRR) provides the capability for machine-to-machine interface for rapid re-tasking/re-targeting of CALCM and J-series weapons before release. This phase also provides Link 16 Tactical Data Link (TDL) capability for Line-of-Sight (LOS) in-theater TDL communication of J-series messages, and is funded for development and production through PEs 0207446F and 0207423F respectively. In addition, Phase A hardware and software will provide a computer network infrastructure to support distributed processing and control functions; upgraded Multi-Functional Color Displays (MFCDs) at all crew stations; and the ability to receive intelligence threat data from the Integrated Broadcast System/Receiver (IBS/R). Phase B will integrate the Family of Advanced BLOS Terminals (FAB-T) Extremely High Frequency (EHF) Satellite Communications (SATCOM) system hardware to receive Low Data Rate (LDR) transmitted Emergency Action Messages (EAMs) in support of STRATCOM. This phase will support limited interface between FAB-T and CIBRR but will fully integrate Link 16 Common Link Integration Processing (CLIP) software for all applicable J-series bomber messages and integrate a new interphone system. Phase C is a software-only modification to fully integrate CIBRR and FAB-T Extended Data Rate (XDR) capability complete with Internet Protocol (IP) based capabilities for Global Interface Grid (GIG) interoperability. The FAB-T terminal and antenna are architecture keystones for integration of B-52 conventional BLOS data link communication.

Trainers & CONECT

B-52 training devices are a mix of 1970's and '80's technology. Most have reached their design capacity and must be upgraded to remain useful training tools. Upgrades to training systems must occur to maintain currency with aircraft configuration. CONECT program will establish a system integration laboratory for flight simulator development of aircrew trainers. The Defensive System Station computer re-host will be part of the CONECT upgrade for CIBRR, FAB-T and Link-16 functionality. Aircrew trainers, and to a lesser extent maintenance trainers will operate in real-world, virtual training, and Distributed Mission Operations (DMO) environments.

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

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE 5039 B-52 Modernization

Weapons Improvements

B-52 Modernization is also responsible for the improvement of conventional warfare capability. This effort provides development and testing to rapidly integrate weapons with a large array of properties, but not limited to: stealth, hard target penetration, standoff, adverse weather, precision strike, loiter, decoy, defense suppression, post-release/launch re-target capability, area denial, mobile targets, and multiple simultaneous attack. These capabilities will be provided through the integration of advanced weapons both internally (MIL-STD-1760 in the bomb bay) and externally.

The B-52 Modernization program will fully integrate the Advanced Targeting Pod by linking ATP control, display and target geo-location with the B-52s offensive avionics system.

Test & Evaluation

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

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

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Product Development	13.200	18.750	39.779
(U)	Simulation/Trainer Development	1.000	4.400	23.600
(U)	Government Test	0.100	0.141	3.700
(U)	Program Support/Modeling and Simulation/Studies and Analysis	6.143	0.592	1.000
(U)	Management Support	0.244	2.865	3.300
(U)	Total Cost	20.687	26.748	71.379

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Appn 36, PE 0207446F, Bomber TDL Core	12.980	42.880	87.700						TBD
(U)	Other APPN									TBD
(U)	Appn 10, PE 0101113F, B52 Squadrons, Aircraft Procurement BP11, Mods	5.923			133.050	127.416	44.068	29.345	17.270	TBD

RDT&E funding provided by PE 27446F, Bombers Tactical Data Link for integration of Link-16

(U) D. Acquisition Strategy

B-52 modernization is a development program that will be sole sourced to Boeing. Boeing will be developing the architecture for a system to process the information;

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101113F B-52 SQUADRONS**	PROJECT NUMBER AND TITLE **5039 B-52 Modernization**

procuring information processing equipment from their subcontractors; and developing drawings, data, and time compliance technical order (TCTO) for installation on the B-52.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **5039 B-52 Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CONECT Pre SDD	T&M	Boeing, Wichita KS		7.200	Dec-04						7.200	
CONECT SDD	CPFF	Boeing, Wichita KS		6.000	Mar-05	14.400	Dec-05	39.779		Continuing	TBD	
1760 Integration	Contract	TBD				4.350					4.350	
Subtotal Product Development			0.000	13.200		18.750		39.779		Continuing	TBD	0.000
Remarks:												
(U) Support												
Simulator/Trainer	616	509 MASSG, OO-ALC, UT		1.000		4.400		23.600		Continuing	TBD	
CONECT Program Support, Studies & Analysis	Contract			0.750		0.592		1.000		Continuing	TBD	
OC-ALC Studies & Analysis	Contract	Boeing, Wichita KS		5.393							5.393	
Subtotal Support			0.000	7.143		4.992		24.600		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
419 FLTS	Project Order			0.100		0.141		3.700		Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.100		0.141		3.700		Continuing	TBD	0.000
Remarks:												
(U) Management												
AEASS		Wright-Patterson AFB, OH				2.150		2.485		Continuing	TBD	
327 BMSG		Tinker AFB, OK		0.244		0.715		0.815		Continuing	TBD	
Subtotal Management			0.000	0.244		2.865		3.300		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	20.687		26.748		71.379		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101113F B-52 SQUADRONS	PROJECT NUMBER AND TITLE: 5039 B-52 Modernization

Exhibit R-4: B-52 Modernization

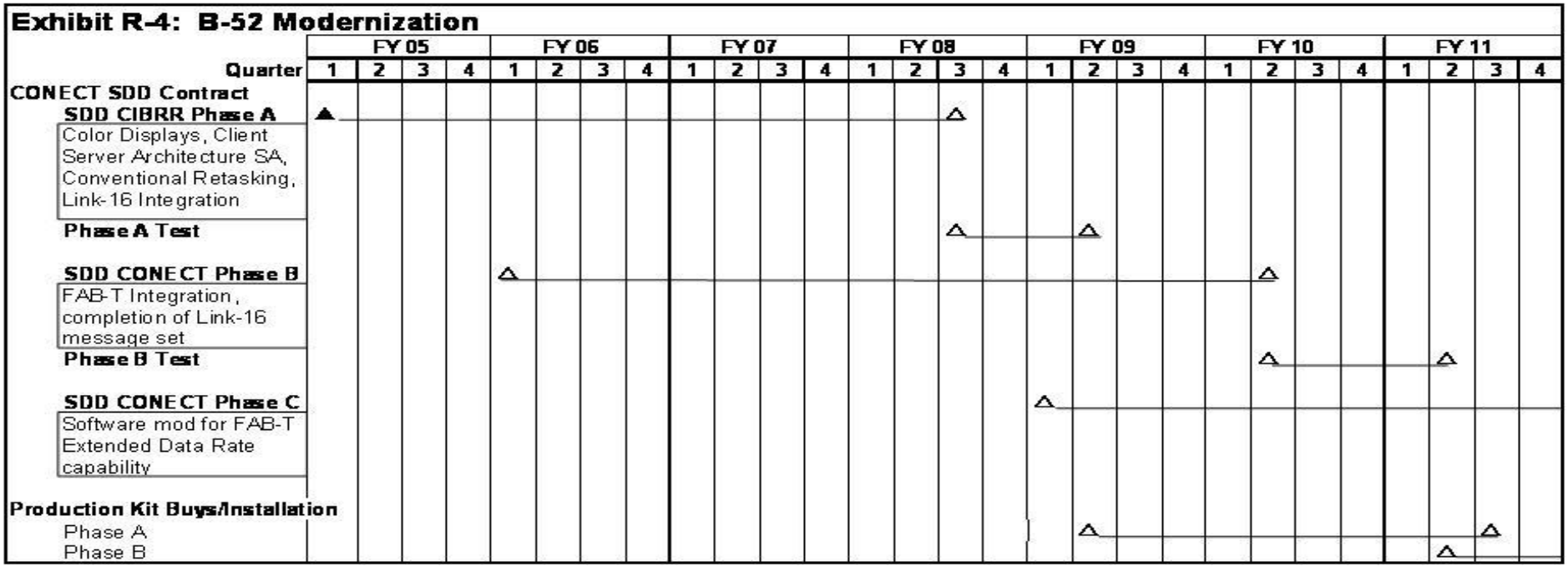

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101113F B-52 SQUADRONS**	PROJECT NUMBER AND TITLE **5039 B-52 Modernization**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) CONECT SDD Contract Award	2Q		
(U) CONECT Phase A Development	2-4Q	1-4Q	1-4Q
(U) CONECT Phase B Development		1-4Q	1-4Q
(U) CONECT Phase C Development (starts FY 09)			

PE NUMBER: 0101120F
PE TITLE: ADVANCED CRUISE MISSILE

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	6.609	1.960	6.983	3.060	0.395	0.412	0.428	Continuing	TBD
4798 Life Extension Program	6.609	1.960	6.983	3.060	0.395	0.412	0.428	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

AGM-129, The Advanced Cruise Missile (ACM), is a low-observable air-launched, strategic missile with significant improvements over the Air Launched Cruise Missile B version (ALCM-B) in range, accuracy, and survivability. Armed with a W-80 warhead, it is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within any enemy's territory. The ACM is designed for B-52H external carriage and there are currently 398 ACM in the inventory. The ACM fleet design service life expires between the years 2003 and 2008.

A Service Life Extension Plan (SLEP) was developed to meet an AF Long Range Plan requirement to extend ACM Service Life to FY30. The results of Service Life Extension Program (SLEP) studies will identify system components that cannot be sustained beyond the standard service life. The current system is experiencing obsolescence of parts/components. Missile support equipment and components are becoming non-supportable. Service Life Extension of this critical weapon is essential to meet ACC and STRATCOM SIOP commitments.

The initial requirement for ACM SLEP was the development of a conforming Joint Test Instrumentation Kit (JTIK) door design. The program developed 2 prototype JTIK doors for qualification and system-level testing. JTIK development satisfied test range safety requirements by incorporating Global Positioning System (GPS) tracking capability and a Department of Energy (DOE) Joint Test Assembly (JTA) redesign.

Together government and contractor personnel prepared an efficient, economical program schedule, in order to realize potential program economies of scale and to ensure the contractor can manage any increased workload. The JTIK development effort was a low risk program, but an essential effort because DOE-compliant JTIK doors are required in FY04 in order to continue conducting flight testing for weapon system reliability data collection used for Nuclear Certification and support of the W-80 Warhead Life Extension Program (LEP).

The ACM Subsystem Simulator (SSS) and Advanced Missile Simulator (AMS) Upgrade will develop, integrate, test and install a real-time simulation system that replaces aging and obsolete equipment. This requirement was identified as part of the ACM SLEP study to upgrade the simulation systems in the AF Avionics Software Integration Facility (ASIF) and the System Integration Lab (SIL). To extend the service life of the ACM to FY30, the real-time computer based simulation systems must be upgraded to resolve aging and obsolescence issues. These systems have many irreplaceable electronic components with high probability of failure. The ability to resolve real-time missile hardware and software anomolies and missile flight test investigations will not be possible without a reliable simulation system provided by this upgrade.

Development of an ACM Aging and Surveillance (A&S) program for the Nuclear Weapons Sub-System (NWSS) components is a Program Management Directive (PMD) requirement. The A&S program is required to analyze critical warhead interface missile components. Fault diagnostics will be accomplished and the data collected from the A&S tests will indicate failure trends and the rate of aging within each component. This effort is the second phase of what was initiated in 1999 to

develop test equipment, utilizing Commercial Off-the-Shelf (COTS) to the maximum extent possible, and software necessary to lay in a test program for the NWSS components.

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

The W-80 LEP replaces warhead components to extend its service life. The National Nuclear Security Administration (NNSA) is responsible for most of the refurbishment costs associated with the W-80 Warhead. The Air force is responsible for funding ACM/W-80 integration. Integration includes evaluation of interface control changes as part of the Initial Concept Design, missile testing and logistics requirements necessary to support a First Production Unit (FPU) delivery of 2009.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.672	1.989	7.034
(U)	Current PBR/President's Budget	6.609	1.960	6.983
(U)	Total Adjustments	-1.063	-0.029	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.006		
	Congressional Increases			
	Reprogrammings	-0.842		
	SBIR/STTR Transfer	-0.215	-0.029	
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4798 Life Extension Program	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4798 Life Extension Program	6.609	1.960	6.983	3.060	0.395	0.412	0.428	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

AGM-129, The Advanced Cruise Missile (ACM), is a low-observable air-launched, strategic missile with significant improvements over the Air Launched Cruise Missile B version (ALCM-B) in range, accuracy, and survivability. Armed with a W-80 warhead, it is designed to evade air and ground-based defenses in order to strike heavily defended, hardened targets at any location within any enemy's territory. The ACM is designed for B-52H external carriage and there are currently 398 ACM in the inventory. The ACM fleet design service life expires between the years 2003 and 2008.

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Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101120F ADVANCED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4798 Life Extension Program**

develop test equipment, utilizing Commercial Off-the-Shelf (COTS) to the maximum extent possible, and software necessary to lay in a test program for the NWSS components.

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

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

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Complete Subsystem Simulator (SS) software, delivery of both Subsystem Simulators (SS) and Computer Support System (CSS), and documentation delivery	1.200		
(U)	Accomplish validation/acceptance testing of Subsystem Simulators and Computer Support System	0.500		
(U)	Complete delivery, validation & acceptance testing of AMS, and documentation delivery	1.330		
(U)	Software Modeling and documentation delivery			0.400
(U)	Continue contractor Interface Control Document (ICD) support and interface change evaluations for W-80 LEP	1.110		
(U)	Continue ACM/W-80 Integration Ground Test and Flight Test Support	1.469		
(U)	ACM/W-80 Service System Test And Repair (Service STAR) re-design/modification	1.000		
(U)	Continue ACM/W-80 Integration and data development support		0.185	
(U)	Conduct of ACM/W-80 Development Flight Testing		1.196	
(U)	ACM/W-80 interface compatability testing		0.579	
(U)	Conduct ACM/W-80 Qualification Flight Testing			2.000
(U)	Conduct Electromagnetic Interference and Compatability (EMIC) Testing			0.970
(U)	Conduct missile interface compatability testing			0.998
(U)	Conduct Cruise Missile Functional Ground Test (FGT) Integration Testing and Verification			0.937
(U)	Developmental Test in FGT Facility			1.200
(U)	Develop FGT Supportability Plan			0.478
(U)	Total Cost	6.609	1.960	6.983

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101120F ADVANCED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4798 Life Extension Program

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (WSC 20ACMA, P-21)	4.074	3.208	1.352	0.129	0.042	0.032	0.048	Continuing	TBD
(U) MPAF, Replenishment Spares (BA04, PE 0101120F, P-16)	7.676	6.238	1.946	0.350	0.362	1.688	1.712	Continuing	TBD
(U) MPAF, Missile Modification Initial Spares (BA04, PE 0101120F, P-16)	0.307	0.308	0.249	0.257	0.265	0.000	0.000	Continuing	TBD

(U) D. Acquisition Strategy

JTIK door development was performed by the prime contractor, Raytheon, utilizing Cost Plus Fixed Fee (CPFF). Sub-System Simulator and Advanced Missile Simulator Upgrades will be performed by the prime contractor, Raytheon, utilizing a Firm Fixed Price (FFP) contract. Aging & Surveillance (A&S) program development is planned to by a FFP contract with E-Spectrum Technologies. The Cruise Missile FGT development will be performed by the prime contractor, utilizing a FFP, Cost Plus and Time & Materials (T&M) contract. Contract support for W-80 LEP will be acquired using T&M on existing sustainment contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Joint Test Instrumentation Kit (JTIK) Development	CPFF	Raytheon, Tucson AZ									0.000	
Subsystem Simulator (SS)/Advanced Missile Simulator (AMS) Development	FFP	Raytheon, Tucson AZ	4.941	2.961	Nov-04			0.400			8.302	7.902
Nuclear Weapons Sub-System (NWSS) Aging & Surveillance (A&S)	FFP	E-Spectrums, San Antonio TX	2.054								2.054	2.025
Functional Ground Test (FGT) Development	FFP/Cost Plus/T&M	Raytheon, Tucson AZ	5.000					2.615	Oct-07		7.615	8.017
W80 LEP Support	T&M	Raytheon, Tucson AZ	2.940	1.110	Feb-05	0.764	Jan-06	0.998	Jan-07	1.457	7.269	6.107
W80 LEP support, Service STAR	FFP	E-Spectrums, San Antonio TX		1.000	Feb-05						1.000	1.000
	T&M	Raytheon, Tucson AZ									0.000	
Subtotal Product Development			14.935	5.071		0.764		4.013		1.457	26.240	25.051
Remarks:												
(U) Support												
W80 Support	T&M	OC-ALC/PSM, Tinker AFB OK									0.000	
SS/AMS Support	T&M	OC-ALC/MAS, Tinker AFB OK	0.631	0.069	Mar-05						0.700	
Subtotal Support			0.631	0.069		0.000		0.000		0.000	0.700	0.000
Remarks:												
(U) Test & Evaluation												
W80 Support	Fund cite/MIPR	49 TES, Barksdale AFB LA		1.469	Jan-05						1.469	
W80 Support	T&M	OC-ALC/LHMR, Tinker AFB OK/Boeing, Wichita KS						1.000	Jul-07		1.000	
W80 Support	Fund cite/MIPR	419 FTS, Edwards AFB CA				1.196	Aug-06	1.970	Aug-07	1.935	5.101	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0101120F ADVANCED CRUISE MISSILE**	**4798 Life Extension Program**

	Subtotal Test & Evaluation			0.000	1.469	1.196	2.970	1.935	7.570	0.000
	Remarks: None									
(U)	Management									
	W-80 Support	T&M	OC-ALC/PSM, Tinker AFB OK						0.000	
	SS/AMS Support	T&M	OC-ALC/PSM, Tinker AFB OK						0.000	
	Nuclear Weapons Sub-System (NWSS) Aging & Surveillance (A&S)								0.000	
	Subtotal Management			0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:									
(U)	Total Cost			15.566	6.609	1.960	6.983	3.392	34.510	25.051

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101120F ADVANCED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4798 Life Extension Program**

U.S. AIR FORCE

ACM Schedule

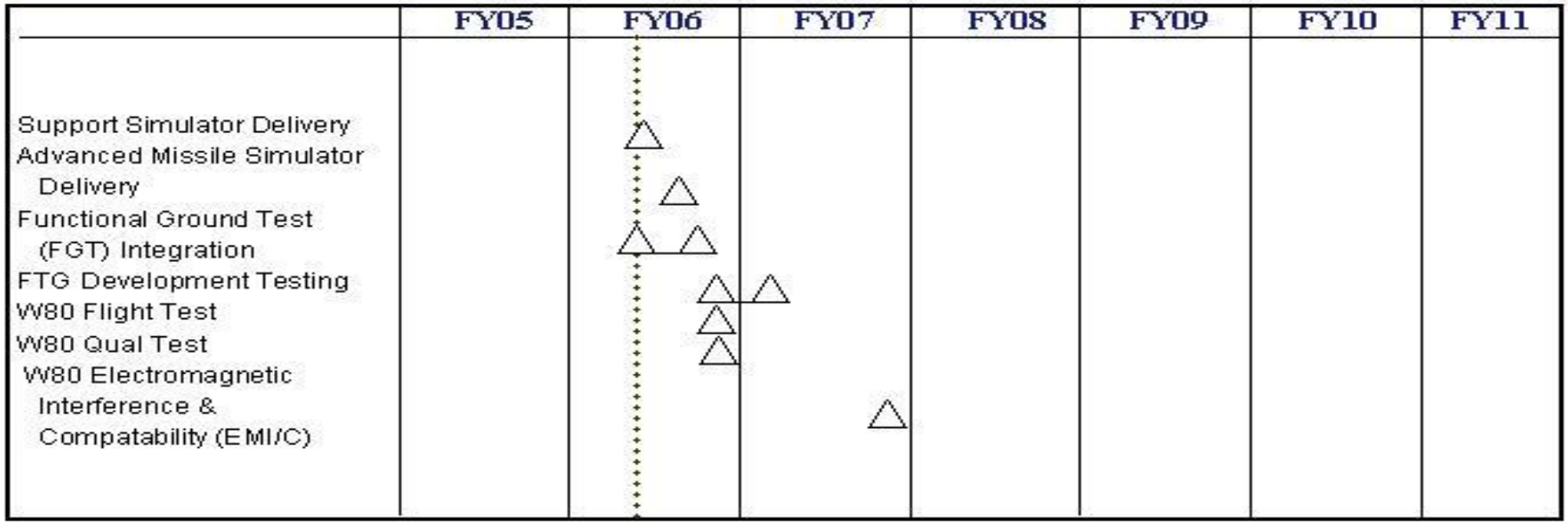

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101120F ADVANCED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4798 Life Extension Program**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) AMS PDR (delta SW design/AMS IFU)	1Q		
(U) SS Test Readiness Review		1Q	
(U) Computer Support System Test Readiness Review		1Q	
(U) SS Deliver/Installation		2Q	
(U) AMS Deliver/Installation		3Q	
(U) ACM NWSS A&S Demo Arm/Disarm Device Tests	1Q		
(U) ACM NWSS A&S Demo Separation Switch Tests	1Q		
(U) ACM NWSS A&S Demo Impact Sensor Dynamic Test	2Q		
(U) ACM NWSS A&S Demo Warhead Mount Tests	3Q		
(U) FGT PDR	1Q		
(U) FGT CDR	2Q		
(U) Integration		1-3Q	
(U) Development Testing		4Q	1Q
(U) ACM/W-80 Interface Control Changes/Documentation (Support)	1Q		
(U) ACM/W-80 Ground Test (Support)	1Q		
(U) ACM/W-80 Flight Test (Support)	2Q		
(U) ACM/W-80 Development Flight Test		4Q	
(U) ACM/W-80 Qualification Flight Test			4Q
(U) ACM/W-80 Electromagnetic Interference and Compatability (EMI/C)			4Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD
4797	Flight Testing & Navigation Enhancement	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

Initial SLEP assessment required the development and acquisition of new Conventional Air Launched Cruise Missile (CALCM)/ALCM Test Instrumentation Kit (CATIK) flight test payload doors, replacement of the current navigation system, and replacement of Operational Test & Evaluation (OT&E) hardware and software. CATIK commenced in FY00 based on the AF decision to maintain this weapon system beyond its current design life. Previous payload doors were purchased to support the original service life only. CATIK development efforts are driven by depleting test assets, parts obsolescence, Range Command Council 319 (RCC-319) safety requirements and re-certification of the Flight Termination System. Five CATIK RDT&E test articles were developed to support Developmental Test & Evaluation (DT&E) flight tests. The five test articles will be used to conduct one ALCM Operational Test Launch, one ALCM Joint Test Assembly (JTA) integration test to ensure compatibility with the warhead package, one CALCM Operational Test Launch , one Captive Carry and a backup test asset.

CATIK payload doors, containing range transponder and battery, are required to be replaced due to depleting test assets to continue flight tests beyond FY06. The new CATIK payload doors will provide an inventory of test assets for continued flight testing through FY16, based on current flight test requirements. W-80 LEP (current interface) - CATIK will be designed to a JTA-R1. If the W-80 LEP program changes interface, CATIK will require modification and additional funding/schedule. The CATIK payload door is a critical component for determining Weapon System Reliability (WSR) and for supporting the W-80 Life Extension Program (LEP) (current interface).

Operational Test & Evaluation (OT&E) hardware and software replacement will occur concurrently with the CATIK development effort.

FY04 EMD efforts consisted of qualification tests of the CATIK doors. Individual component qualification has already been completed at the subvendors. FY05 EMD efforts was flight tests and concludes with the flight test report in FY06. Contract period of performance ends April 06.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101122F AIR LAUNCHED CRUISE MISSILE

INE - The original ALCM Inertial Navigation Element (INE) service life design expired in 1996. The AF took action to study the INE components and determine which components were expected to become increasingly difficult to maintain or support. The completed studies indicate the ALCM INE failure rate has remained constant over the past 10 yrs and the INE is sustainable to 2030 with software modifications and Sub-Terminal Map Upgrades, hardware cannibalization and depot support/test equipment replacement. The Sub-Terminal map software upgrade will help maintain the credibility of the ALCM threat for the remainder of its service life.

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

The Big Crow Alternative development effort was terminated.

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	11.732	2.250	3.763
(U)	Current PBR/President's Budget	6.495	2.218	3.736
(U)	Total Adjustments	-5.237	-0.032	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.009	-0.032	
	Congressional Increases			
	Reprogrammings	-4.899		
	SBIR/STTR Transfer	-0.329		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4797	Flight Testing & Navigation Enhancement	6.495	2.218	3.736	5.822	0.395	0.412	0.428	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

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INE - The original ALCM Inertial Navigation Element (INE) service life design expired in 1996. The AF took action to study the INE components and determine

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

which components were expected to become increasingly difficult to maintain or support. The completed studies indicate the ALCM INE failure rate has remained constant over the past 10 yrs and the INE is sustainable to 2030 with software modifications and Sub-Terminal Map Upgrades, hardware cannibalization and depot support/test equipment replacement. The Sub-Terminal map software upgrade will help maintain the credibility of the ALCM threat for the remainder of its service life.

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

The Big Crow Alternative development effort was terminated.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue CATIK Test & Evaluation/Government costs	3.960		
(U)	Continue INE Software Subterminal Map Development, Testing and Integration	0.000		
(U)	Continue FGT System/Missile Integration & Test	0.280		
(U)	ALCM interface change evaluations and contractor Interface Control Document support for W-80 LEP			
(U)	Continue ALCM interface change evaluations and contractor Interface Control Document support for W-80 LEP	1.255		
(U)	Begin ALCM/W-80 Service System Test and repair (Service STAR) re-design/modification	1.000		
(U)	Continue ALCM interface change evaluations/changes and contractor ICD support for W-80 LEP		1.029	
(U)	Continue ALCM W-80 integration data developement		0.097	
(U)	Continue ALCM W-80 integration ground test and flight test support, Environmental Flight Test and Developlmental Flight Test		1.092	2.903
(U)	Continue contractor and organic missile interface compatibility testing			0.833
(U)	Total Cost	6.495	2.218	3.736

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101122F AIR LAUNCHED CRUISE MISSILE	PROJECT NUMBER AND TITLE: 4797 Flight Testing & Navigation Enhancement

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	MPAF, Missile Modifications (BA 03, PE 0101122F, P-15)	21.055	24.437	9.708	9.956	10.141	0.000	0.000	Continuing	TBD
(U)	MPAF, Missile Modifications Initial Spares (BA 04 PE 0101122F, P-16)	0.374	0.177	0.186	0.189	0.194	0.000	0.000	Continuing	TBD
(U)	MPAF, Replenishment Spares (BA 04, PE 0101122F, P-16)	4.215	4.248	0.288	0.292	0.300	11.010	11.295	Continuing	TBD
(U)	OPAF, Electronics and Telecommunications Equipment (BP83) (BA 03, PE 0101122F, P-18)	1.343	1.364	1.424	1.453	1.488	1.554	1.612	Continuing	TBD

(U) D. Acquisition Strategy

Begun in FY00, CATIK payload door development efforts are performed by Boeing utilizing a Cost Plus Award Fee (CPAF) contract. A CATIK Low Rate Initial Production contract will be awarded in the 2nd quarter FY05 to ensure CATIK production assets are available in late FY06/early FY07 to continue ALCM flight testing beyond FY06 and support W-80 LEP (current interface).

The Cruise Missile FGT development is being performed by the prime contractor, utilizing a Firm Fixed Price (FFP) contract.

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

The Big Crow Alternative development has been terminated.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Development:											0.000	
CATIK	Eng Asgn/ CPAF	Boeing, Seattle, WA.		1.000	Jan-05					0.050	1.050	
TRW- INE	Eng Asgn/T&M									0.000	0.000	
Boeing-INE	Eng Asgn/ CPAF									0.000	0.000	
	TBD									7.668	7.668	
Functional Ground Test (FGT)	FFP	Raytheon, Tuscon AZ		0.280	Jan-05					0.000	0.280	
W80 LEP Support	Eng Asgn/T&M	Boeing, Seattle, WA.		1.255	Feb-05	1.041	Feb-06	0.836	Jan-07	1.420	4.552	
W80 LEP Support, Service STAR	FFP	E-Spectrums, San Antonio TX.		1.000	Feb-05						1.000	
											0.000	
Subtotal Product Development			0.000	3.535		1.041		0.836		9.138	14.550	0.000
Remarks:												
(U) Support												
OC-ALC/PSM						0.085	Jan-06			0.652	0.737	
W80 Support/PSM										1.436	1.436	
Subtotal Support			0.000	0.000		0.085		0.000		2.088	2.173	0.000
Remarks:												
(U) Test & Evaluation												
Utah Test Range	MIPR			1.500	Jan-05					0.475	1.975	
49th Test Wing	MIPR			0.000	Jan-05					0.450	0.450	
Responsible Test Org	TBD			0.960	Jan-05					0.025	0.985	
Eglin AFB	MIPR									0.000	0.000	
49th Test Wing (W-80 LEP)	MIPR			0.500	May-05	1.092	Jul-06	2.900	Jan-07	4.685	9.177	
None											0.000	
Subtotal Test & Evaluation			0.000	2.960		1.092		2.900		5.635	12.587	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	6.495		2.218		3.736		16.861	29.310	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

U.S. AIR FORCE

ALCM Schedule

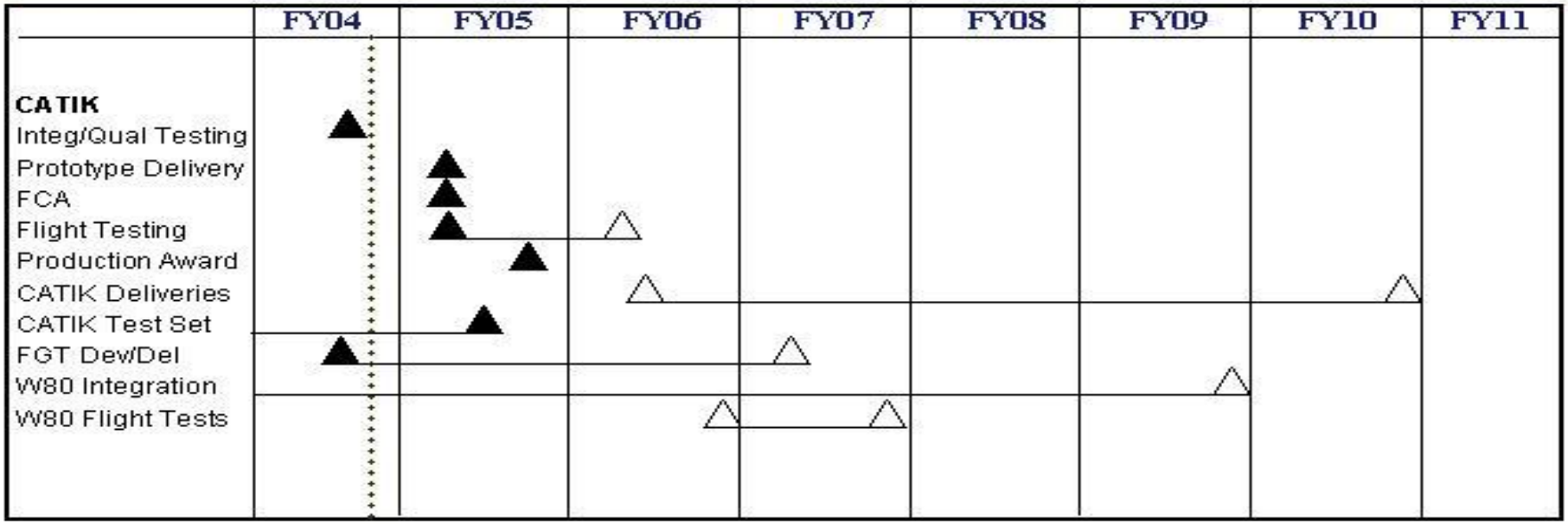

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101122F AIR LAUNCHED CRUISE MISSILE**	PROJECT NUMBER AND TITLE **4797 Flight Testing & Navigation Enhancement**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) CATIK Development Milestones	4Q		
(U) Integration/Qual Testing	1Q		
(U) CATIK Production Contract Award	2Q		
(U) Functional/Physical Config Audit	2Q		
(U) 5 Prototype CATIKs delivered	2Q		
(U) Flight Testing	3Q	3Q	
(U) Funtional Ground Test (FGT) Contract Award	2Q		
(U) FGT PDR	3Q		
(U) FGT CDR		1Q	
(U) ALCM/W-80 Contract Award		2Q	
(U) ALCM/W-80 Ground Test Support		2Q	3Q
(U) ALCM/W-80 Flight Test Support		2Q	3Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	13.472	29.705	27.285	13.322	10.146	10.378	10.558	Continuing	TBD
5059	Strategic War Planning System (SWPS)	13.472	29.705	27.285	13.322	10.146	10.378	10.558	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

ISPAN is in budget activity 7, Operational System Development, because the system is operational, and currently supports capabilities to create, verify, and produce OPLAN 8044, meet new UCP taskings, and produce other products.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0101313F STRAT WAR PLANNING SYS - USSTRATCOM

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	17.993	29.134	27.173
(U)	Current PBR/President's Budget	13.472	29.705	27.285
(U)	Total Adjustments	-4.521	0.571	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.016	-0.429	
	Congressional Increases		1.000	
	Reprogrammings	-4.000		
	SBIR/STTR Transfer	-0.505		

(U) Significant Program Changes:

In FY05 $4M was reprogrammed out of program for higher Air Force priorities.

In FY06 ISPAN received a $1M Congressional increase to support USSTRATCOM's Global Command and Control Development Center

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5059	Strategic War Planning System (SWPS)	13.472	29.705	27.285	13.322	10.146	10.378	10.558	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

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Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101313F STRAT WAR PLANNING SYS - USSTRATCOM**	PROJECT NUMBER AND TITLE **5059 Strategic War Planning System (SWPS)**

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

		FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program			
(U)	Theater Planning Support continues the modernization of software applications for Air Vehicle Planning System (APS), Missile Graphics Planning System (MGPS) and Targeting in support of the Theater Planning Support Document for Combatant Commanders.	1.652	1.556	1.716
(U)	Block 1 will modernize, integrate and test ISPAN planning tools. This includes, but is not limited to, completing required System Engineering, developing new tools as required, and modifying existing software tools to interface with newly developed ISPAN tools. The primary focus of Block 1 is to establish a service oriented N-Tier architecture for the ISPAN applications to use.	11.820	27.149	17.969
(U)	Block 2 continues to modernize, integrate and test ISPAN planning tools, to include but not be limited to, accomplishing System Engineering and the modification of existing software tools to interface with ISPAN. Block 2 modernizes existing applications to operate in the new architecture.			7.600
(U)	Global C2 Development Center will provide timely analysis of technologies and processes and identifying innovative approaches to facilitate effective and timely integration of Net Centric capabilities. This effort is a one-time congressional add for FY06.		1.000	
(U)	Total Cost	13.472	29.705	27.285

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF WSC 833140 Strategic Command and Control (Program Element 0101313F)	14.747	6.640	10.027	9.803	13.040	13.362	13.578	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

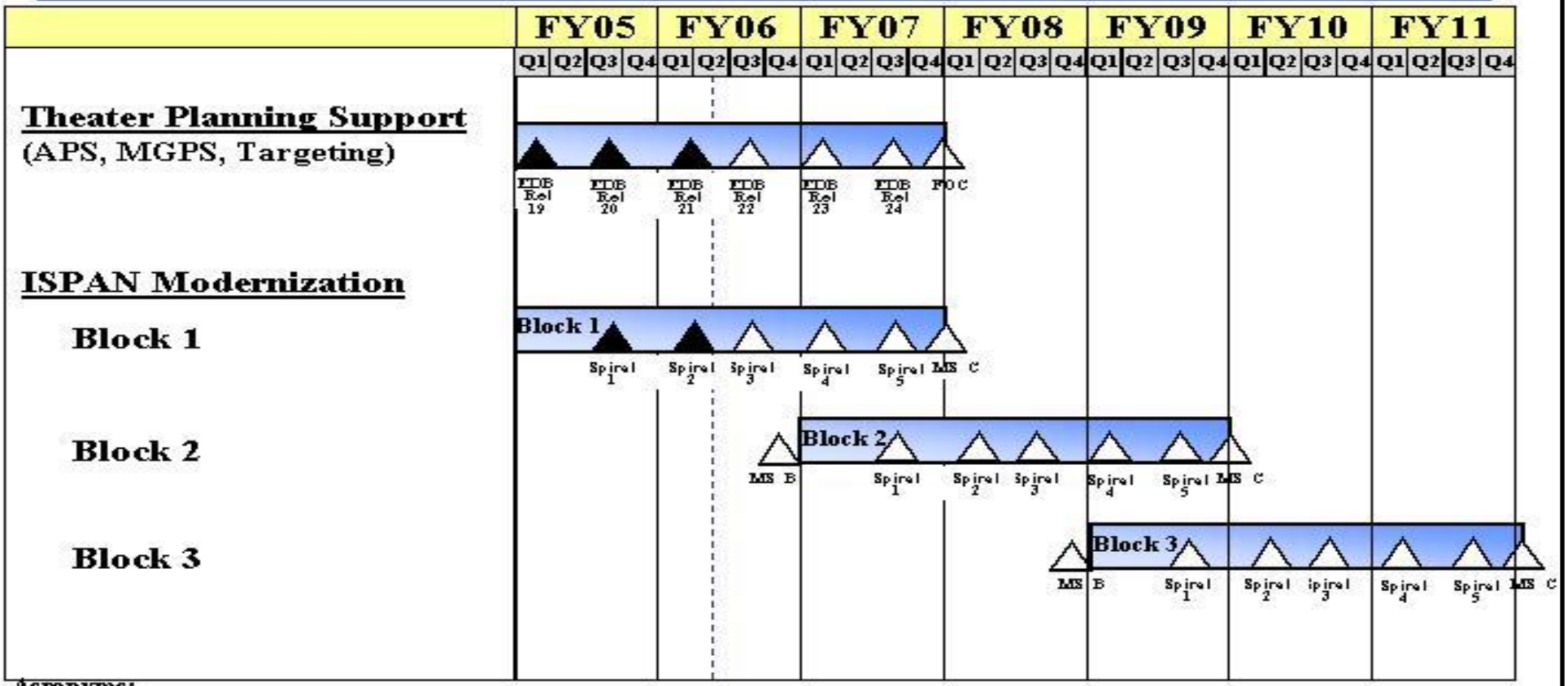
PROJECT NUMBER AND TITLE: **5059 Strategic War Planning System (SWPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
BAE (Air Vehicle Planning System (APS))	TM	San Diego, CA	3.026	1.164	Oct-04	3.630	Oct-05	1.593	Oct-06	Continuing	TBD	TBD
Northrop Grumman (Missile Graphics Planning System (MGPS)	TMAF	Bellevue, NE	1.106	0.180	Oct-04	0.000				0.000	1.286	1.286
Northrop Grumman (MGPS)	CPAF	Bellevue, NE	0.000	0.648	Mar-05	1.927	Oct-05	2.052	Oct-06	Continuing	TBD	TBD
SAIC (Targeting)	TMAF	San Diego, Ca	0.800	0.000		0.000				0.000	0.800	0.800
SAIC (Targeting)	CPAF	San Diego, Ca	0.000	0.661	Mar-05	0.928	Oct-05	0.613	Oct-06	Continuing	TBD	TBD
Lockheed Martin Integrated Systems (ISPAN Modernization)	CPAF	Bellevue, NE	4.376	9.401	Oct-04	19.837	Oct-05	21.019	Oct-06	Continuing	TBD	TBD
Miscellaneous Contracts	CPAF	Pending	1.080	1.418	Mar-05	3.383	Jan-06	2.008	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			10.388	13.472		29.705		27.285		Continuing	TBD	TBD
Remarks:												
(U)											0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			10.388	13.472		29.705		27.285		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0101313F STRAT WAR PLANNING SYS - USSTRATCOM	PROJECT NUMBER AND TITLE: 5059 Strategic War Planning System (SWPS)

U.S. AIR FORCE

ISPAN Schedule



Acronyms:

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

As of: 12 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0101313F STRAT WAR PLANNING SYS - USSTRATCOM**	PROJECT NUMBER AND TITLE **5059 Strategic War Planning System (SWPS)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Theater Planning Support (APS, MGPS, Targeting)	1-4Q	1-4Q	1-4Q
(U) Theater Planning Support FOC			4Q
(U) ISPAN Modernization Block 1	1-4Q	1-4Q	1-4Q
(U) ISPAN Modernization Block 1 MS C			4Q
(U) ISPAN Modernization Block 2 MS B		4Q	
(U) ISPAN Modernization Block 2			1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD
4592	Region/Sector Operations Modernization Center (R/SAOC)	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS). The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture. This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	19.047	18.237	14.540
(U)	Current PBR/President's Budget	14.721	17.937	14.853
(U)	Total Adjustments	-4.326	-0.300	
(U)	Congressional Program Reductions		-0.040	
	Congressional Rescissions	-0.295	-0.260	
	Congressional Increases			
	Reprogrammings	-4.031		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY05 - FY07 reductions to support higher Air Force needs, program rephased to align with current funding.

FY05 - Additional $2M reprogramming reduction applied in early FY06 to support higher Air Force needs not reflected in FY05 current PBR/President's Budget top line number above.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4592	Region/Sector Operations Modernization Center (R/SAOC)	14.721	17.937	14.853	23.149	23.785	24.056	18.984	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Air Operation Control Center, PE 0102326F (called the Battle Control System-Fixed {BCS-F})] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M})]. Battle Control System-Fixed (BCS-F) is the replacement for the fixed sites for the Region/Sector Air Operations Center (R/SAOC) [also known as Region Air Operations Center-Air Defense Sector (RAOC-ADS)] for the Atmospheric Early Warning System (AEWS). The BCS-F program, which supports NOBLE EAGLE, will provide a next-generation battle management command and control system with enhanced capability to integrate data from existing and future civil and military defense surveillance systems into a comprehensive recognized air picture. This multi-input integrated air control picture will enhance the North American Aerospace Defense/Combatant Commander's (NORAD/CC's) capability to conduct peacetime air sovereignty, transition and conventional warfare in the event of aggression toward the North American continent. BCS-F systems serve as the Air Force's Homeland Defense battle management, command, and control hubs and integrates data from radar sensors, data links and supporting communications architecture. They provide the tactical communications and data link capabilities with other military and civil systems responsible for conducting the planning, directing, coordinating, and controlling forces for air surveillance, air defense and control of sovereign US air space (including the National Capital Region). The BCS-F system is a bi-national cooperative program with Canada, ensuring air defense and surveillance capability for the entire North American continent.

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

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program			
(U)	Continue Acquisition Activities associated with System Development of the BCS-F, to include but not limited to Software Development, System Integration, Purchase of Government Furnished Equipment, Production Representative Hardware, Test and Certification Support.	9.026	14.104	11.742
(U)	Continue Program Management/Systems Engineering	4.137	2.789	2.134
(U)	Continue Program Support (i.e. travel, supplies, equipment, misc)	1.558	1.044	0.977
(U)	Total Cost	14.721	17.937	14.853

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER	PROJECT NUMBER AND TITLE: 4592 Region/Sector Operations Modernization Center (R/SAOC)

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
(U) OPAF PE 0102326F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement)	6.448	11.846	18.262	11.868	18.013	14.067	20.567	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

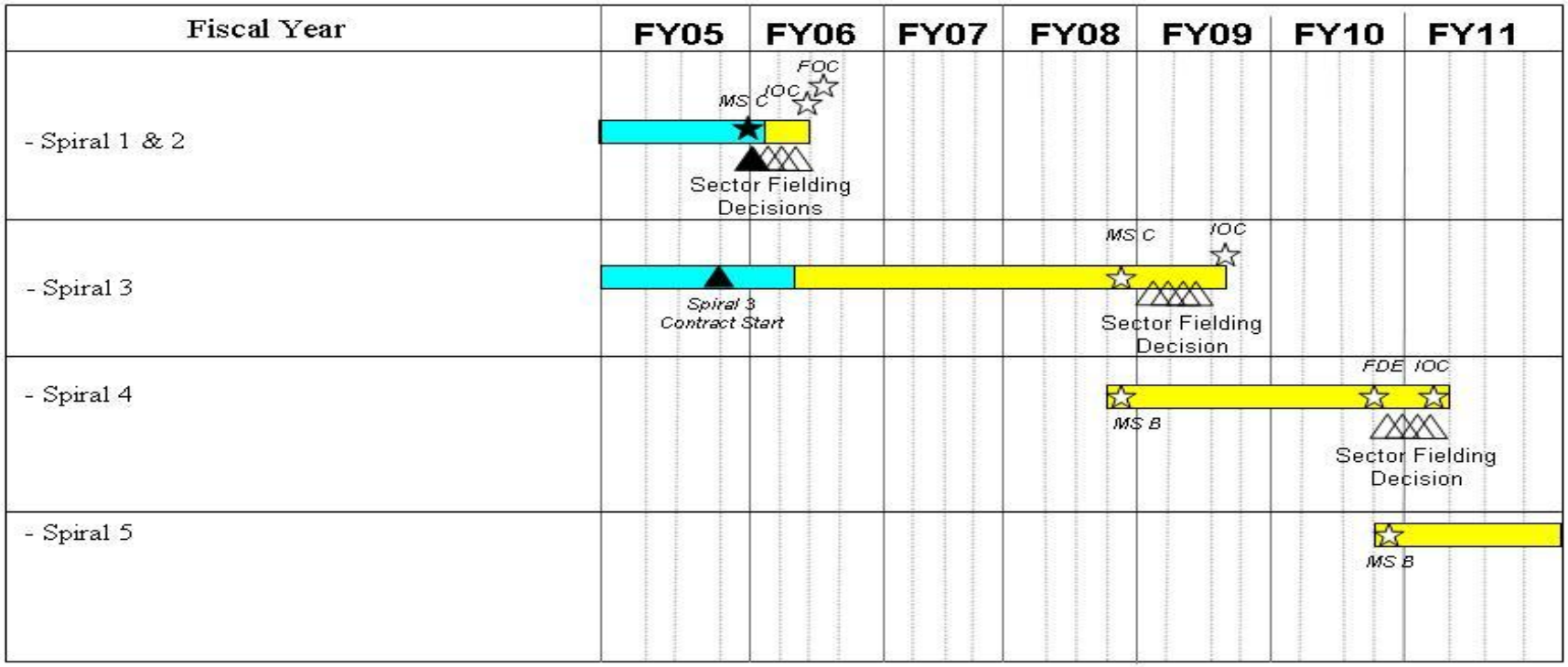
PE NUMBER AND TITLE: **0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER**

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
THALES RAYTHEON	FFP/C	Fullerton, CA	32.426	5.423	May-05	11.422	Oct-05	10.405	Oct-06	Continuing	TBD	TBD
Various	Various	Various	2.172	2.266	Dec-04	1.364	Jan-06	0.019	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			34.598	7.689		12.786		10.424		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Management/Systems Engineering	T&M	Bedford, MA	20.425	4.137	Oct-04	2.789	Oct-05	2.134	Oct-06	Continuing	TBD	TBD
Program Office Support	Various	Various	5.077	1.558	Nov-04	1.044	Nov-05	0.977	Nov-06	Continuing	TBD	TBD
Subtotal Support			25.502	5.695		3.833		3.111		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46th Test Wing/Other Test Act	Various	Various	5.381	1.337	Oct-04	1.318	Nov-05	1.318	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			5.381	1.337		1.318		1.318		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			65.481	14.721		17.937		14.853		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER**	PROJECT NUMBER AND TITLE **4592 Region/Sector Operations Modernization Center (R/SAOC)**

Exhibit R-4 – PE 0102366F – REGIONAL/SECTOR OPERATIONS CONTROL CENTER



AS OF 13 JAN 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0102326F REGION/ SECTOR OPERATIONS CONTROL CENTER**	PROJECT NUMBER AND TITLE **4592 Region/Sector Operations Modernization Center (R/SAOC)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) BCS-F Spiral 1 & 2 MS C	4Q		
(U) BCS-F Spiral 1 & 2 Fielding Decisions		1-2Q	
(U) BCS-F Spiral 1 & 2 IOC		2Q	
(U) BCS-F Spiral 1 & 2 FOC		3Q	
(U) BCS-F Spiral 3 Start	4Q		

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0203761F Warfighter Rapid Acquisition Program

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	34.697	22.764	30.584	30.934	31.078	31.675	32.107	Continuing	TBD
4936	Warfighter Rapid Acquisition Program	34.697	22.764	30.584	30.934	31.078	31.675	32.107	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Warfighter Rapid Acquisition Process (WRAP) provides rapid transition funding for the development and fielding of highly successful competitive experiments, demonstrations, and innovative approaches to support the Expeditionary Air Force (EAF) and other warfighters. WRAP supports the specific DoD goal of significantly shortening the acquisition response time and acquisition cycle times. This process is expected to shorten the project decision/initiation time by 2-5 years for selected projects due to the integrated headquarters review and immediate availability of transition funding. The WRAP process is specifically designed to deal with initiatives throughout the fiscal year as they arise resulting in a sequential distribution of WRAP funding over the course of that entire execution year. Although analogous to major investment programs WRAP's process allows the Air Force the flexibility to acquire innovative concepts and initiatives and transition them to the warfighter annually in a manner that coincides with Air Forces' development of the President's Budget. Candidate projects will compete for WRAP approval and funds based on business case analyses, identified and demonstrated operational impact, cost savings, project development, production, lifecycle costs, project risk and cost of delay. The WRAP will nominate projects to the Chief of Staff of the Air Force (CSAF) for final approval. Potential sources of projects include, but are not limited to, JEFX, Battlelabs, Joint Experimentation, Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs), Science & Technology, and Independent R&D efforts. MAJCOM/Agencies must commit full project funding in the subsequent programming cycle. The Air Force will ensure CSAF selected projects are incorporated in the future annual planning and programming guidance or Program Objective Memorandum (POM) preparation instructions.
This effort is Budget Activity 7, Operational System Development, because the program provides a vehicle for developing operational concepts and attendant new technologies for enhancing capabilities of the 21st century aerospace force.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	24.716	22.764	
(U)	Current PBR/President's Budget	34.697	22.764	30.584
(U)	Total Adjustments	9.981	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	9.981		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**	PROJECT NUMBER AND TITLE **4936 Warfighter Rapid Acquisition Program**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4936	Warfighter Rapid Acquisition Program	34.697	22.764	30.584	30.934	31.078	31.675	32.107	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Warfighter Rapid Acquisition Process (WRAP) provides rapid transition funding for the development and fielding of highly successful competitive experiments, demonstrations, and innovative approaches to support the Expeditionary Air Force (EAF) and other warfighters. WRAP supports the specific DoD goal of significantly shortening the acquisition response time and acquisition cycle times. This process is expected to shorten the project decision/initiation time by 2-5 years for selected projects due to the integrated headquarters review and immediate availability of transition funding. The WRAP process is specifically designed to deal with initiatives throughout the fiscal year as they arise resulting in a sequential distribution of WRAP funding over the course of that entire execution year. Although analogous to major investment programs WRAP's process allows the Air Force the flexibility to acquire innovative concepts and initiatives and transition them to the warfighter annually in a manner that coincides with Air Forces' development of the President's Budget. Candidate projects will compete for WRAP approval and funds based on business case analyses, identified and demonstrated operational impact, cost savings, project development, production, lifecycle costs, project risk and cost of delay. The WRAP will nominate projects to the Chief of Staff of the Air Force (CSAF) for final approval. Potential sources of projects include, but are not limited to, JEFX, Battlelabs, Joint Experimentation, Advanced Technology Demonstrations (ATDs), Advanced Concept Technology Demonstrations (ACTDs), Science & Technology, and Independent R&D efforts. MAJCOM/Agencies must commit full project funding in the subsequent programming cycle. The Air Force will ensure CSAF selected projects are incorporated in the future annual planning and programming guidance or Program Objective Memorandum (POM) preparation instructions.
This effort is Budget Activity 7, Operational System Development, because the program provides a vehicle for developing operational concepts and attendant new technologies for enhancing capabilities of the 21st century aerospace force.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) FY 05 BTR in order to support increased Air Force WRAP requirements	9.981		
(U) Planned WRAP project selection and project initiation	24.716	22.764	30.584
(U) Total Cost	34.697	22.764	30.584

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

WRAP enables Air Force innovation including experimentation and spiral development processes to decrease fielding timelines and allows development, fielding, or upgrading of systems until the sponsoring MAJCOM/Agency can incorporate them into their subsequent submission. The Air Force, through appropriate program offices, will manage the acquisition and development process for the integration and fielding of WRAP approved projects. Each project will have a complete

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**	PROJECT NUMBER AND TITLE **4936 Warfighter Rapid Acquisition Program**

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	TBD
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
	Various	Multiple		34.697	Feb-05	22.764	Jan-06	30.584	Jan-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	34.697		22.764		30.584		Continuing	TBD	TBD
Remarks: WRAP funds are distributed to initiatives capable of utilizing 3600 monies.												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Various												
(U) Total Cost			0.000	34.697		22.764		30.584		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0203761F Warfighter Rapid Acquisition Program	PROJECT NUMBER AND TITLE 4936 Warfighter Rapid Acquisition Program

Warfighting Rapid Acquisition Program PE 23761F

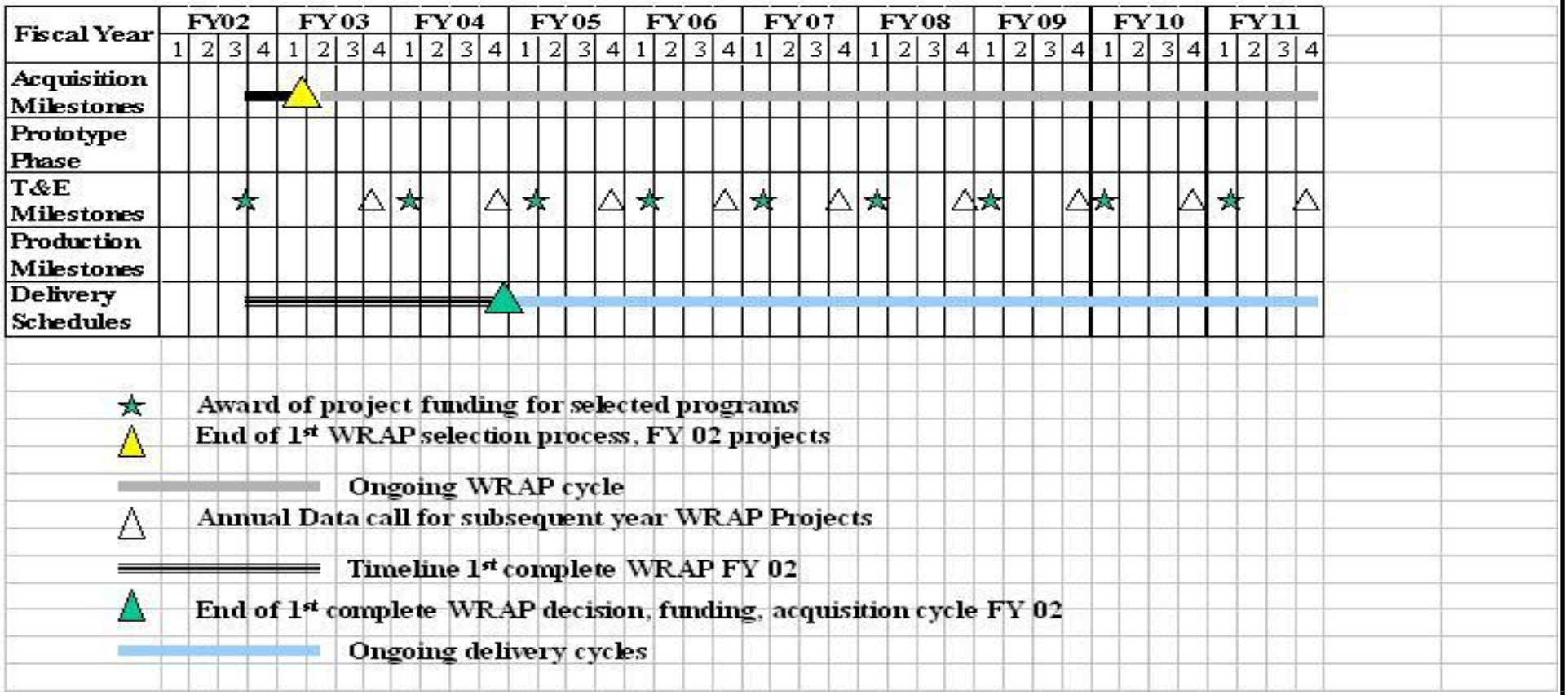

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0203761F Warfighter Rapid Acquisition Program**	PROJECT NUMBER AND TITLE **4936 Warfighter Rapid Acquisition Program**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) FY 05 WRAP Project Initiation	1Q		
(U) FY 05 WRAP Project Approval/funding	2Q		
(U) FY 06 WRAP Project Initiation (Anticipated)		1Q	
(U) FY 06 WRAP Project Approval/funding (Anticipated)		2Q	
(U) FY 07 WRAP Project Initiation (Anticipated)			1Q
(U) FY 07 WRAP Project Approval/funding (Anticipated)			2Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	29.878	56.025	80.771	59.942	0.000	0.000	0.000	Continuing	TBD
4809 A-10 Squadrons	29.878	56.025	80.771	59.942	0.000	0.000	0.000	Continuing	TBD

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 0605807F.

(U) A. Mission Description and Budget Item Justification

The A/OA-10 is the USAF's primary aircraft for Close Air Support (CAS) and Forward Air Control (FAC) support to the ground battle including special forces, with a secondary mission of Combat Search and Rescue (CSAR) and interdiction. Currently, RDT&E funding supports: the Precision Engagement (PE) Program (MN-9805); an A-10 Propulsion Upgrade Study; and a Systems Design and Demonstration (SDD) program for upgraded A-10 engines.

PRECISION ENGAGEMENT

The PE program is a spiral development program providing increased tactical effectiveness (more targets destroyed), greater survivability, and decreased risk of fratricide. These modifications are mandatory for the A/OA-10 to adhere to the regional CINC's requirement for a CAS and FAC platform.

Spiral #1 of the PE modification integrates: MIL-STD 1760 Bus, Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), LITENING and SNIPER targeting pods, Digital Stores Management System (DSMS), and DC power upgrade. The DSMS replaces the current Armament Control Panel (ACP) (television monitor) and the Interstation Control Unit (ICU) with Multi-Function Color Displays (MFCD) and replaces the current stick and throttle with improved Hands on Throttle and Stick Capable controls reducing 'heads down' time in the cockpit. During spiral #1, the ICU will be replaced with a new processor: the Central Interface Control Unit (CICU). This program does not purchase JDAM/WCMD munitions, targeting pods or their associated support equipment. After Spiral 1, the A/OA-10A will be designated as an A/OA-10C.
Spiral #2 of the PE modification integrates tests, and fields an integrated battlefield air picture, an integrated ground picture, and legacy data link waveform through the addition of a digital data link system. However, A-10 aircraft modification and RDT&E efforts are funded under the Fighter TDL PE 0207445F.

Spiral #3 and subsequent spirals of the A-10 modernization program may include: a moving map, BRU-57 Smart Pack, Small Diameter Bomb (SDB), and additional data link waveforms. Improvements will enhance situational awareness, enable the A-10 to carry two smart weapons on a single parent station, and expand combat data link capability. Through a spiral development approach, the PE program will ultimately improve survivability and tactical affectivity, decrease fratricide, and continue to play a major role as one of the USAF's primary Close Air Support and Forward Air Control weapon systems. Spiral modifications may include some or all software development, integration, and testing.

PROPULSION UPGRADE STUDY

In FY04 Congress provided a $3.0M add to conduct a study to determine the best way to upgrade the engines on the A-10. In FY05, Congress provided an additional

$5.0M which will be applied to existing pre-SDD studies. In FY06, the PUP program was given an another $5.0M to continue Pre SDD sudies. In addition, pre-SDD studies are being conducted by the engine Original Equipment Manufacturer to examine possible solutions, perform trade studies, refine cost data and conduct risk reduction analysis. This effort will provide an updated prime item development specification, interface control document, and qualification plan. A third effort is being conducted by the A-10 prime contractor to identify structural changes required for additional thrust and weight changes.

PROPULSION UPGRADE SYSTEMS DESIGN AND DEMONSTRATION (SDD)

In February 2004, the SECAF and CSAF validated the need for the A-10 Propulsion Upgrade. The Congressional add of $5.0M in FY05, mentioned above, was used to provide a ramp to the FY06 SDD effort. In FY06, SDD continued with development of the integration requirements and design work including development of the evaluation and test requirements as well test hardware. The Air Force will provide TF34-100A engines for the prototype effort.

The FY07 Budget request authorizes $247M in APAF money to procure up to 110 TF-3400B engine kits.

THREE-DIMENSIONAL (3-D) MODELING, DESIGN, AND ENGINEERING ASSESSMENT

In FY05, this effort received a $3.5M Congressional add for an effort to investigate a new wing and fuselage/empennage improvement to increase the service life to 16,000 flight hours.

The digital model captured the most current configuration of the A-10 wing assembly in order to support future sustainment activities of the aircraft. This model is the basis for simulating the effects of differing usage, to include additional weapon or countermeasures installations, on the structure.

In FY06, $1.602M was realigned from the MODE S/MODE 5 program to the 3-D Modeling, Design and Engineering Assessment.

A-10 WING REPLACEMENT PROGRAM

Aging A-10 thin-skin wings must be replaced by new thick-skin wings. Replacement wings can accomplish the CAF Operational Requirements Document (ORD) requirement to keep the A-10 operational until 2028 and the corresponding A-10 Program Management Directive (PMD) requirement to extend the A-10 aircraft service life to 16,000 hours.

The cost of sustaining the thin-skin wings at an acceptable risk level has exceeded its economic limit. It is more cost effective to replace the thin-skin wing than to repair it. The program will replace 197 thin-skin wings currently in the inventory.

As a new start, FY07 PBR provides $741M across the FYDP to begin purchasing wing kits in FY07. The $741M replaces up to 121 wings through the FYDP.

Wings procured in FY10 and FY11 cannot be installed until FY12 and FY13 respectively. Therefore, additional funding will have to be pursued through FY08 POM for these installations outside of the FYDP.

MODE S/MODE 5 EQUIPMENT

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS

Mode S is a new civilian mode for the aviation Identify Friend or Foe (IFF) systems. It provides more detailed flight information about an aircraft to ground controllers or other aircraft than currently available. Europe has set a deadline of 31 Mar 09 for aircraft to be equipped with Mode S or risk having those aircraft grounded.

Mode 5 is a secure military only IFF mode used in combat to identify friendly aircraft to prevent fratricide. Mode 5 is being developed by DoD to replace Mode 4, which is no longer NSA certified. All combat aircraft will be required to have this IFF mode by approximately 2015.

Global Air Traffic Management (GATM) is the Air Force program designed to meet the evolving aviation requirements of the International Civil Aviation Organization (ICAO). GATM, Navigation and Safety, and Navigation Warfare (NAVWAR) are major components of the AF's Global Access, Navigation, and Safety (GANS) management effort.

The A/OA-10 RDT&E program is in budget activity 7 - Operational System Development because it supports an operational system.

In FY06, $1.602M was realigned from the MODE S/MODE 5 program to the 3-D Modeling, Design and Engineering Assessment.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	30.816	51.835	75.223
(U)	Current PBR/President's Budget	29.878	56.025	80.771
(U)	Total Adjustments	-0.938	4.190	
(U)	Congressional Program Reductions		-0.810	
	Congressional Rescissions	-0.024		
	Congressional Increases		5.000	
	Reprogrammings	-0.049		
	SBIR/STTR Transfer	-0.865		
(U)	Significant Program Changes:			

FY06:
-Congress adds $5M for Propulsion Upgrade Pre-SDD Studies
FY07:
-Increase of $5.216 for the Wing Replacement Program

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4809 A-10 Squadrons	29.878	56.025	80.771	59.942	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The A/OA-10 is the USAF's primary aircraft for Close Air Support (CAS) and Forward Air Control (FAC) support to the ground battle including special forces, with a secondary mission of Combat Search and Rescue (CSAR) and interdiction. Currently, RDT&E funding supports: the Precision Engagement (PE) Program (MN-9805); an A-10 Propulsion Upgrade Study; and a Systems Design and Demonstration (SDD) program for upgraded A-10 engines.

PRECISION ENGAGEMENT

The PE program is a spiral development program providing increased tactical effectiveness (more targets destroyed), greater survivability, and decreased risk of fratricide. These modifications are mandatory for the A/OA-10 to adhere to the regional CINC's requirement for a CAS and FAC platform.

Spiral #1 of the PE modification integrates: MIL-STD 1760 Bus, Joint Direct Attack Munition (JDAM), Wind Corrected Munitions Dispenser (WCMD), LITENING and SNIPER targeting pods, Digital Stores Management System (DSMS), and DC power upgrade. The DSMS replaces the current Armament Control Panel (ACP) (television monitor) and the Interstation Control Unit (ICU) with Multi-Function Color Displays (MFCD) and replaces the current stick and throttle with improved Hands on Throttle and Stick Capable controls reducing 'heads down' time in the cockpit. During spiral #1, the ICU will be replaced with a new processor: the Central Interface Control Unit (CICU). This program does not purchase JDAM/WCMD munitions, targeting pods or their associated support equipment. After Spiral 1, the A/OA-10A will be designated as an A/OA-10C.
Spiral #2 of the PE modification integrates tests, and fields an integrated battlefield air picture, an integrated ground picture, and legacy data link waveform through the addition of a digital data link system. However, A-10 aircraft modification and RDT&E efforts are funded under the Fighter TDL PE 0207445F.

Spiral #3 and subsequent spirals of the A-10 modernization program may include: a moving map, BRU-57 Smart Pack, Small Diameter Bomb (SDB), and additional data link waveforms. Improvements will enhance situational awareness, enable the A-10 to carry two smart weapons on a single parent station, and expand combat data link capability. Through a spiral development approach, the PE program will ultimately improve survivability and tactical affectivity, decrease fratricide, and continue to play a major role as one of the USAF's primary Close Air Support and Forward Air Control weapon systems. Spiral modifications may include some or all software development, integration, and testing.

PROPULSION UPGRADE STUDY

In FY04 Congress provided a $3.0M add to conduct a study to determine the best way to upgrade the engines on the A-10. In FY05, Congress provided an additional $5.0M which will be applied to existing pre-SDD studies. In FY06, the PUP program was given an another $5.0M to continue Pre SDD sudies. In addition, pre-SDD studies are being conducted by the engine Original Equipment Manufacturer to examine possible solutions, perform trade studies, refine cost data and conduct risk reduction analysis. This effort will provide an updated prime item development specification, interface control document, and qualification plan. A third effort is being conducted by the A-10 prime contractor to identify structural changes required for additional thrust and weight changes.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE 4809 A-10 Squadrons

PROPULSION UPGRADE SYSTEMS DESIGN AND DEMONSTRATION (SDD)

In February 2004, the SECAF and CSAF validated the need for the A-10 Propulsion Upgrade. The Congressional add of $5.0M in FY05, mentioned above, was used to provide a ramp to the FY06 SDD effort. In FY06, SDD continued with development of the integration requirements and design work including development of the evaluation and test requirements as well test hardware. The Air Force will provide TF34-100A engines for the prototype effort.

The FY07 Budget request authorizes $247M in APAF money to procure up to 110 TF-3400B engine kits.

THREE-DIMENSIONAL (3-D) MODELING, DESIGN, AND ENGINEERING ASSESSMENT

In FY05, this effort received a $3.5M Congressional add for an effort to investigate a new wing and fuselage/empennage improvement to increase the service life to 16,000 flight hours.

The digital model captured the most current configuration of the A-10 wing assembly in order to support future sustainment activities of the aircraft. This model is the basis for simulating the effects of differing usage, to include additional weapon or countermeasures installations, on the structure.

In FY06, $1.602M was realigned from the MODE S/MODE 5 program to the 3-D Modeling, Design and Engineering Assessment.

A-10 WING REPLACEMENT PROGRAM

Aging A-10 thin-skin wings must be replaced by new thick-skin wings. Replacement wings can accomplish the CAF Operational Requirements Document (ORD) requirement to keep the A-10 operational until 2028 and the corresponding A-10 Program Management Directive (PMD) requirement to extend the A-10 aircraft service life to 16,000 hours.

The cost of sustaining the thin-skin wings at an acceptable risk level has exceeded its economic limit. It is more cost effective to replace the thin-skin wing than to repair it. The program will replace 197 thin-skin wings currently in the inventory.

As a new start, FY07 PBR provides $741M across the FYDP to begin purchasing wing kits in FY07. The $741M replaces up to 121 wings through the FYDP.

Wings procured in FY10 and FY11 cannot be installed until FY12 and FY13 respectively. Therefore, additional funding will have to be pursued through FY08 POM for these installations outside of the FYDP.

MODE S/MODE 5 EQUIPMENT

Mode S is a new civilian mode for the aviation Identify Friend or Foe (IFF) systems. It provides more detailed flight information about an aircraft to ground controllers or other aircraft than currently available. Europe has set a deadline of 31 Mar 09 for aircraft to be equipped with Mode S or risk having those aircraft grounded.

Mode 5 is a secure military only IFF mode used in combat to identify friendly aircraft to prevent fratricide. Mode 5 is being developed by DoD to replace Mode 4, which is no longer NSA certified. All combat aircraft will be required to have this IFF mode by approximately 2015.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE 4809 A-10 Squadrons

Global Air Traffic Management (GATM) is the Air Force program designed to meet the evolving aviation requirements of the International Civil Aviation Organization (ICAO). GATM, Navigation and Safety, and Navigation Warfare (NAVWAR) are major components of the AF's Global Access, Navigation, and Safety (GANS) management effort.

The A/OA-10 RDT&E program is in budget activity 7 - Operational System Development because it supports an operational system.

In FY06, $1.602M was realigned from the MODE S/MODE 5 program to the 3-D Modeling, Design and Engineering Assessment.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Further development/integration requirements efforts for Precision Engagement (PE). PE combines six modifications into one comprehensive modification: definition and initial integration design of JDAM/WCMD, Targeting Pod, DSMS, DC Power and 1760 Bus. PE Spiral #1 efforts include Preliminary Design Review, further refinement of PVI design, maintenance concept, installation design, ILS tasks and design tasks leading to Critical Design Review.	21.696	16.333	10.955
(U)	In FY05 and FY06, Congress provided additional funds which were applied to existing Propulsion Upgrade pre-SDD studies.	4.810	4.190	
(U)	Propulsion Upgrade SDD began in FY06 with design work on engine and airframe changes. Some hardware for the prototype kits will be procured or manufactured. In FY07, the factory test engine will be produced and tested and the airframe kits will be produced. In FY08, test aircraft will be modified with upgraded engines and flight testing will be conducted.		33.900	64.600
(U)	Three Dimensional (3-D) Modeling, Design, and Engineering Assessment is an effort to investigate a new wing and fuselage/empennage improvement to increase the service life to 16,000 flight hours. In FY05, this effort received a $3.5M Congressional add.	3.372	1.602	

A digital model capturing the most current configuration of the A-10 wing assembly is necessary to support future sustainment activities of the aircraft. This model will be used as the basis for simulating the effects of differing usage, to include additional weapon or countermeasures installations, on the structure. This will be done by using the digital definition to develop finite element models for stress and thermal analyses as needed. These same digital models can be used as input to aerodynamic analyses to develop airloads for the baseline and a multitude of weapons load configurations. These models can also be used to simulate various production and maintenance related activities to include development of appropriate shop aids, tools, procurement of spares, assist in validating first articles, etc. Finally, these models can be used to simulate impacts to systems and avionics hardware due to modifications associated with updates, capability enhancements, or engineering evaluations.

The use of digital modeling and simulation as described would provide a benefit to the A-10 program by reducing

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE 4809 A-10 Squadrons

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

		FY 2005	FY 2006	FY 2007
	overall costs of sustainment activities by providing a common baseline that can be maintained and shared amongst A-10 government and contractor organizations.			
(U)	Wing Replacement Program -- To increase the aircraft service life, aging A-10 thin-skin wings must be replaced by new thick-skin wings like those used on the later lots of production aircraft. Replacement wings can accomplish the CAF Operational Requirements Document (ORD) requirement to keep the A-10 operational until 2028 and the corresponding A-10 Program Management Directive (PMD) requirement to extend the A-10 aircraft service life to 16,000 hours. The cost of sustaining the thin-skin wings at an acceptable risk level has exceeded its economic limit. It is more cost effective to replace the thin-skin wing than to repair it. The program will replace 197 thin-skin wings currently in the inventory.			5.216
(U)	Total Cost	29.878	56.025	80.771

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	TDL (PE 0207445F)-RDT&E		25.080	17.674	28.029				Continuing	TBD
(U)	TDL (PE 0207445F)-APAF	5.139								

(U) D. Acquisition Strategy

- Precision Engagement and Digital Data Link (now under PE 0207445F) development will be conducted under the A-10 Prime Contract which was awarded in Dec 1997 on a full-and-open basis. Cost Plus Award Fee (CPAF) contract awarded for specific modernization efforts.
- The Propulsion Upgrade Program will have two major contracts. The AF plans to procure the Engine Upgrade kits via sole source; while the integration portion will be competed on a full-and -open basis.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **4809 A-10 Squadrons**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Precision Engagement Development	SS/CPFF	Lockheed Martin Systems Integration--Owego NY		20.669	Mar-05	7.758	Jan-06			Continuing	TBD	
Precision Engagement Spiral 3	CPFF	Lockheed Martin Systems Integration--Owego NY						10.459	Jan-07	Continuing	TBD	
Propulsion Upgrade Study	FP	Whitney Bradley & Brown Inc--Vienna VA				4.190				Continuing	TBD	
Propulsion Upgrade	SS/CPFF	General Electric, Lynn MA		3.800	Mar-05	25.200	Dec-05	53.890	Dec-06	Continuing	TBD	
Airframe Integration	CPFF	Lockheed Martin Systems Integration--Owego NY		0.650	Mar-05	6.880	Nov-05	8.200	Nov-06	Continuing	TBD	
											0.000	
Three-Dimensional (3D) Modeling, Design, and Engineering Assessment	CPFF	Aerospace Engineering Spectrum (AES)--Ogden UT		3.372	Sep-05	1.602	Feb-06				4.974	
A-10 Wing Replacement Program	TBD	TBD						5.216	Jun-07		5.216	
Subtotal Product Development			0.000	28.491		45.630		77.765		Continuing	TBD	0.000
Remarks:												
(U) Support												
USAF (Multiple) PE				0.687	Apr-05	3.675	Jan-06	0.496	Jan-07	1.101	5.959	
USAF (Multiple) Propulsion				0.700	Jul-05	1.820	Nov-05	1.151	Nov-06	Continuing	TBD	
Navy											0.000	
Subtotal Support			0.000	1.387		5.495		1.647		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

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

	USAF (40th FTS) PE			Feb-05	4.900	Jan-06			4.900	
	USAF (40th FTS) Propulsion SDD						1.359	Nov-06	0.461	1.820	3.601
	Subtotal Test & Evaluation	0.000	0.000		4.900		1.359		0.461	6.720	3.601
	Remarks:										
(U)	Management										
										0.000	
	Subtotal Management	0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)	Total Cost	0.000	29.878		56.025		80.771		Continuing	TBD	3.601

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons

PE Spiral 1 Master Schedule

Dominant Air Power: Design For Tomorrow…Deliver Today

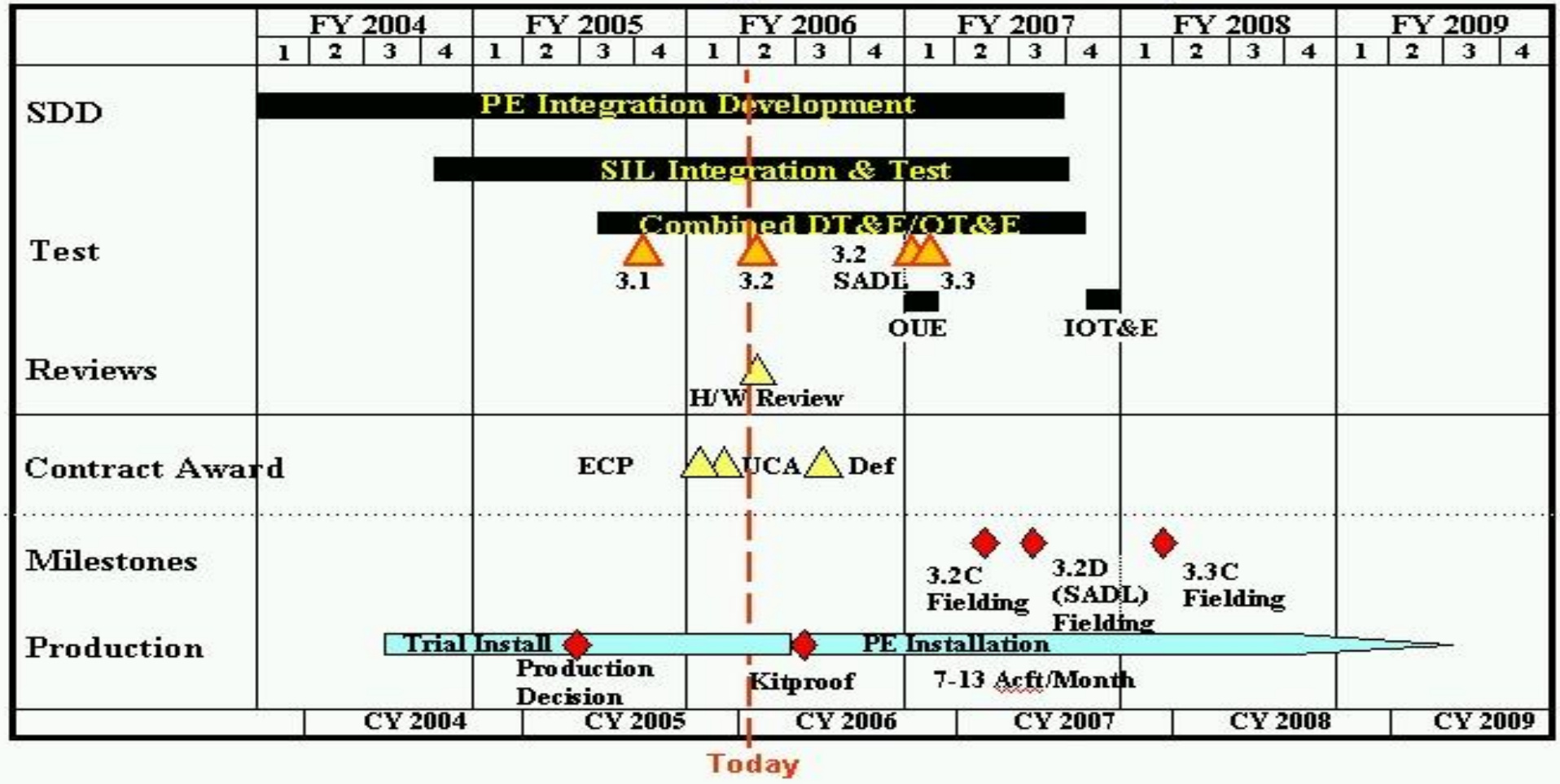

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207131F A-10 SQUADRONS	PROJECT NUMBER AND TITLE: 4809 A-10 Squadrons

PUP Master Schedule

Current Status – Detailed IMP/IMS In Work

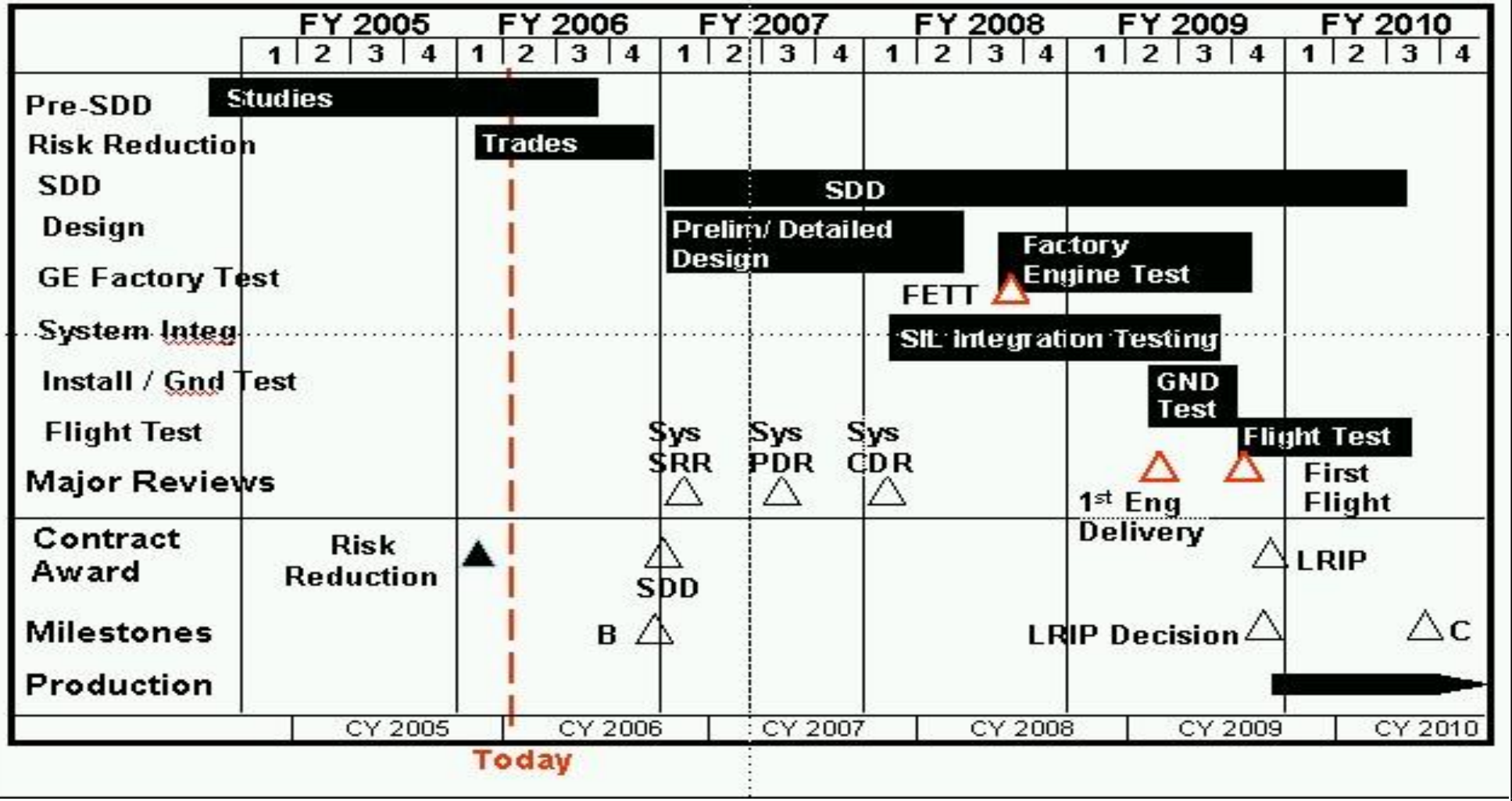

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

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

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Precision Engagement Developmental Test	1-4Q		
(U) Precision Engagement Initial Operational Testing	3-4Q		
(U) Precision Engagement Initial Operating Capability (IOC)	3Q		
(U) Precision Engagement Production/Installation	3-4Q	1-4Q	1-4Q
(U) Engine Upgrade Systems Design and Demonstration (SDD)		3-4Q	1Q
(U) -- Engine Upgrade SDD SRR		3Q	
(U) -- Engine Upgrade SDD PDR			1Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	95.664	154.533	148.373	108.888	106.710	108.434	106.666	Continuing	TBD
2671 F-16 Squadrons	95.664	154.533	148.373	108.888	106.710	108.434	106.666	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 25-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world. Foreign military sales production will continue into the 21st century. The F-16 System Program Office (SPO) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

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

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), WCMD-ER Small Diameter Bomb (SDB) and updates to existing weapons into the F-16. This task also includes performing risk reduction activities on advanced weapon integration and add development/integration of advanced racks, pylons and adapters. Also includes Nuclear surety, safety and compatibility tasks.

b. The AN/APG-68(V)10 radar provides an all weather auto detection/target cueing capability taking full advantage of GPS-aided precision guided muntions to conduct evolving missions of time critical targeting and Destruction of Enemy Air Defenses (DEAD). The (V)10 radar program was to develop and integrate the system into the Blocks 50/52 aircraft. The (V)10 program has been terminated before production fielding, however, the program is being restructured to cost effectively complete initial testing as required to support other non-F-16 modification efforts. A Congressional plus up of $1.1M FY06 was received for integration into Blk 30 aircraft.

c. The Air-to-Air Interrogator (AAI) consists of a single unit interrogator/transponder, a beam forming network, fuselage-mounted array antenna elements, and a lower interrogator antenna. The system provides a higher reliability rate and increases performance over present systems. Modes 1, 2, 3/A, C, S, 4 and 5 are available. Mode S transponders will be required for operation within the European Union. The AAI has been integrated in the Block 50 and will be integrated onto other blocks as required.

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

e. The F-16 development efforts are complimented by the comprehensive operational flight program (OFP) upgrades. Hardware and Group A development associated with OFP software candidates are included in the OFP line. Integration efforts include manned fighter reconnaissance capabilities, Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. When integrated to the high angle off-bore sight AIM-9X missile, this provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Also, the Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other fighters, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI)

systems will provide targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Starting with M6/M6+ LM Aero will start transfer of OFP workload and maintenance of M-series tapes to OO-ALC. There is a large increase starting in FY07 to fund this transition and assumes a "see one/do one" transition where LM will produce M6/M6+ as OO-ALC builds up capability (personnel, Special Test Equipment, OFP development tools & processes, and training). OO-ALC will then assume system responsibility for the next M-series program (M7/M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of Special Test Equipment and personnel since OPF tape developments overlap. This funding is broken out for clarity as the SORAP was approved in Aug 05.

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	96.984	155.666	165.288
(U)	Current PBR/President's Budget	95.664	154.533	148.373
(U)	Total Adjustments	-1.320	-1.133	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-2.233	
	Congressional Increases		1.100	
	Reprogrammings	-1.320		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY06: $1.1M Plus-up for AN/APG-68(V)10 for Blk 30 Aircraft

FY07: Flight test costs for FY07 reflects transfer of indirect costs from F-16 account into Major Range & Test Facilty account to comply with FY03 Congressional language.

FY07: Removed $16.6M from the AN/APG-68(V)10 for Blk 50 Aircraft

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2671 F-16 Squadrons	95.664	154.533	148.373	108.888	106.710	108.434	106.666	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-16 Fighting Falcon is the world's premier multi-mission fighter. It is a fixed-wing, high performance, single-engine fighter aircraft. In its 25-year history, the F-16 has proven itself in combat in a variety of air-to-air and air-to-surface missions such as close air support, combat air patrol, forward air control, battle air interdiction (day/night and all-weather) and suppression of enemy air defenses (SEAD). Also during these years the aircraft has evolved in its capabilities to exploit the advances made in computer, avionics systems, engine, and structures technologies. The F-16 has been selected by more than 20 air forces around the world. Foreign military sales production will continue into the 21st century. The F-16 System Program Office (SPO) develops, integrates, and qualifies systems to enhance the overall performance of the F-16 mission.

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

a. Advanced Weapons Integration will include Joint Air-to-Surface Stand-off Missile (JASSM), Joint Direct Attack Munition (JDAM), Joint Stand-off Weapon (JSOW), Wind Corrected Munition Dispenser (WCMD), WCMD-ER Small Diameter Bomb (SDB) and updates to existing weapons into the F-16. This task also includes performing risk reduction activities on advanced weapon integration and add development/integration of advanced racks, pylons and adapters. Also includes Nuclear surety, safety and compatibility tasks.

b. The AN/APG-68(V)10 radar provides an all weather auto detection/target cueing capability taking full advantage of GPS-aided precision guided muntions to conduct evolving missions of time critical targeting and Destruction of Enemy Air Defenses (DEAD). The (V)10 radar program was to develop and integrate the system into the Blocks 50/52 aircraft. The (V)10 program has been terminated before production fielding, however, the program is being restructured to cost effectively complete initial testing as required to support other non-F-16 modification efforts. A Congressional plus up of $1.1M FY06 was received for integration into Blk 30 aircraft.

c. The Air-to-Air Interrogator (AAI) consists of a single unit interrogator/transponder, a beam forming network, fuselage-mounted array antenna elements, and a lower interrogator antenna. The system provides a higher reliability rate and increases performance over present systems. Modes 1, 2, 3/A, C, S, 4 and 5 are available. Mode S transponders will be required for operation within the European Union. The AAI has been integrated in the Block 50 and will be integrated onto other blocks as required.

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

e. The F-16 development efforts are complimented by the comprehensive operational flight program (OFP) upgrades. Hardware and Group A development associated with OFP software candidates are included in the OFP line. Integration efforts include manned fighter reconnaissance capabilities, Joint Helmet Mounted Cueing System (JHMCS) which allows the pilot to designate and shoot targets at high angles without maneuvering the aircraft. When integrated to the high angle off-bore sight AIM-9X missile, this provides the F-16 with enhanced first-look/first-shoot/first-kill advantage in the "dogfight" arena. Also, the Link 16 provides the F-16s with a secure, jam resistant, high-capacity data communications link with other fighters, airborne control aircraft, and ground control centers. Embedded GPS/INS (EGI) systems will provide targeting capability to take full advantage of GPS-aided precision weapons to conduct evolving missions. Starting with M6/M6+ LM Aero will

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE 2671 F-16 Squadrons

start transfer of OFP workload and maintenance of M-series tapes to OO-ALC. There is a large increase starting in FY07 to fund this transition and assumes a "see one/do one" transition where LM will produce M6/M6+ as OO-ALC builds up capability (personnel, Special Test Equipment, OFP development tools & processes, and training). OO-ALC will then assume system responsibility for the next M-series program (M7/M7+). During transition, both Lockheed and Ogden may have some concurrent software development capabilities both in terms of Special Test Equipment and personnel since OPF tape developments overlap. This funding is broken out for clarity as the SORAP was approved in Aug 05.

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	AN/APG-68(V)10	26.603	19.965	8.000
(U)	Continue OFP Updates	33.093	87.222	79.087
(U)	ALR-56M	0.496	0.463	0.494
(U)	Continue Flight Tests DT&E	34.881	23.465	26.526
(U)	Weapons Integration	0.591	0.230	0.494
(U)	Mode S/5 IFF for CAF Aircraft		2.800	7.793
(U)	EMD Hardware/MMC Upgrade Development		12.628	3.390
(U)	EGI/INS Development		3.740	3.412
(U)	OFP Transition		4.020	19.177
(U)	Total Cost	95.664	154.533	148.373

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement (3010), Line Item 27, F-16 Mods	347.100	414.375	352.054	319.512	280.787	150.335	97.987		TBD
(U)	Aircraft Procurement (3010), Line Item 71, Post Production Support	11.277	17.596	12.245	19.188	20.528	20.310	20.608		TBD

(U) D. Acquisition Strategy

RDT&E funds will primarily be executed in developing improved capability, maintenance and safety mods. Operational Flight Program (OFP) software will be continuously updated to complement mod development efforts. OFP updates will transition to OO-ALC starting in FY06. Costs associated with this transition will

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207133F F-16 SQUADRONS**	PROJECT NUMBER AND TITLE **2671 F-16 Squadrons**

take place over FY06 to FY10. The EMD Hardware Development line provides funding to test, qualify, and field aircraft subsystems replaced or modified due to OFP requirements, Pre-Planned Product Improvements (P3I) and Diminishing Manufacturing Source (DMS). The approach to contracting varies by individual project. Lockheed Martin Aeronautics Company (LM Aero) is the prime contractor on all systems except the 110 Engines (General Electric), and the 229 Engines (Pratt & Whitney). Northrop Grumman and LM Aero will work collectively on AN/APG-68(V)10 efforts. Contract types are T&M, CPIF, CPFF and FFP.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **2671 F-16 Squadrons**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
OFP Updates	CPIF, T&M	LM Aero		33.093	Jan-05	87.222	Jan-06	79.087	Jan-07	Continuing	TBD	
OFP Transition	T&M, Organic	LM Aero, OO-ALC				4.020	Feb-06	19.177	Feb-07	Continuing	TBD	
ALR-56M	PO	WRALC/LN		0.496	Dec-04	0.463	Jan-06	0.494	Dec-06	Continuing	TBD	
Weapons Integration	T&M/FFP	LM Aero		0.591	Jun-05	0.230	Jan-06	0.494	Jan-07	Continuing	TBD	
AN/APG-68(V)10	T&M/CPFF	Northrup Grumman / LM Aero		26.603	Jan-06	19.965	Mar-06	8.000	Jan-07	Continuing	TBD	
Mode S/5 IFF for CAF Aircraft	CPFF	LM Aero				2.800	Jun-06	7.793	Jan-06	Continuing	TBD	
EMD Hardware/MMC Upgrade Development	FFP/CPIF	LM Aero				12.628	Mar-06	3.390	Jan-06	Continuing	TBD	
EGI/INS Development	FFP	Honeywell, Northrop Grumman				3.740	Jan-06	3.412	Jan-07	Continuing	TBD	
Subtotal Product Development			0.000	60.783		131.068		121.847		Continuing	TBD	0.000
Remarks:												
(U) Support											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Flight Tests	T&M/CPFF	LM Aero/ Edwards AFB		34.881	Jan-05	23.465	Jan-06	26.526	Jan-07	Continuing	TBD	
Subtotal Test & Evaluation			0.000	34.881		23.465		26.526		Continuing	TBD	0.000
Remarks:												
(U) Management											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Rescission												
(U) Total Cost			0.000	95.664		154.533		148.373		Continuing	TBD	0.000
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207133F F-16 SQUADRONS	PROJECT NUMBER AND TITLE: 2671 F-16 Squadrons

U.S. AIR FORCE

F-16 Program Schedule - USAF

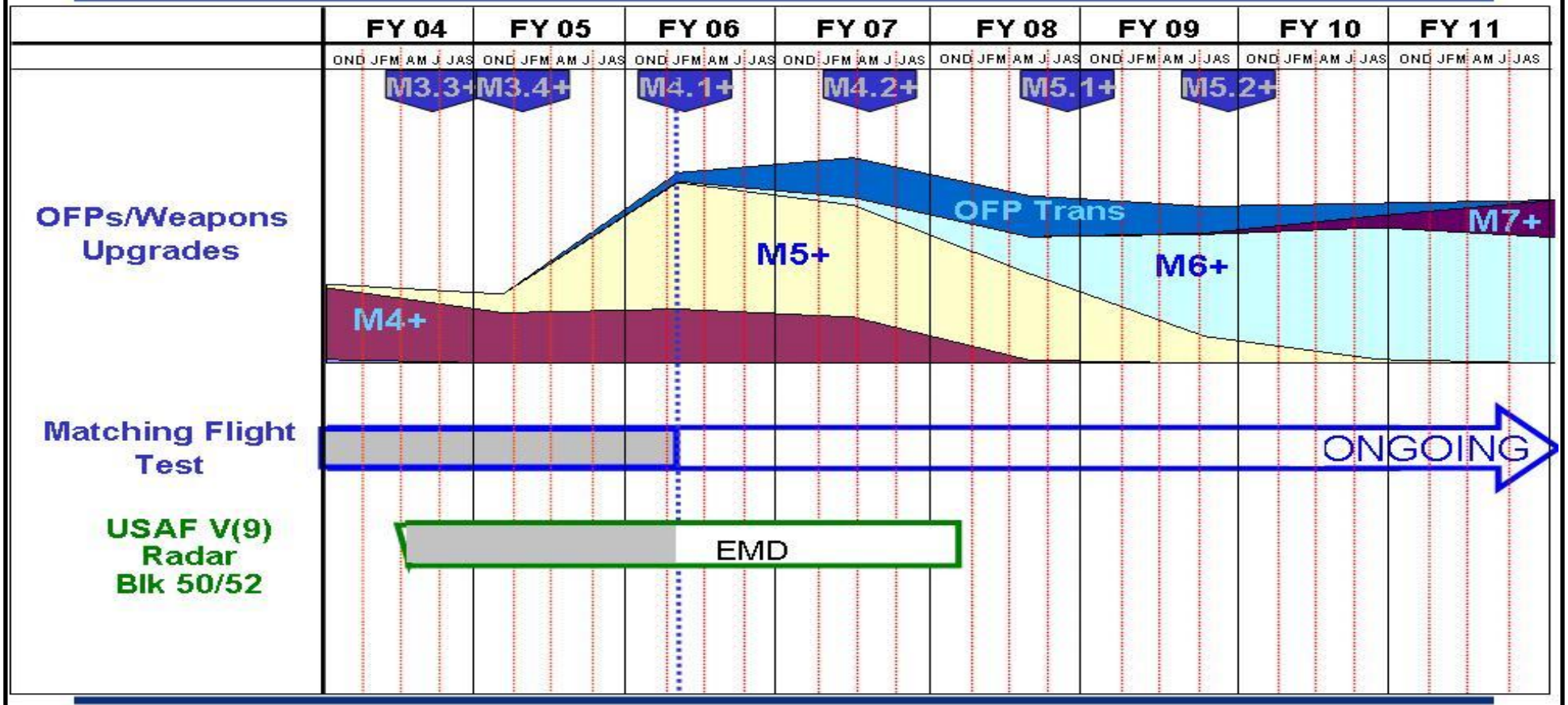

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207133F F-16 SQUADRONS**	**2671 F-16 Squadrons**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Flight Test Continuous, no end date	1-4Q	1-4Q	1-4Q
(U) OFP Development, continuous	1-4Q	1-4Q	1-4Q
(U) OFP Transition		1-2Q	1-2Q
(U) ALR-56M	1Q	1-2Q	1Q
(U) Weapons Integration	3Q	2Q	2Q
(U) AN/APG-68(V)10	1-4Q	1-2Q	2Q
(U) Mode S/5 IFF for CAF Aircraft		3Q	2Q
(U) EMD Hardware/MMC Development Development		1-2Q	1-2Q
(U) EGI/INS Development		1-2Q	1-2Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	127.112	143.572	125.062	105.903	234.214	159.959	117.187	Continuing	TBD
0131 Initial Operational Test and Evaluation	127.112	143.572	125.062	105.903	234.214	159.959	117.187	Continuing	TBD

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 0605807F.

(U) A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to guarantee air superiority with an undefeated and unmatched aerial combat record. The F-15E retains air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E can deploy worldwide with minimal tanker support and arrive combat-ready. The F-15's avionics, armament, airframe and engines must continue to be upgraded to improve supportability and maintain its superiority against all threats. These threats include a new generation of aircraft possessing all-weather detection and kill capabilities as well as sophisticated "double-digit" anti-aircraft missile systems. Avionics updates (exploiting proven technological advances or demonstrating new technology) including radar modernization, precision registration systems implemented through data server storage technology, and a fully integrated electronic warfare suite hold the promise of providing expanded capability. All improvements are linked to an aircraft operational flight program update schedule which works to integrate new capabilities with the airframe. These updates will increase the offensive and defensive capability and survivability of the F-15. Furthermore, incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment and training device upgrades improves performance, supportability, and LRU throughput.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	131.279	124.647	124.694
(U)	Current PBR/President's Budget	127.112	143.572	125.062
(U)	Total Adjustments	-4.167	18.925	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.775	-2.075	
	Congressional Increases		21.000	
	Reprogrammings			
	SBIR/STTR Transfer	-3.392		
(U)	Significant Program Changes:			
	Funding (FY06):			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207134F F-15E SQUADRONS**

FY06 Congressional adds in support of BOL ($9.500M) and AESA Demonstration ($11.500M).

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207134F F-15E SQUADRONS	0131 Initial Operational Test and Evaluation

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0131	Initial Operational Test and Evaluation	127.112	143.572	125.062	105.903	234.214	159.959	117.187	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-15 is the most versatile fighter in the world today. The F-15A-D continues to guarantee air superiority with an undefeated and unmatched aerial combat record. The F-15E retains air superiority capability and adds systems, such as advanced imaging and targeting systems, to meet the requirement for all-weather, deep penetration, and night/under-the-weather, air-to-surface attack. Configured with conformal fuel tanks (CFTs), the F-15E can deploy worldwide with minimal tanker support and arrive combat-ready. The F-15's avionics, armament, airframe and engines must continue to be upgraded to improve supportability and maintain its superiority against all threats. These threats include a new generation of aircraft possessing all-weather detection and kill capabilities as well as sophisticated "double-digit" anti-aircraft missile systems. Avionics updates (exploiting proven technological advances or demonstrating new technology) including radar modernization, precision registration systems implemented through data server storage technology, and a fully integrated electronic warfare suite hold the promise of providing expanded capability. All improvements are linked to an aircraft operational flight program update schedule which works to integrate new capabilities with the airframe. These updates will increase the offensive and defensive capability and survivability of the F-15. Furthermore, incorporation of corresponding spiral and/or phased technology/equipment improvements that include support equipment and training device upgrades improves performance, supportability, and LRU throughput.

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

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Operational Flight Program (OFP) development efforts.	78.598	62.922	70.392
(U)	Flight testing of improvements initiated in prior years.	13.164	16.580	22.670
(U)	Development of ADCP (formerly OFP effort).	6.350	2.000	
(U)	Development of Tactical Electronic Warfare System (TEWS) Intermediate Support System (TISS) Technology Insertion Program (TTIP)	6.426	7.170	2.800
(U)	Development of Radar Warning Receiver Upgrade	3.211		
(U)	Mode S/5 IFF Development Efforts		17.200	16.000
(U)	F-15 BOL PVI		9.500	
(U)	F-15C/D Active Electronically Scanned Array (AESA) Radar Block Upgrade	14.935	24.900	
(U)	F-15E AESA Radar Block Upgrade	0.465	1.000	6.000
(U)	F-15 Avonics Replacement development efforts			4.900
(U)	Mission Support, Other Government Cost	3.963	2.300	2.300
(U)	Total Cost	127.112	143.572	125.062

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	Aircraft Procurement (3010F), Line Item 5, F-15E (PE0207134F) [BP 10]	108.233	64.136							172.369
(U)	Aircraft Procurement (3010F), Line Item 27, F-15A-E (PEs 0207130F and 0207134F) [BP 11]	134.969	153.180	49.755	41.351	90.384	158.200	142.124	Continuing	TBD
(U)	Aircraft Procurement (3010F) F-15E (PE0804731F) General Skills Training [BP11]									1.263
(U)	Aircraft Procurement (3010F) F-15 (PE0207434F) Link 16 Support and Sustainment [BP11]									
(U)	Aircraft Procurement (3010F) F-15E (PE0809731F) Training Support to Units [BP11]		2.072	1.306					Continuing	TBD
(U)	Aircraft Procurement (3010F), Line Item 66, F-15A-E [BP 13]	13.112	12.995	10.741	1.039	2.524	2.589	2.622	Continuing	TBD
(U)	Aircraft Procurement (3010F) F-15E (PE0207445F) Fighter Tactical Data Link [BP11]	69.122	66.869	41.840						177.831

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
OFP Suite 4/5/6/7 Development and Test	CPAF	Boeing, St Louis		78.598		62.922		70.392		Continuing	TBD	
Boeing (JHMCS A-D)	CPAF	Boeing, St Louis								0.000	0.000	
Smart Weapons Integration	CPAF									0.000	0.000	
ADP(E)	CPAF									0.000	0.000	
ADCP(E)	CPAF	Boeing, St Louis		6.350	Jan-05	2.000	Jan-06			0.000	8.350	
NGA (ALQ-135 Band 1.5)	FFP									0.000	0.000	
Link-16 Data Link	CPAF									0.000	0.000	
TISS TTIP	CPFF			6.426	Dec-04	7.170	Dec-05	2.800	Dec-06	0.000	16.396	
Boeing/Raytheon ECCM	CPAF									0.000	0.000	
F-15 C/D AESA Radar Block Upgrade	CPFF	Boeing, St Louis		14.935	Jun-05	24.900	Jun-06			0.000	39.835	
F-15 E AESA Radar Block Upgrade	CPFF	Boeing. St Louis		0.465	Jun-05	1.000	Jan-06	6.000	Jan-07	211.560	219.025	
Radar Warning Receiver Upgrade	TNM	Boeing, St Louis		3.211	Nov-05					0.000	3.211	
Mode S/5 IFF		Boeing, St. Louis				17.200	Feb-06	16.000	Jan-07	0.000	33.200	
F-15 BOL PVI		Boeing, St. Louis				9.500					9.500	
F-15 Avionics Replacement								4.900	Dec-06	10.086	14.986	
Subtotal Product Development			0.000	109.985		124.692		100.092		Continuing	TBD	0.000
Remarks:												
(U) Support												
(Msn Spt) Misc.		WPAFB, OH		3.963		2.300		2.300		Continuing	TBD	
Subtotal Support			0.000	3.963		2.300		2.300		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Boeing (Contractor Test Team)	FFP	Boeing, St Louis		6.942	Mar-05	10.155	Mar-06	13.200	Mar-07	Continuing	TBD	
Edwards	PO	Edwards AFB, CA		0.050	Mar-05	0.069	Mar-06	0.033	Mar-07	Continuing	TBD	
Eglin (Flt Test)	PO	Eglin AFB, FL		6.172	Feb-05	6.356	Mar-06	9.437	Mar-07	Continuing	TBD	
Subtotal Test & Evaluation			0.000	13.164		16.580		22.670		Continuing	TBD	0.000
Remarks:												
(U) Management												

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation	

								0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:								
(U)	Total Cost	0.000	127.112	143.572	125.062	Continuing	TBD	0.000	

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE: 0131 Initial Operational Test and Evaluation

F-15E Modernization

U.S. AIR FORCE

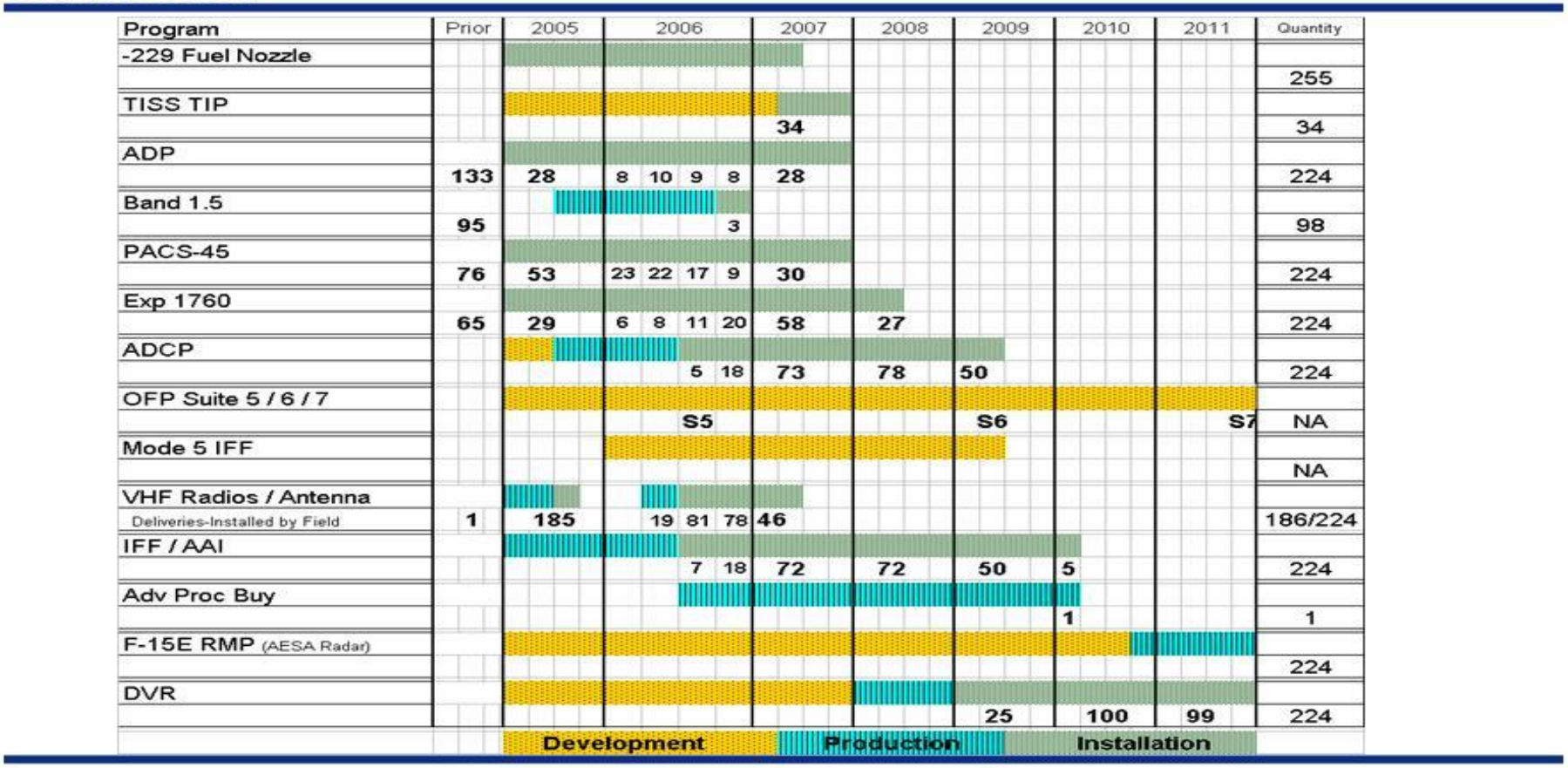

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207134F F-15E SQUADRONS	PROJECT NUMBER AND TITLE 0131 Initial Operational Test and Evaluation

F-15A-D Modernization

U.S. AIR FORCE

Program	Prior	2005	2006				2007	2008	2009	2010	2011	Quantity
220E Engines												
	246	39	9	11	11							255+63
JHMCS												
	82	39	8	9	6	9	34	8				180+16
EGI												
	36	41	15	15	14	15	40	54				178+54T
APG-63(V)1												
	137	23	5	6	5	3						179
Radar Imp Pgm (V)3												
									TBD			1+6
VHF Radios / Antenna												
Deliveries-Installed by Field		397		63	120	81	64					289+108
IFF / AAI												
					2	0	149	154	53			178+54T+126
ALE-58 IRCM												
	113									104	74	178+113
NVIS Phase II												
					89		89					178
OFP Suite 5 / 6 / 7												
			S5					S6			S7	NA
Mode 5 IFF												
												NA
ESTS												
	62											62
DVR												
									89	89		178
		Development					Production				Installation	

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207134F F-15E SQUADRONS**	**0131 Initial Operational Test and Evaluation**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	OFP Suite 5E Flight Test Complete		1Q	
(U)	OFP Suite 5MSIP Flight Test Complete		2Q	
(U)	OFP Suite 5E & MSIP Fielding		3Q	
(U)	OFP Suite 6 Phase 1 Start	1Q		
(U)	OFP Suite 6 Phase 1 Complete		2Q	
(U)	OFP Suite 6 Phase II Start		2Q	
(U)	OFP Suite 6 Phase II Flight Test Start			4Q
(U)	ADCP EMD Flight Test Complete	1Q		
(U)	ADCP Tech Roll Flight Test Start	1Q		
(U)	ADCP Tech Roll Flight Test Complete	2Q		
(U)	ADCP F3I complete		2Q	
(U)	ADCP Tech Roll - Complete	2Q		
(U)	Mode S/5 IFF - Start		2Q	
(U)	F-15 C/D AESA Radar Block Upgrade Flight Test - Start		3Q	
(U)	F-15 C/D AESA Radar Block Upgrade Flight Test - Complete			1Q
(U)	TISS Hardware/Software Integration - Complete		4Q	
(U)	TISS System Compatibility Test - Complete			1Q
(U)	F-15 Avionics Replacement Start			1Q
(U)	RWR - Lab Test Start		2Q	
(U)	RWR - Lab Test Complete			3Q

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PE NUMBER: 0207136F
PE TITLE: Manned Destructive Suppression

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	16.143	9.260	0.515	0.000	0.000	0.000	0.000	0.000	158.830
4595	F-16 Smart Targeting and Identification via Networked Geolocation (STING)	16.143	9.260	0.515	0.000	0.000	0.000	0.000	0.000	158.830

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 0605807F.

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

(U) A. Mission Description and Budget Item Justification

The overall Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program. In FY00, P3I development of HTS Revision 7 (HTS R7) began to address evolving threats and to incorporate a precision geolocation capability to target Precision Guided Munitions (PGMs) into the AN/ASQ 213 Pod. In FY01, the R7 P3I Program Definition and Risk Reduction (PDRR) was completed and the contract was awarded for System Development and Demonstration (SDD). HTS R7 developed changes will also enable the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. These improvements represent the Air Force's near-term solution (capability can be transferred to F-35, Unmanned Combat Air Vehicle (UCAV), or a yet defined system) for reactive time critical targeting for the DEAD mission. HTS R7 will target HARM and other PGMs to destroy fixed and mobile enemy air defense elements. HTS R7 precision coordinates will be available to all Joint Forces via Link-16. FY06 continues flight test activities and conducts investigation, studies, and preliminary design activities for future P3I. The HTS R7 development effort and P3I related activities continue through FY07.

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	16.827	9.394	0.509
(U)	Current PBR/President's Budget	16.143	9.260	0.515
(U)	Total Adjustments	-0.684	-0.134	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.013	-0.134	
	Congressional Increases			
	Reprogrammings	-0.307		
	SBIR/STTR Transfer	-0.364		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207136F Manned Destructive Suppression	PROJECT NUMBER AND TITLE: 4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4595	F-16 Smart Targeting and Identification via Networked Geolocation (STING)	16.143	9.260	0.515	0.000	0.000	0.000	0.000	0.000	158.830
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The overall Manned Destructive Suppression (MDS) program funds the development, procurement, and sustainment of the Air Force's Suppression of Enemy Air Defenses (SEAD) and Destruction of Enemy Air Defenses (DEAD) capabilities. The F-16 HARM Targeting System (HTS) is currently the only programmed reactive SEAD capability and enables targeting the HARM missile in its most lethal 'range known' mode. The program provides F-16 Block 50/52 aircraft with the ability to employ the AN/ASQ-213 Pod. This RDT&E effort continues preplanned product improvements (P3I) and applies technologies similar to those demonstrated in the Advanced Tactical Targeting Technologies (AT3) program. In FY00, P3I development of HTS Revision 7 (HTS R7) began to address evolving threats and to incorporate a precision geolocation capability to target Precision Guided Munitions (PGMs) into the AN/ASQ 213 Pod. In FY01, the R7 P3I Program Definition and Risk Reduction (PDRR) was completed and the contract was awarded for System Development and Demonstration (SDD). HTS R7 developed changes will also enable the F-16 to carry both an AN/ASQ-213 HTS R7 Pod and an Advanced Targeting Pod (ATP), by relocating HTS R7 pod to the aircraft's left inlet hard point. These improvements represent the Air Force's near-term solution (capability can be transferred to F-35, Unmanned Combat Air Vehicle (UCAV), or a yet defined system) for reactive time critical targeting for the DEAD mission. HTS R7 will target HARM and other PGMs to destroy fixed and mobile enemy air defense elements. HTS R7 precision coordinates will be available to all Joint Forces via Link-16. FY06 continues flight test activities and conducts investigation, studies, and preliminary design activities for future P3I. The HTS R7 development effort and P3I related activities continue through FY07.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue HTS R7 Geolocation Upgrade Development/P3I related activities	11.751	8.451	
(U)	Continue HTS R7 Upgrade Test and Evaluation Support	3.519	0.000	
(U)	Continue Mission Support	0.873	0.809	0.515
(U)	Total Cost	16.143	9.260	0.515

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) HTS Aircraft Procurement (BP11)AF PE 0207136F	13.425	20.713	7.289	0.000	0.000				41.427
(U) HTS Aircraft Procurement (BP19)AF PE 0207136F	2.860	16.917	9.374	9.991	10.103				49.245

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U)	Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Raytheon Systems Co.	SS/Various		75.310	11.751		8.451					95.512	
	Raytheon Systems Co.	SS/CPAF		31.331								31.331	
	AFMSS	SS/CPIF		2.674								2.674	
	Lockheed/Ft Worth	SS/FFP		2.400								2.400	
	Subtotal Product Development			111.715	11.751		8.451		0.000		0.000	131.917	0.000
	Remarks: HTS R7 SDD Contract awarded FY01 (on-going through FY07)												
(U)	Support												
	Mission Support	Various		7.880	0.873		0.809		0.515			10.077	
	Subtotal Support			7.880	0.873		0.809		0.515		0.000	10.077	0.000
	Remarks:												
(U)	Test & Evaluation												
	Eglin	PO		2.175								2.175	
	Edwards	PO		10.220	3.519							13.739	
	Light Defender			0.922								0.922	
	Subtotal Test & Evaluation			13.317	3.519		0.000		0.000		0.000	16.836	0.000
	Remarks:												
(U)	Management												
												0.000	
	Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:												
(U)	Total Cost			132.912	16.143		9.260		0.515		0.000	158.830	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

HTS R7 Development Program Schedule

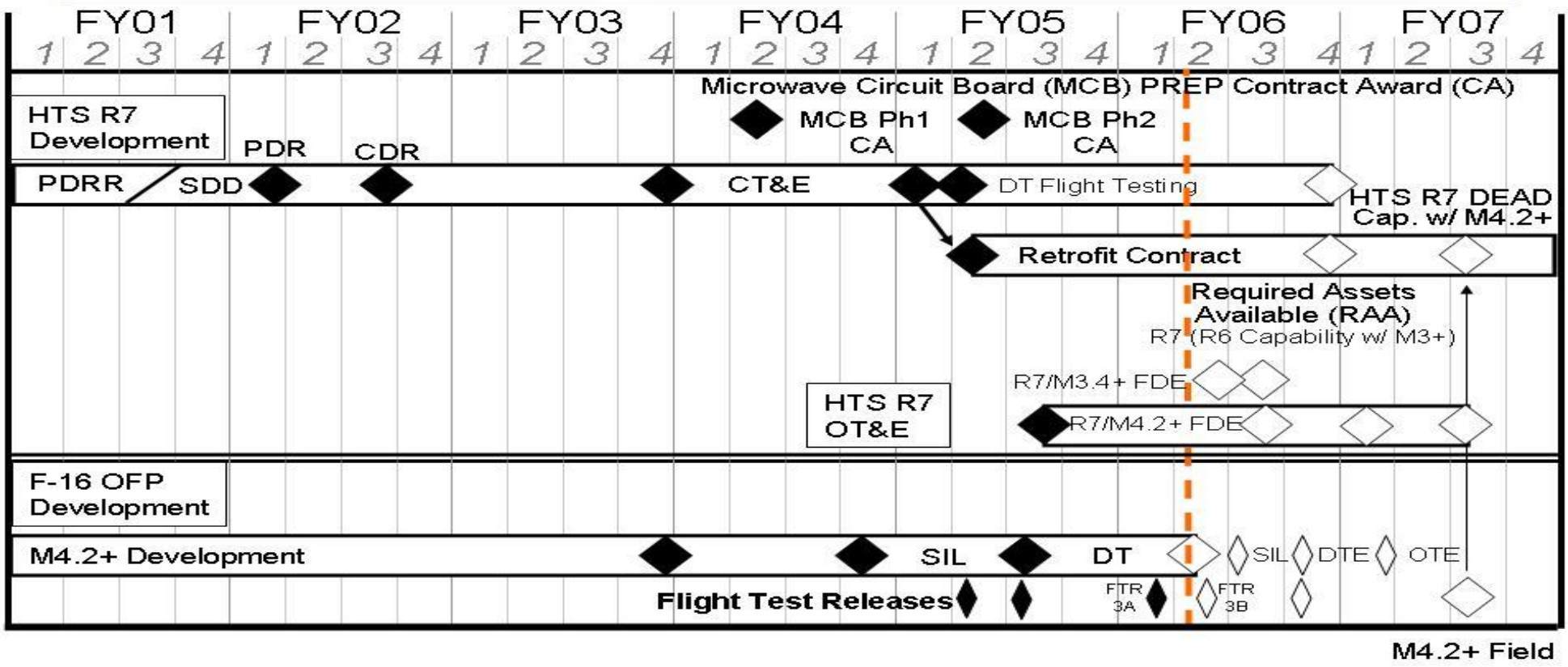

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207136F Manned Destructive Suppression**	PROJECT NUMBER AND TITLE **4595 F-16 Smart Targeting and Identification via Networked Geolocation (STING)**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	MCB PREP Contract Award -- Ph 2	3Q		
(U)	R7 Retrofit Decision	2Q		
(U)	Retrofit Kits -- Contract Award (83 Kits)	2Q		
(U)	Retrofit Kit Installation (83 Kits) -- Contract Award		1Q	
(U)	Retrofit Kits -- Contract Award (117 Kits)		2Q	
(U)	P3I Study -- Contract Award		4Q	
(U)	R7 RAA (R6 Capability w/ F-16 OFP M3+)		4Q	
(U)	Retrofit Kit Installation (117 Kits) -- Contract Award			1Q
(U)	R7 Precision Targeting Capability (w/ F-16 OFP M4+)			3Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	318.369	373.124	584.290	645.556	563.901	614.296	604.380	Continuing	TBD
4785	F-22	318.369	373.124	584.290	620.560	326.994	203.724	202.257	Continuing	TBD
5209	Spiral 4 and 5	0.000	0.000	0.000	24.996	236.907	410.572	402.123	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The F-22A Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22A is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F-22A is currently closing out the Engineering and Manufacturing Development (EMD) phase of acquisition and continuing the spiral-modernization phase. This exhibit includes the spiral modernization enhancements required to enable a more robust air-to-air and air-to-ground target engagement capability in the most demanding threat environments-day or night.

Spirals 2 and 3 continue the development of global strike capability. The development program enhances the air vehicle, engine, and training system capabilities to improve F-22A weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	362.394	403.517	582.512
(U)	Current PBR/President's Budget	318.369	373.124	584.290
(U)	Total Adjustments	-44.025	-30.393	
(U)	Congressional Program Reductions	-0.262	-25.000	
	Congressional Rescissions		-5.393	
	Congressional Increases			
	Reprogrammings	-34.366		
	SBIR/STTR Transfer	-9.397		

(U) Significant Program Changes:

FY05 reductions for higher AF priorities, congressional recissions, and an internal F-22 reprogramming.
FY06 reduction is a $25M congressional mark.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207138F F-22 SQUADRONS

PROJECT NUMBER AND TITLE: 4785 F-22

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4785 F-22	318.369	373.124	584.290	620.560	326.994	203.724	202.257	Continuing	TBD
Quantity of RDT&E Articles	0	1	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The F-22A Raptor represents the USAF's top priority for providing the Joint Force with air dominance, operational access, homeland and cruise missile defense for the next 20+ years. The F-22A is a first-of-a-kind multi-mission fighter aircraft that combines stealth, supercruise, advanced maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F-22A is currently closing out the Engineering and Manufacturing Development (EMD) phase of acquisition and continuing the spiral-modernization phase. This exhibit includes the spiral modernization enhancements required to enable a more robust air dominance air-to-air/Suppression/Destruction of Enemey Air Defense (SEAD/DEAD) and other air-toground target engagement capability in the most demanding threat environments-day or night.

Spirals 2 and 3 continue the development of global strike capability. The development program enhances the air vehicle, engine, and training system capabilities to improve F-22A weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue requirements definition and spiral development activities for planned hardware and software capability upgrades. (NSP) --Continue Spiral 2 to develop Global Strike Conops basic capabilities. --Continue Spiral 3 to develop Global Strike Conops enhanced capabilities.	230.447	213.319	361.671
(U)	Continue Post-EMD System Engineering/Program Management Contract Support	32.937	35.752	41.030
(U)	Continue Air Vehicle Instrumentation support (Training and Test Instrumentation)	3.501	18.540	8.000
(U)	Continue Flight test and flight test support at Edwards AFB.	17.672	55.946	66.838
(U)	Continue Mission support of the SPO; travel, computer costs, misc contracts, etc.	7.885	10.567	10.751
(U)	Continue F-22A Reliability and Maintainability Maturation Program (RAMMP)		14.000	29.000
(U)	Replacement Test Aircraft (RTA) and Instrumentation	25.927	25.000	67.000
(U)	Total Cost	318.369	373.124	584.290

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E (PE 64239F)	211.815	75.117							24,086.648
(U)	PRTV II (6)									1,580.580
(U)	F-22A Squadrons Procurement (3010) (PE 0207138F)	95.187	78.489	262.906	300.218	285.885	170.679	398.246	Continuing	TBD
(U)	F-22A Squadrons Procurement (3080) (PE 027138F)	0.443	1.471	2.741	1.735	0.000	0.721	1.479	Continuing	TBD
(U)	Military Construction (PE 0604239F)	0.000	0.000	0.000	0.000	0.000	0.000		0.000	65.000
(U)	Military Construction (PE 0207219F)	0.000	0.000	0.000	0.000	0.000	0.000		0.000	96.018
(U)	Military Construction (PE 0207138F)	28.370	47.120	62.900	98.391	0.000	0.000	0.000	0.000	267.951
(U)	Aircraft Procurement (PE 0207219F) Advanced Tactical Fighter, P-1 Line Item #003**	4024.599	3763.848	2032.881	3197.146	2894.025	1694.514	0.000	0.000	34,099.816
(U)	Munitions Procurement (PE 0207219F)	16.788	10.836	16.575	12.496	12.801	16.153	12.909	0.000	120.424
(U)	F-22A Tactical Data Link RDT&E (PE 27445F)	35.526	95.557	88.099	52.175	38.626	34.714		0.000	344.697
(U)	F-22A Adv Comm Systems Procurement (PE 27423F)						34.521	16.690	Continuing	TBD

**NOTE: Includes BP10, 11, 16, 19 and Advance Buy.

(U) D. Acquisition Strategy

The Raptor Enhancement Development & Integration (REDI) contract is an Indefinite Delivery/Indefinite Quantity Ordering contract that maximizes flexibility to start, stop, accelerate and decelerate projects based on funding. The REDI contract was established to be more responsive to evolving war fighter requirements. The REDI contract allows the issuance of orders for the highest priority war fighter capabilities in operationally meaningful capability increments, requirements analysis, contractor cost estimates and studies, development and demonstration of capability enhancements, and unanticipated future war fighter requirements. Each spiral is broken into phases. Phase A is to initiate requirements analysis, Phase B is the design phase and Phases C,D,E are the development, integration and verification phase of a specific spiral development effort. Separate delivery orders will be issued for each phase of a spiral. These separate delivery orders at these predetermined breakpoints allow the spiral effort to be tailored to the technology maturity, available funding and capability priority during the life of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **4785 F-22**

(U)	Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U)	Product Development												
	Spiral development activities	Cost Plus		284.859	230.447	Dec-04	213.319	Dec-05	361.671	Dec-06	Continuing	TBD	
	Air Vehicle Instrumentation support (Training and Test Instrumentation)	Cost Plus		0.250	3.501	Nov-04	18.540	Mar-06	8.000	Jan-07	Continuing	TBD	
	System Engineering / Program Management	Cost Plus		67.411	32.937	Dec-04	35.752	Dec-05	41.030	Dec-06	Continuing	TBD	
	F/A-22 Reliability and Maintainability Maturation Program (RAMMP)	Cost Plus					14.000	Jan-06	29.000	Jan-07	Continuing	TBD	
	Not Applicable											0.000	
	Subtotal Product Development			352.520	266.885		281.611		439.701		Continuing	TBD	0.000
	Remarks:												
(U)	Support												
	Support Contracts	Various		6.233	7.885		10.567		10.751		Continuing	TBD	
	In House Support										Continuing	TBD	
	Not Applicable											0.000	
	Subtotal Support			6.233	7.885		10.567		10.751		Continuing	TBD	0.000
	Remarks:												
(U)	Test & Evaluation												
	AFFTC and Contractor	Various	Edwards AFB, CA		17.672	Apr-05	55.946	Nov-05	66.838	Nov-06	Continuing	TBD	
	Replacement Test Aircraft (RTA) and Instrumentation	Fixed Price		9.870	25.927	Jan-06	25.000	Feb-06	67.000	Jan-07	Continuing	TBD	
	Not Applicable											0.000	
	Subtotal Test & Evaluation			9.870	43.599		80.946		133.838		Continuing	TBD	0.000
	Remarks:												
(U)	Management												
												0.000	
	Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:												
(U)	Total Cost			368.623	318.369		373.124		584.290		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207138F F-22 SQUADRONS	PROJECT NUMBER AND TITLE 4785 F-22

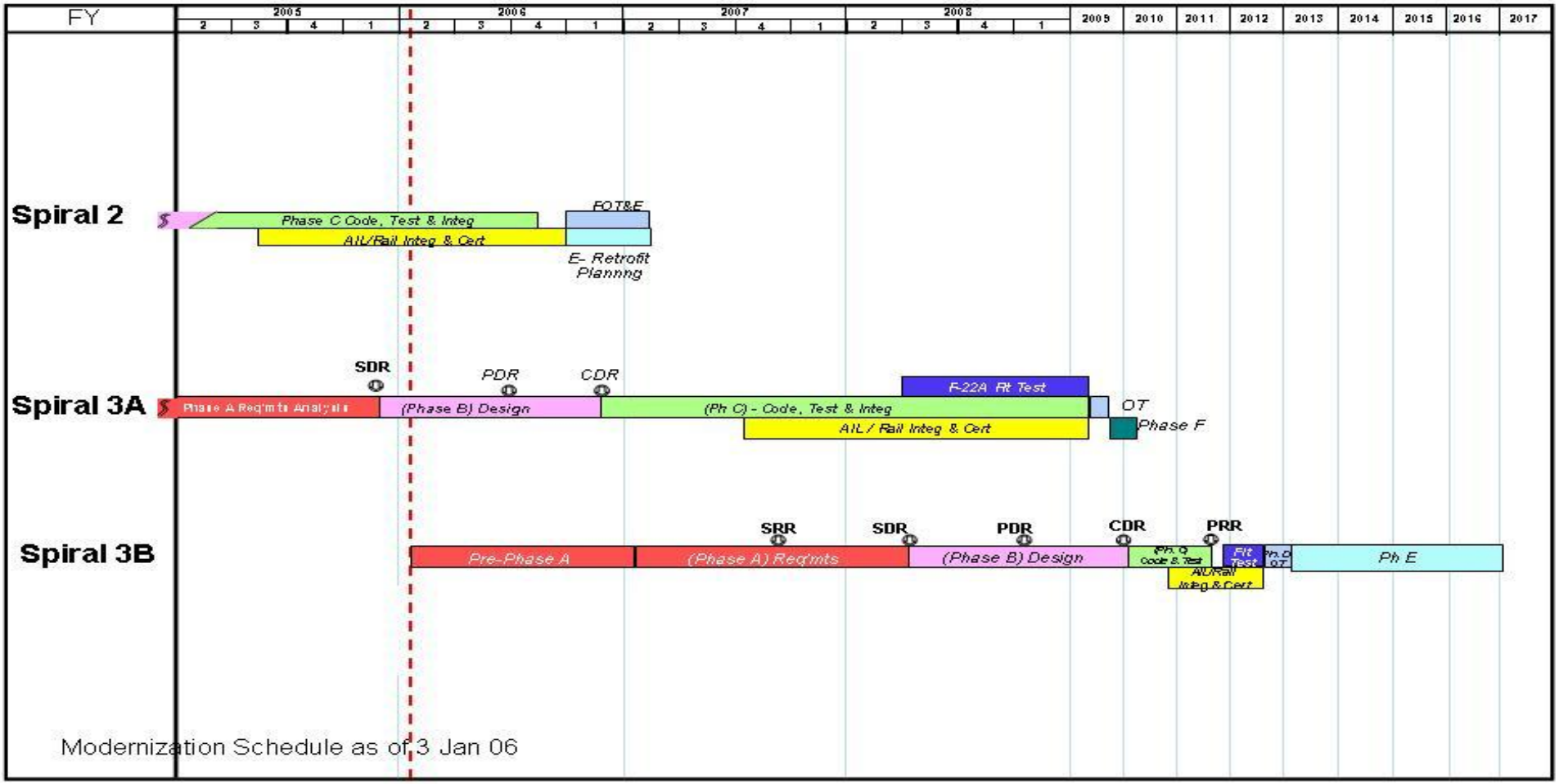

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207138F F-22 SQUADRONS	4785 F-22

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Initiate Spiral 2 Phase C, D &E (Development, Integration & Test)	2Q		
(U) Complete Spiral 3a Phase A (Requirements Analysis)		1Q	
(U) --Spiral 3a SDR		1Q	
(U) Initiate Spiral 3a Phase B (Design)		1Q	
(U) --Spiral 3a PDR		3Q	
(U) --Spiral 3a CDR			1Q
(U) Initiate Spiral 3b Phase A (Requirements Analysis)			2Q
(U) --Spiral 3b SRR			4Q

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207141F F-117A SQUADRON

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	17.385	13.406	14.093	0.000	0.000	0.000	0.000	Continuing	TBD
3956 F-117A Stealth Fighter	17.385	13.406	14.093	0.000	0.000	0.000	0.000	Continuing	TBD

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning FY06; this resulted in a zero-balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 0605807F.

(U) A. Mission Description and Budget Item Justification

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

The Air Force plans to retire 10 F-117 aircraft in FY07 and the remaining aircraft in FY08. Retirement of the aircraft will require a significant level of funding across the FYDP to carry out 1) contract terminations; 2) facility shutdown; 3) aircraft, tool and equipment disposition; and 4) potential environmental clean-up.
All of the FY07 development funding identified in this R-Doc will be re-allocated to start the program on termination/ shutdown efforts. A study to determine the required actions and their estimated costs is currently under way.

If retirement plans change to a later date, FY07 development efforts outlined below would continue.

- Development efforts continue for smart weapons integration, primarily in revisions to the Operational Flight Program (OFP). The current program scope implements three weapons capabilities: EGBU-27, JDAM and WCMD. System Development & Demonstration (SDD) started in FY01.

- The Combat Capability Sustainment Program (CCSP) replaces obsolete avionics systems, establishes new vendors and improves reliability and maintainability to keep the F-117 operational. CCSP began Concept & Technology Development (CTD) in FY00 with Congressional Add funding. Beginning in FY2004, SDD started for Expanded Data Transfer System (EDTS). EDTS is the system that allows data to be transferred from the mission planning environment to the aircraft for operations.
- The F-117 Weapon System Trainer (WST) requires a replacement for the imagery computer/image generation system. The vendor of the current system, SGI, no longer manufactures replacement boards for the imagery computer. Furthermore, the vendor no longer supports the current maintenance requirements. Recently, the computer was responsible for 80% of the total WST downtime. The downtime associated with the computer will likely increase over time.

- The F-117 Mission Planning System (MPS) requires an operational system upgrade. The National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117 MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. These obsolescence issues drive the requirement for both hardware and software upgrades.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON

- Dual Radio was approved as an FY05 New Start, addressing changes in F-117 employment and tactics. The F-117 is now required to integrate with conventional strike packages, support aircraft, and special operations forces both in the air and on the ground. This requires the ability to communicate on and monitor multiple frequencies at the same time. This project enables the pilot to receive and transmit target, threat, and other critical mission data on two UHF channels at the same time. The dual radio capability meets this requirement and will allow the development of advanced tactics to support time sensitive targeting. Additionally, international communications requirements have changed and VHF 8.33KHz channel spacing has been mandated in many parts of the world. The current radio is UHF only. This project will provide growth capability to meet the required international communications capability on VHF once a VHF capable antenna is available to the aircraft

- SATCOM Antenna was approved as an FY05 New Start, addressing the requirement to function in a network centric combat environment. The project provides beyond line of sight, reach-back capability to obtain Time Sensitive Targeting (TST) information, increased in importance as F-117 employment and tactics continue to evolve. This SATCOM antenna project will extend the F-117s ability to receive and transmit dynamic targeting data from beyond line of sight locations to a point much closer to the target area.

- Common Data Recorder - The current Structures Tracking and Engine Management System (STEMS) and Low Observable Instrumentation System (LOIS) have limited memory capacity and obsolescence issues. The STEMS recorder is required to determine inspection intervals of the engines and structures of the aircraft to predict economic life of the aircraft. Additional memory is required to record additional parameters and increase the fidelity of the inspection intervals circumventing catastrophic failures. The LOIS functionality can be combined into STEMS to reduce the cost of supporting two unique subsystems. Additionally, this approach allows for future add-ins such as recording of flight, video, and crash data.

This program is in budget activity 7, Operational System Development, because all aircraft have been delivered and the program is in its deployment phase.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	29.399	13.600	14.035
(U)	Current PBR/President's Budget	17.385	13.406	14.093
(U)	Total Adjustments	-12.014	-0.194	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.023	-0.194	
	Congressional Increases			
	Reprogrammings	-11.199		
	SBIR/STTR Transfer	-0.792		

(U) Significant Program Changes:

- $5.5M FY05 funds transferred to Warfighter Rapid Acquisition Program program element to jump start Dual Radio and SATCOM Antenna. $5.3M transferred to meet higher AF requirements.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE: 3956 F-117A Stealth Fighter	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3956 F-117A Stealth Fighter	17.385	13.406	14.093	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

The Air Force plans to retire 10 F-117 aircraft in FY07 and the remaining aircraft in FY08. Retirement of the aircraft will require a significant level of funding across the FYDP to carry out 1) contract terminations; 2) facility shutdown; 3) aircraft, tool and equipment disposition; and 4) potential environmental clean-up.
All of the FY07 development funding identified in this R-Doc will be re-allocated to start the program on termination/ shutdown efforts. A study to determine the required actions and their estimated costs is currently under way.

If retirement plans change to a later date, FY07 development efforts outlined below would continue.

- Development efforts continue for smart weapons integration, primarily in revisions to the Operational Flight Program (OFP). The current program scope implements three weapons capabilities: EGBU-27, JDAM and WCMD. System Development & Demonstration (SDD) started in FY01.

- The Combat Capability Sustainment Program (CCSP) replaces obsolete avionics systems, establishes new vendors and improves reliability and maintainability to keep the F-117 operational. CCSP began Concept & Technology Development (CTD) in FY00 with Congressional Add funding. Beginning in FY2004, SDD started for Expanded Data Transfer System (EDTS). EDTS is the system that allows data to be transferred from the mission planning environment to the aircraft for operations.
- The F-117 Weapon System Trainer (WST) requires a replacement for the imagery computer/image generation system. The vendor of the current system, SGI, no longer manufactures replacement boards for the imagery computer. Furthermore, the vendor no longer supports the current maintenance requirements. Recently, the computer was responsible for 80% of the total WST downtime. The downtime associated with the computer will likely increase over time.

- The F-117 Mission Planning System (MPS) requires an operational system upgrade. The National Imaging and Mapping Agency (NIMA) is migrating to DVD format for all mapping database operations and the F-117 MPS operating system cannot be modified to function with this capability. Additionally, the current MPS Solaris operating system and Sybase database product are no longer supported by the Air Force Mission Support System (AFMSS) program office. These obsolescence issues drive the requirement for both hardware and software upgrades.

- Dual Radio was approved as an FY05 New Start, addressing changes in F-117 employment and tactics. The F-117 is now required to integrate with conventional strike packages, support aircraft, and special operations forces both in the air and on the ground. This requires the ability to communicate on and monitor multiple frequencies at the same time. This project enables the pilot to receive and transmit target, threat, and other critical mission data on two UHF channels at the same time. The dual radio capability meets this requirement and will allow the development of advanced tactics to support time sensitive targeting. Additionally, international

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

communications requirements have changed and VHF 8.33KHz channel spacing has been mandated in many parts of the world. The current radio is UHF only. This project will provide growth capability to meet the required international communications capability on VHF once a VHF capable antenna is available to the aircraft

- SATCOM Antenna was approved as an FY05 New Start, addressing the requirement to function in a network centric combat environment. The project provides beyond line of sight, reach-back capability to obtain Time Sensitive Targeting (TST) information, increased in importance as F-117 employment and tactics continue to evolve. This SATCOM antenna project will extend the F-117s ability to receive and transmit dynamic targeting data from beyond line of sight locations to a point much closer to the target area.

- Common Data Recorder - The current Structures Tracking and Engine Management System (STEMS) and Low Observable Instrumentation System (LOIS) have limited memory capacity and obsolescence issues. The STEMS recorder is required to determine inspection intervals of the engines and structures of the aircraft to predict economic life of the aircraft. Additional memory is required to record additional parameters and increase the fidelity of the inspection intervals circumventing catastrophic failures. The LOIS functionality can be combined into STEMS to reduce the cost of supporting two unique subsystems. Additionally, this approach allows for future add-ins such as recording of flight, video, and crash data.

This program is in budget activity 7, Operational System Development, because all aircraft have been delivered and the program is in its deployment phase.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	SDD for Smart Weapons Integration	5.077	3.893	3.000
(U)	SDD for CCSP Expanded Data Transfer System (EDTS)	3.657		
(U)	Concept Technology and Development (CTD) for CCSP	0.337		
(U)	SDD for Weapon System Trainer (WST) Image Generation System	3.667		1.675
(U)	Mission Planning System (MPS) Upgrade	3.694	4.569	2.447
(U)	Modify flight test assets to conform with current modifications of operational jets	0.785	0.974	1.758
(U)	Dual Radio SDD	0.168	1.538	0.726
(U)	SATCOM Antenna SDD		1.632	0.962
(U)	Initiate Common Data Recorder SDD		0.800	3.525
(U)	Total Cost	17.385	13.406	14.093

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	Aircraft Procurement (BA-5), Appn 3010/BP1100, AF F117A Squadrons, PE 0207141F	22.578	9.493	24.422	8.932				0.000	65.425
(U)	Aircraft Procurement (BA-5),	1.029								1.029

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

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

Appn 3010/BP1600, AF F117A
Squadrons, PE 0207141F

(U) D. Acquisition Strategy

RDT&E funds are executed to develop improved capability, reliability, maintenance and safety modifications. Operational Flight Program (OFP) software is continuously updated as needed to complement modification development efforts. The contracting approach varies by individual effort and involves Cost Plus Fixed Fee (CPFF) and Cost Plus Award Fee (CPAF) contract types.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Smart Weapon Integration SDD	CPAF	Lockheed Martin, Palmdale CA	19.374	5.077		3.893		4.430			32.774	
CCSP EDTS SDD	CPFF	Lockheed Martin, Palmdale CA		3.657							3.657	
CCSP CTD	CPFF	Lockheed Martin, Palmdale CA		0.337	Mar-05						0.337	
Weapon System Trainer Image Generation Sys Upgrd SDD	CPFF	Lockheed Martin, Palmdale CA		3.667	Sep-05			1.675			5.342	
Mission Planning System, Operating System Upgrade SDD	CPFF	Lockheed Martin, Palmdale CA		3.694	Mar-05	4.569		1.147			9.410	
Modify flight test assets to conform with current modifications of operational jets	CPFF	Lockheed Martin, Palmdale CA		0.785	Nov-04	0.974		1.628			3.387	
Dual Radio SDD	CPFF	Lockheed Martin, Palmdale CA		0.168	Jul-05	1.538		0.726			2.432	
SATCOM Antenna SDD	CPFF	Lockheed Martin, Palmdale CA		0.000	Jul-05	1.632		0.962			2.594	
Common Data Recorder SDD						0.800	Apr-06	3.525			4.325	
Subtotal Product Development			19.374	17.385		13.406		14.093		0.000	64.258	0.000
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207141F F-117A SQUADRON**	**3956 F-117A Stealth Fighter**

(U) Total Cost	19.374	17.385	13.406	14.093	0.000	64.258	0.000	

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207141F F-117A SQUADRON	PROJECT NUMBER AND TITLE 3956 F-117A Stealth Fighter

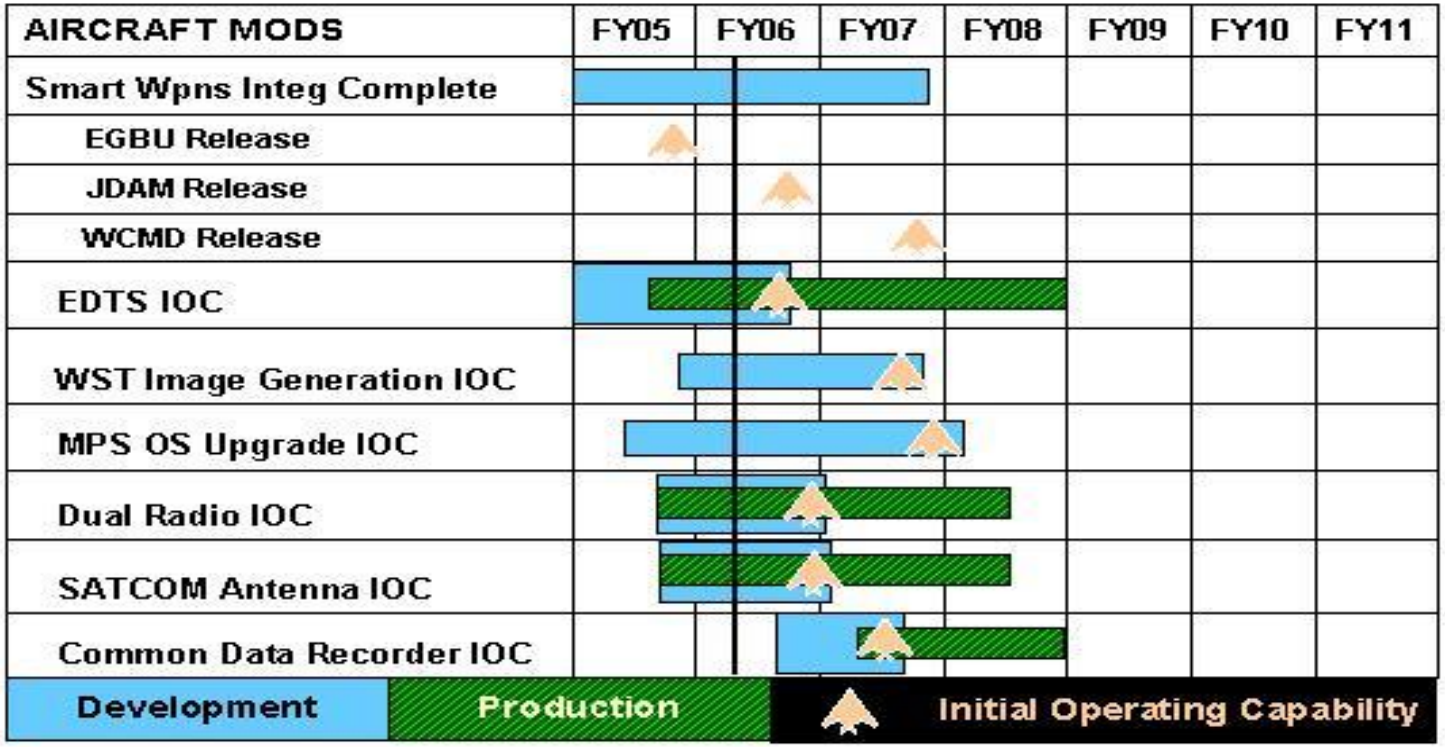

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207141F F-117A SQUADRON**	PROJECT NUMBER AND TITLE **3956 F-117A Stealth Fighter**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Smart Weapons Integration Completion			4Q
(U) EGBU Release	4Q		
(U) JDAM Release		3Q	
(U) WCMD Release			4Q
(U) EDTS IOC		2Q	
(U) WST Image Generation IOC			2Q
(U) MPS OS Upgrade IOC			4Q
(U) Dual Radio IOC		4Q	
(U) SATCOM Antenna IOC		4Q	
(U) Common Data Recorder IOC			3Q

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PE NUMBER: 0207161F
PE TITLE: Tactical AIM Missiles

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	5.346	15.416	8.850	7.897	5.805	6.044	6.256	Continuing	TBD
4132	AIM-9 Product Improvement	5.346	15.416	8.850	7.897	5.805	6.044	6.256	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

Milestone III was approved May 2004, the first full-rate production (FRP) contract was awarded Nov 04 and the second FRP contract was awarded Dec 05.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	5.509	15.639	8.899
(U)	Current PBR/President's Budget	5.346	15.416	8.850
(U)	Total Adjustments	-0.163	-0.223	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.004	-0.223	
	Congressional Increases			
	Reprogrammings	-0.082		
	SBIR/STTR Transfer	-0.077		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles

PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4132 AIM-9 Product Improvement	5.346	15.416	8.850	7.897	5.805	6.044	6.256	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

Milestone III was approved May 2004, the first full-rate production (FRP) contract was awarded Nov 04 and the second FRP contract was awarded Dec 05.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Raytheon Missile Systems (RMS) P3I Contract	4.910	11.539	5.414
(U) Software/OFP Upgrade	0.000	2.300	1.030
(U) DT&E/OT&E for P3I software updates and FOT&E efforts	0.253	1.127	1.956
(U) In-house/CSS Support	0.183	0.450	0.450
(U) Total Cost	5.346	15.416	8.850

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E	5.346	15.416	8.850	7.897	5.805	6.044	6.256	Continuing	TBD
(U) DOD PE (0603715D)									25.000
(U) Tactical AIM Missile Modification (BP21)									30.817
(U) Tactical AIM Missile Procurement	61.377	50.639	49.925	51.018	79.818	79.532	62.570	Continuing	TBD
(U) SEEK EAGLE (PE_0207590F)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	10.028

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

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207161F Tactical AIM Missiles**	PROJECT NUMBER AND TITLE **4132 AIM-9 Product Improvement**

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Hughes	C/CPIF									0.000	0.000	
Raytheon	C/CPIF									0.000	0.000	
Raytheon	C/CPIF									Continuing	TBD	
Raytheon Software/OFP Upgrades						2.300	Dec-05	1.030	Dec-06	Continuing	TBD	
Raytheon P3I Contract				4.910	Dec-04	11.539	Dec-05	5.414	Dec-06	Continuing	TBD	
Boeing	C/CPIF										0.000	
Engineering Services	Various									Continuing	TBD	
Program Management*	PO									Continuing	TBD	
Subtotal Product Development			0.000	4.910		13.839		6.444		Continuing	TBD	0.000
Remarks: Note*: Based on a Memorandum of Agreement, RDT&E program costs includes Navy PMA working capital funded personnel funded at 50%/50% ratio per Service.												
(U) Support												
Various Contracts	FFP									Continuing	TBD	
In House Support	N/A			0.183	Dec-04	0.450	Nov-05	0.450	Nov-06	Continuing	TBD	
Subtotal Support			0.000	0.183		0.450		0.450		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Field Activities	PO			0.253	Dec-04	1.127	Nov-05	1.956	Nov-06	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.253		1.127		1.956		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	5.346		15.416		8.850		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

AIM-9X Program / Delivery Schedule

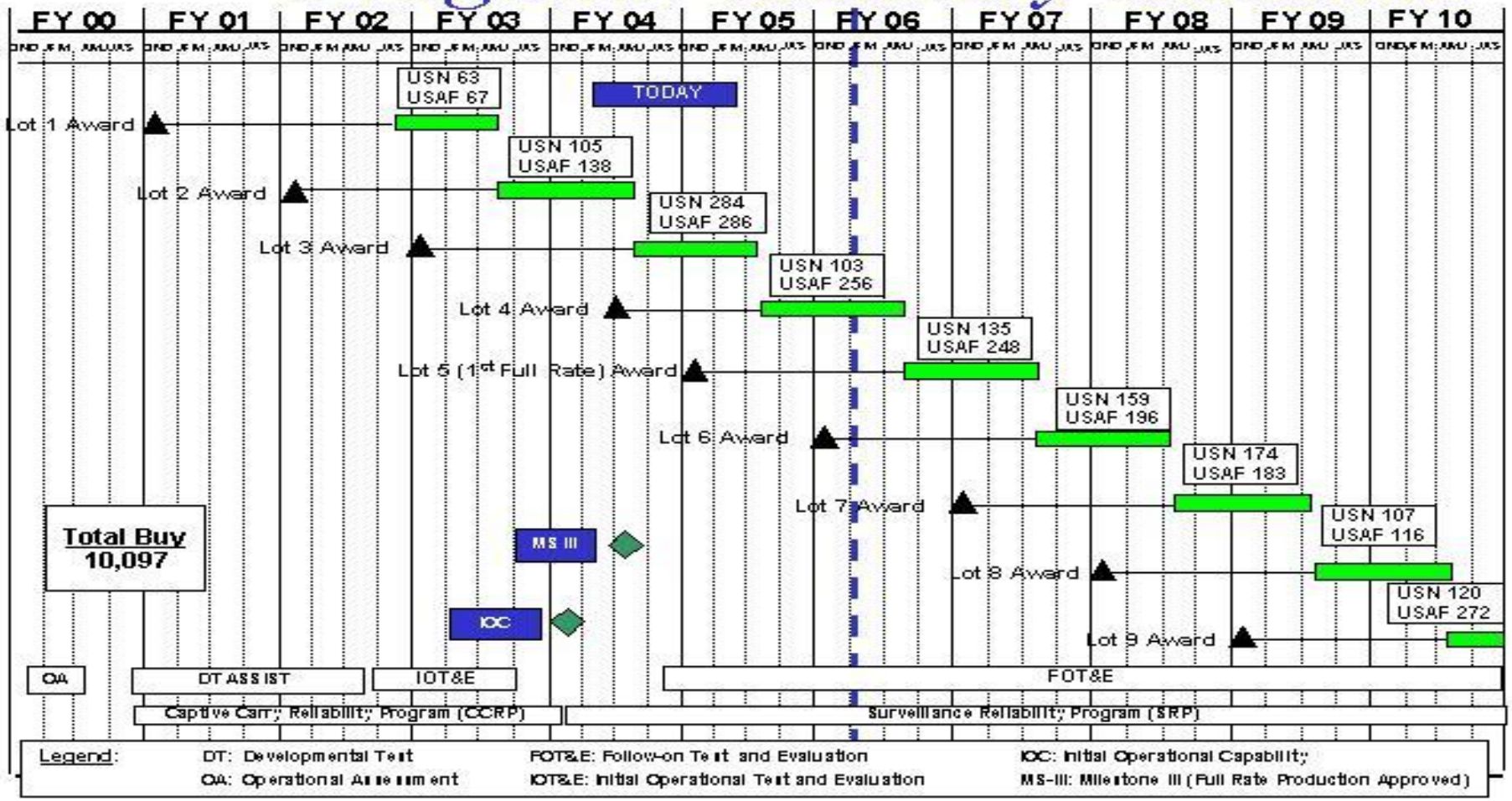

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207161F Tactical AIM Missiles	PROJECT NUMBER AND TITLE: 4132 AIM-9 Product Improvement

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) FRP Award (Lots 5-7)	1Q	1Q	1Q
(U) DT-IIIB		3Q	
(U) OT-IIIB			3Q

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	31.871	32.788	43.417	37.441	38.497	39.939	40.403	Continuing	TBD
3777 AMRAAM	31.871	32.788	43.417	37.441	38.497	39.939	40.403	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	32.973	33.262	43.193
(U)	Current PBR/President's Budget	31.871	32.788	43.417
(U)	Total Adjustments	-1.102	-0.474	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.025	-0.474	
	Congressional Increases			
	Reprogrammings	-0.207		
	SBIR/STTR Transfer	-0.870		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

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

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3777 AMRAAM	31.871	32.788	43.417	37.441	38.497	39.939	40.403	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

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

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue to provide software upgrades	5.000	0.000	2.000
(U) Continue mission support: Provide program management to execute Phase 4 program	1.460	1.495	1.544
(U) Continue test and evaluation: Provide Test Wing support to DT and OT	1.851	2.979	6.213
(U) Continue effort to complete qualification of the Phase 4 missile design. Contract was awarded Dec 03.	20.647	17.011	9.275
(U) Aircraft Integration - Integrate Phase 4 on multiple aircraft platforms	2.913	4.303	17.385
(U) Develop AMRAAM field reprogrammer		7.000	7.000
(U) Total Cost	31.871	32.788	43.417

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Missile Procurement, Budget Activity #2, PE 0207163F, P-1 Line Item, AMRAAM	106.857	103.086	135.869	221.231	273.838	281.750	300.240	0.000	7,814.786

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM	

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

(U)	Replenishment Spares, BP25 and Missile Replacement Equipment	0.268	0.193	0.202	0.202	0.210	0.214	0.219	0.000	61.876
(U)	Initial Spares, BP26	0.072	0.072	0.075	0.074	0.077	0.078	0.081	0.000	63.483
(U)	Seek Eagle	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	14.525
(U)	AMRAAM Field Reprogrammer, BP 22	0.000	0.000	0.000	5.696	5.742	5.315	0.000	0.000	16.487

(U) D. Acquisition Strategy

The AMRAAM P3I program takes advantage of emerging technologies to update and expand the system capabilities to meet new user requirements. The Phase 3 Cost Plus Award Fee EMD contract was completed 30 Mar 04. This missile is currently in OT testing with projected fielding date of 1QFY07. Phase 4, awarded in Dec 03, is intended to meet the requirement to evolve the AMRAAM for improved performance. Production cut-in of the Phase 4 (AIM 120-D) missile begins in FY06. The Missile Performance Specification (MPS) and Interface Control Document (ICD) will define the requirement to integrate the Phase 4 AMRAAM onto the F-15, F-16, and F-22A. Total Seek Eagle (PE 0207590F) includes cost for 36 missiles and services.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **3777 AMRAAM**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Misc. Contracts	SS/FFP									0.000	0.000	15.987
F08635-90-C-0201 Hughes	SS/FFP	Hughes								0.000	0.000	5.200
F08626-91-C-0034 Hughes	SS/CPIF	Hughes								0.000	0.000	93.506
F08626-93-C-0044 (Phase 2) Hughes	SS/CPAF	Hughes								0.000	0.000	117.558
Phase 3 Risk Reduction	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	24.484
Phase 3 Improved Fuzing Capability	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	3.937
Phase 3 Improved Seeker and Advanced EP. Raytheon F08626-98-C-0027	SS/CPAF	Raytheon, Tucson, AZ								0.000	0.000	207.755
Phase 3 Software Upgrade	SS/CPFF	Raytheon, Tucson, AZ		5.000						0.000	5.000	12.000
Phase 4 Contract FA8675-04-C-0001	SS/CPFF	Raytheon, Tucson, AZ		20.647	Dec-04	17.011	Dec-05	9.275	Dec-06	12.996	59.929	79.987
Phase 4 Follow-On Contract	SS/CPFF	Raytheon, Tucson, AZ		0.000		0.000		2.000		74.761	76.761	76.761
Aircraft Integration	MIPR	Wright-Patters on AFB, OH		2.913	Dec-04	4.303	Dec-05	17.385	Dec-06	55.173	79.774	80.300
AMRAAM Field Reprogrammer		Raytheon, Tucson, AZ				7.000	Jan-06	7.000	Jan-07	0.000	14.000	14.000
Joint Dual Role Air Dominance Missile (JDRADM)				0.000		0.000		0.000		25.000	25.000	25.000
Subtotal Product Development			0.000	28.560		28.314		35.660		167.930	260.464	756.475
Remarks: *Note: Hughes became part of Raytheon Systems effective Dec 97												
(U) Support												
COEA	PO/MIPR									0.000	0.000	3.358
Contractor Support	REO/PR			0.778	Oct-04	0.817		0.858		3.883	6.336	26.136
JSPO Operations	PR/IMPAC			0.682		0.678		0.686		2.937	4.983	25.840
Subtotal Support			0.000	1.460		1.495		1.544		6.820	11.319	55.334
Remarks:												
(U) Test & Evaluation												
Government Test	REO/MIPR			1.851		2.979		6.213		0.255	11.298	47.229
TM/ECM Pods	REO/MIPR									0.000	0.000	2.818
Subtotal Test & Evaluation			0.000	1.851		2.979		6.213		0.255	11.298	50.047
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE: 3777 AMRAAM	

	Remarks:								
(U)	Total Cost	0.000	31.871	32.788	43.417	175.005	283.081	861.856	

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207163F Advanced Medium Range Air-to-Air Missile	PROJECT NUMBER AND TITLE 3777 AMRAAM

U.S. AIR FORCE

AMRAAM Schedule

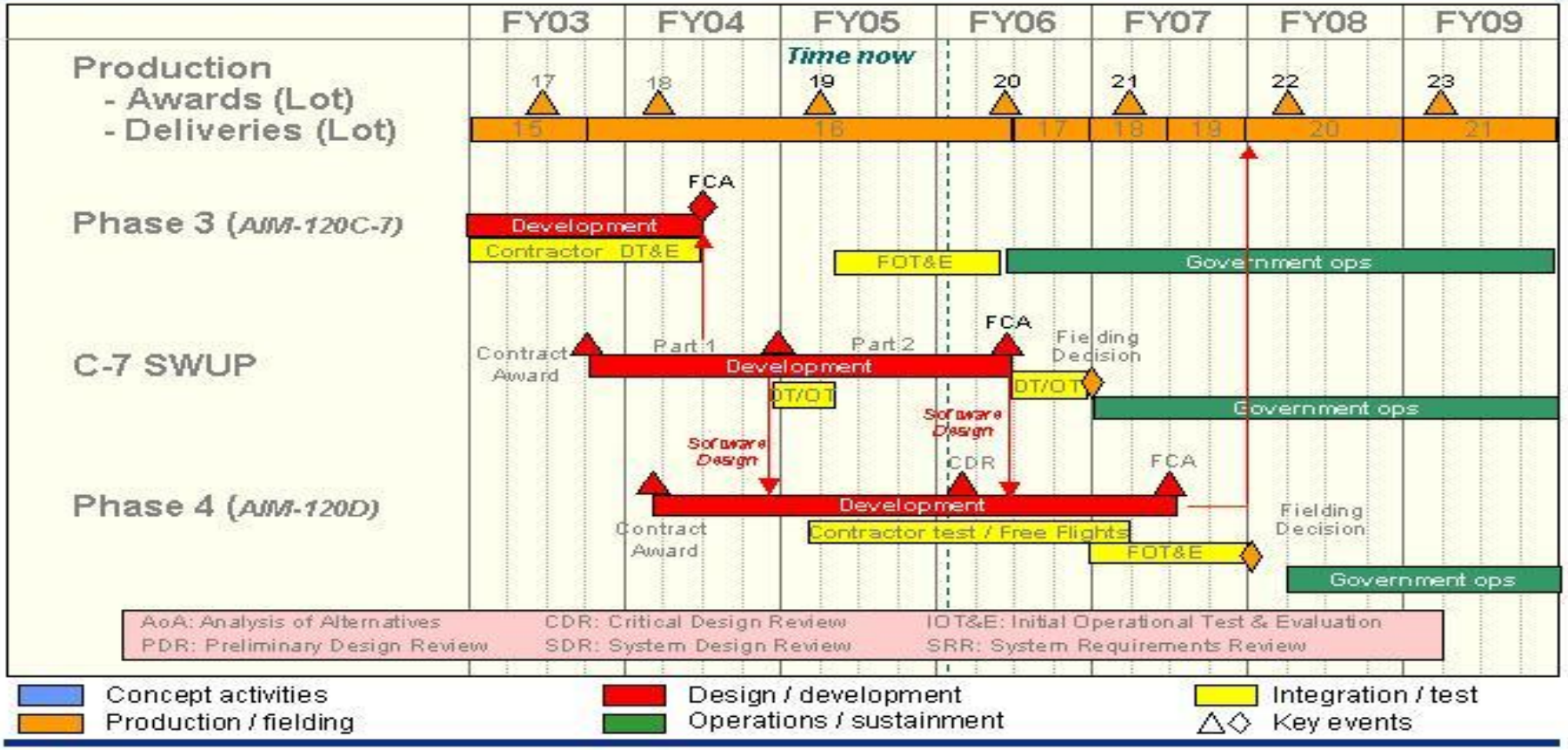

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207163F Advanced Medium Range Air-to-Air Missile**	PROJECT NUMBER AND TITLE **3777 AMRAAM**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Phase 4 POD 1st Delivery	1Q		
(U) Start Phase 4 Development Test	2Q		
(U) Phase 4 Production Award		2Q	
(U) Phase 4 Functional Configuration Audit (FCA)			2Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.460	70.801	0.000	20.300	25.391	0.000	0.000	0.000	122.952
5211	HC-130 Tanker Conversion	0.000	0.000	0.000	20.300	25.391	0.000	0.000	0.000	45.691
5125	Personnel Recovery Vehicle	6.460	70.801	0.000	0.000	0.000	0.000	0.000	0.000	77.261

(U) A. Mission Description and Budget Item Justification

The Combat Search and Rescue Replacement Aircraft (CSAR-X) will provide USAF Combat Rescue forces with a medium-lift vertical take-off and landing aircraft that is quickly deployable and capable of main base and austere location operations for worldwide CSAR and Joint Personnel Recovery (PR) missions. On-board weapons and defensive capabilities will permit the CSAR-X to operate in an increased threat environment. An in-flight refueling capability will provide an airborne alert capability and extend its combat mission range. The aircraft will be self-supporting to the maximum extent practical. The CSAR-X will be capable of operating in all environmental regions of the globe, day or night, during adverse weather conditions, to include passing through Nuclear, Biological, and Chemical (NBC) environments.

The CSAR-X program was previously known as the Personnel Recovery Vehicle (PRV). The name was changed to more accurately describe its intended mission.

A new development PE 604261F has been created for the CSAR-X program. FY07-11 RDT&E funding for this program has been transferred to PE 604261F. Production funding for CSAR-X will remain in PE 207224F and be reported in P-Docs starting in FY08.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	12.342	113.825	231.537
(U)	Current PBR/President's Budget	6.460	70.801	0.000
(U)	Total Adjustments	-5.882	-43.024	
(U)	Congressional Program Reductions		-42.000	
	Congressional Rescissions	-0.108	-1.024	
	Congressional Increases			
	Reprogrammings	-5.774		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

The Personnel Recovery Vehcile program name has been changed to CSAR-X.

FY07-11 RDT&E funding for this program has been transfered to a new PE 604261F.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY	PROJECT NUMBER AND TITLE: 5125 Personnel Recovery Vehicle

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5125	Personnel Recovery Vehicle	6.460	70.801	0.000	0.000	0.000	0.000	0.000	0.000	77.261
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Combat Search and Rescue Replacement Aircraft (CSAR-X) will provide USAF Combat Rescue forces with a medium-lift vertical take-off and landing aircraft that is quickly deployable and capable of main base and austere location operations for worldwide CSAR and Joint Personnel Recovery (PR) missions. On-board weapons and defensive capabilities will permit the CSAR-X to operate in an increased threat environment. An in-flight refueling capability will provide an airborne alert capability and extend its combat mission range. The aircraft will be self-supporting to the maximum extent practical. The CSAR-X will be capable of operating in all environmental regions of the globe, day or night, during adverse weather conditions, to include passing through Nuclear, Biological, and Chemical (NBC) environments.

The CSAR-X program was previously known as the Personnel Recovery Vehicle (PRV). The name was changed to more accurately describe its intended mission.

A new development PE 604261F has been created for the CSAR-X program. FY07-11 RDT&E funding for this program has been transferred to PE 604261F. Production funding for CSAR-X will remain in PE 207224F and be reported in P-Docs starting in FY08.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	SPO support in development of test and evaluation master plan, acquisition strategy, preparation of Milestone B (MS B) documentation, development of request for proposals, and support of source selection activities and contract award.	2.904	3.810	
(U)	Studies and Analysis	3.506	5.268	
(U)	Government Test		1.395	
(U)	Test and evlauation planning	0.050		
(U)	Development of test vehicles		60.328	
(U)				
(U)				
(U)				
(U)	Total Cost	6.460	70.801	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207224F COMBAT RESCUE AND RECOVERY**	PROJECT NUMBER AND TITLE **5125 Personnel Recovery Vehicle**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	3010 BP10 AP, PE 27224				23.638	300.799	402.185	740.752	Continuing	TBD
(U)	3600 BP28 RDT&E, PE 64261F			254.310	285.136	223.970	270.217	391.940	Continuing	TBD

(U) D. Acquisition Strategy

Request for proposals (RFP) was released in FY06. Competitive source selection, Milestone B (MS B), and contract award to be completed in FY06. Test articles will be delivered starting in FY08. Milestone C is planned for FY09.

The CSAR-X acquisition strategy will pursue an incremental development strategy. CSAR-X will develop and field two increments, a Block 0 and a Block 10 platform. The initial RDT&E funding is required for the development of three Block 0 Test Vehicles and the design, integration, testing and certification of CSAR-X mission components required by the Capability Development Document (CDD). The Block 0 CSAR-X will begin production deliveries in FY11, and have an Initial Operational Capability (IOC) in FY12. Block 10 development will develop two Test Vehicles to the Block 10 configuration allowing design, integration, and test of the Block 10 capabilities. Block 10 CSAR-Xs will have an IOC of FY18.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Studies and Analysis	TBD			3.506		5.268		0.000			8.774	
Development of Test Vehicles						60.328					60.328	
Subtotal Product Development			0.000	3.506		65.596		0.000		0.000	69.102	0.000
Remarks:												
(U) Support												
	TBD										0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
	TBD			0.050		1.395					1.445	
Subtotal Test & Evaluation			0.000	0.050		1.395		0.000		0.000	1.445	0.000
Remarks:												
(U) Management												
	TBD		2.000	2.904		3.810					8.714	
Subtotal Management			2.000	2.904		3.810		0.000		0.000	8.714	0.000
Remarks:												
(U) Total Cost			2.000	6.460		70.801		0.000		0.000	79.261	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207224F COMBAT RESCUE AND RECOVERY	PROJECT NUMBER AND TITLE: 5125 Personnel Recovery Vehicle

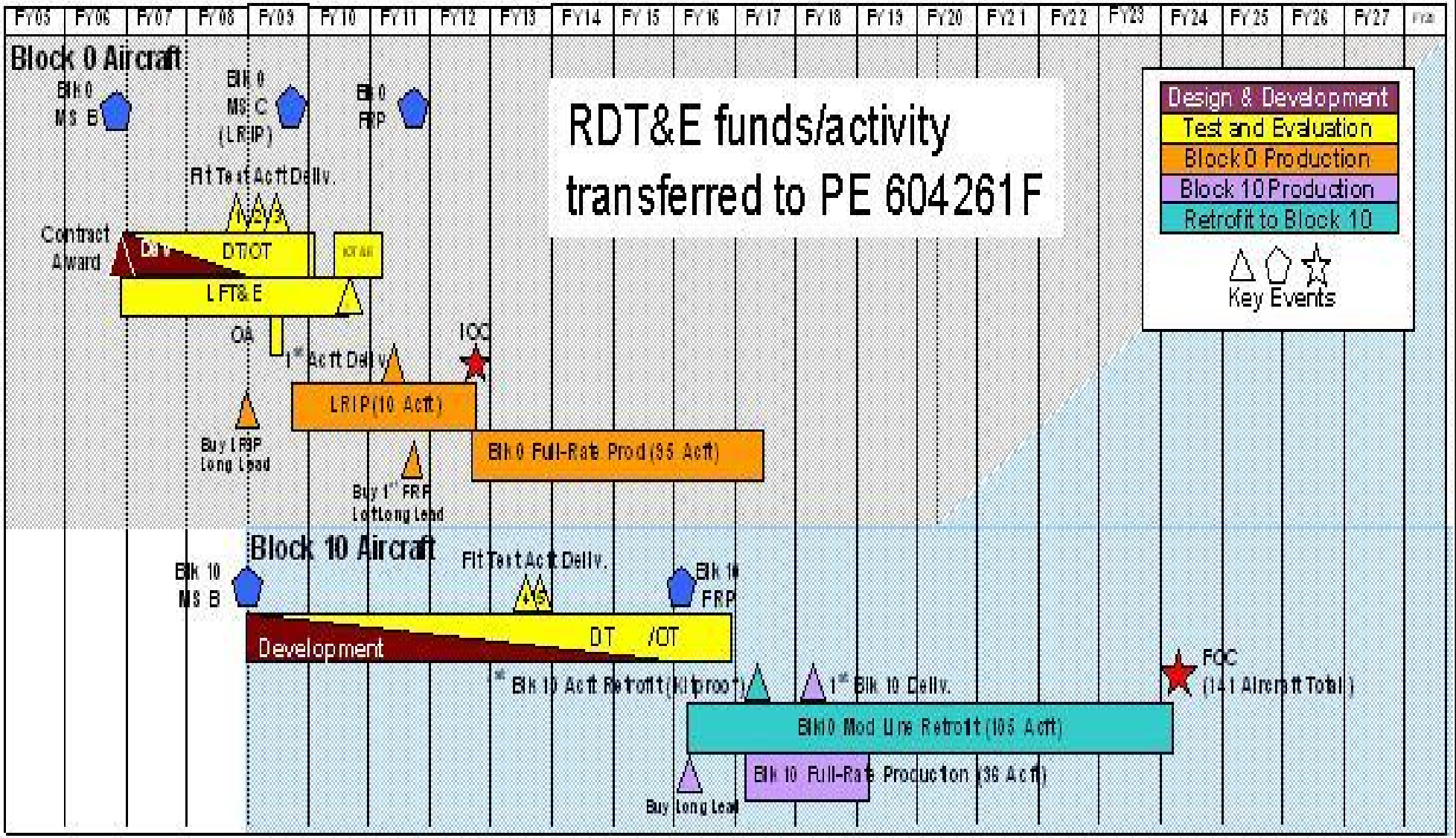

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207224F COMBAT RESCUE AND RECOVERY**	PROJECT NUMBER AND TITLE **5125 Personnel Recovery Vehicle**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Develop Acquisition Strategy	2Q		
(U) RFP Release		1Q	
(U) Conduct PRV Source Selection		1-4Q	
(U) Milestone B		4Q	
(U) Contract Award		4Q	

PE NUMBER: 0207247F
PE TITLE: Air Force TENCAP

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	17.010	11.661	11.202	11.419	11.607	11.856	12.044	Continuing	TBD
0001 Air Force TENCAP	17.010	11.661	11.202	11.419	11.607	11.856	12.044	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, Air Force TENCAP increases the integration of national and space systems into service operations by:

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

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

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

Air Force TENCAP is executed by the Space Warfare Center at Schriever Air Force Base, Colorado.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	18.112	10.829	11.067
(U)	Current PBR/President's Budget	17.010	11.661	11.202
(U)	Total Adjustments	-1.102	0.832	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.014	-0.168	
	Congressional Increases		1.000	
	Reprogrammings	-0.600		
	SBIR/STTR Transfer	-0.488		
(U)	Significant Program Changes:			

FY 2006: Congressional add for FOGLITE project

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207247F Air Force TENCAP

PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0001 Air Force TENCAP	17.010	11.661	11.202	11.419	11.607	11.856	12.044	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Established by Congress in 1977 as one of a family of service Tactical Exploitation of National Capabilities (TENCAP) programs, Air Force TENCAP increases the integration of national and space systems into service operations by:

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

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

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

Air Force TENCAP is executed by the Space Warfare Center at Schriever Air Force Base, Colorado.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Exploit existing space and other national systems for tactical applications through rapid-prototyping projects; influence the design and operation of future systems; educate and train operational forces	9.147	9.642	10.796
(U) Conduct Global Positioning System jammer detection and location (GPS JLOC) system projects	3.177	0.619	0.000
(U) Conduct adverse weather imaging system project (FOGLITE)	4.300	1.000	0.000
(U) Provide program support and other government support	0.386	0.400	0.406
(U) Total Cost	17.010	11.661	11.202

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, Air Force (Weapon System Code 832070, Intelligence Communications Equipment)	0.188	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.822

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Exploiting existing space and other national systems through rapid-prototyping projects; influencing future systems; educating and training	Various	Various	164.370	9.147	Oct-04	9.642	Oct-05	10.796	Oct-06	Continuing	TBD	
FOGLITE	SS/CPFF	General Atomics, San Diego, CA	7.157	4.300	Mar-05	1.000	Mar-06	0.000		0.000	12.457	
GPS JLOC projects (including Nightshade and Namath)	SS/CPFF	NAVSYS Corp., Colorado Springs, CO	6.855	2.457	Oct-05	0.269	Jan-06	0.000		0.000	9.581	
GPS JLOC projects (Nightshade)	Various	Various	0.000	0.720	Oct-05	0.350	Mar-06	0.000		0.000	1.070	
Subtotal Product Development			178.382	16.624		11.261		10.796		Continuing	TBD	0.000
Remarks:												
(U) Support												
Program oversight	Various	Various	6.522	0.386	Dec-04	0.400	Dec-05	0.406	Dec-06	Continuing	TBD	
Subtotal Support			6.522	0.386		0.400		0.406		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			184.904	17.010		11.661		11.202		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

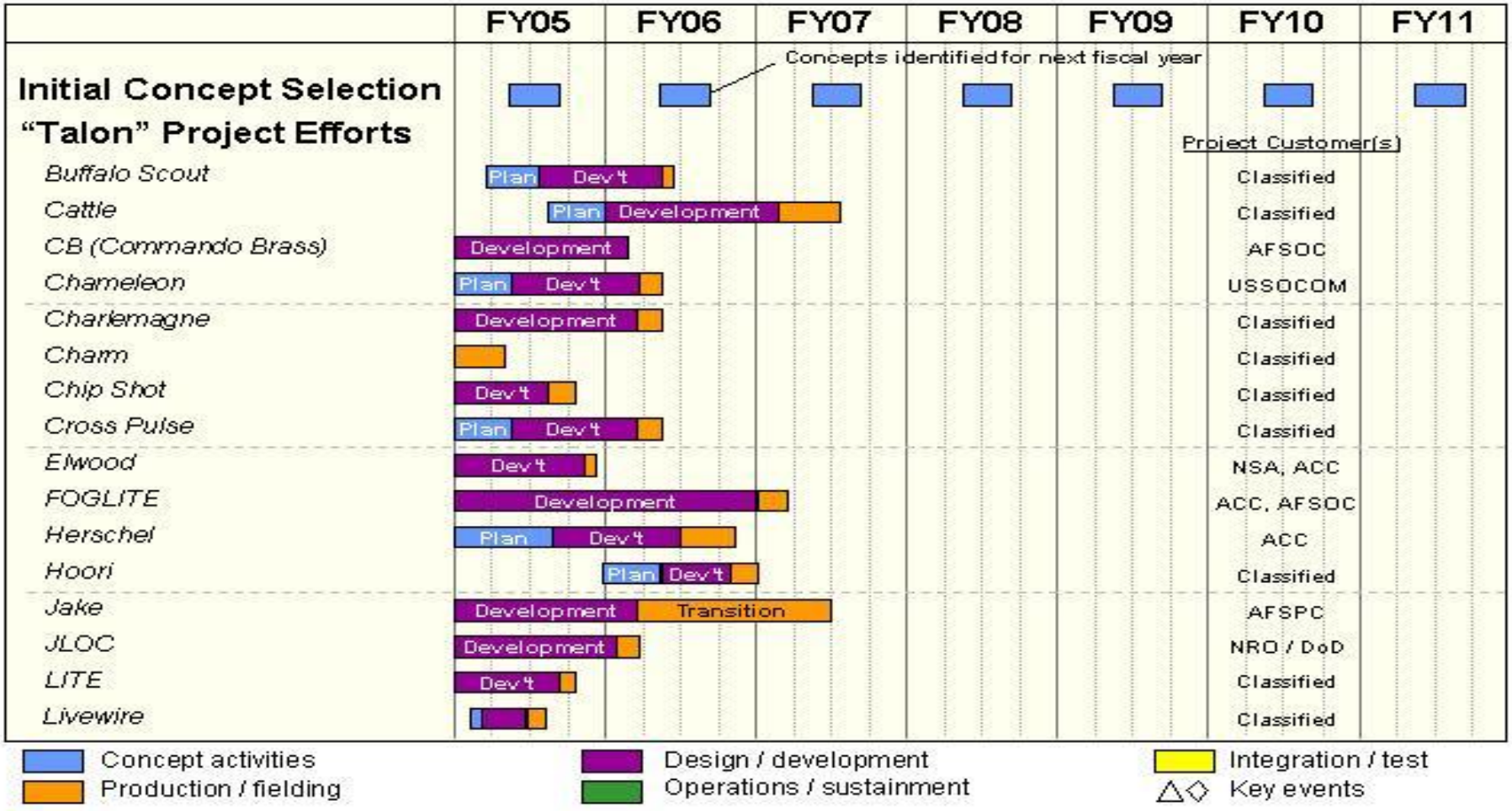

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE: 0001 Air Force TENCAP

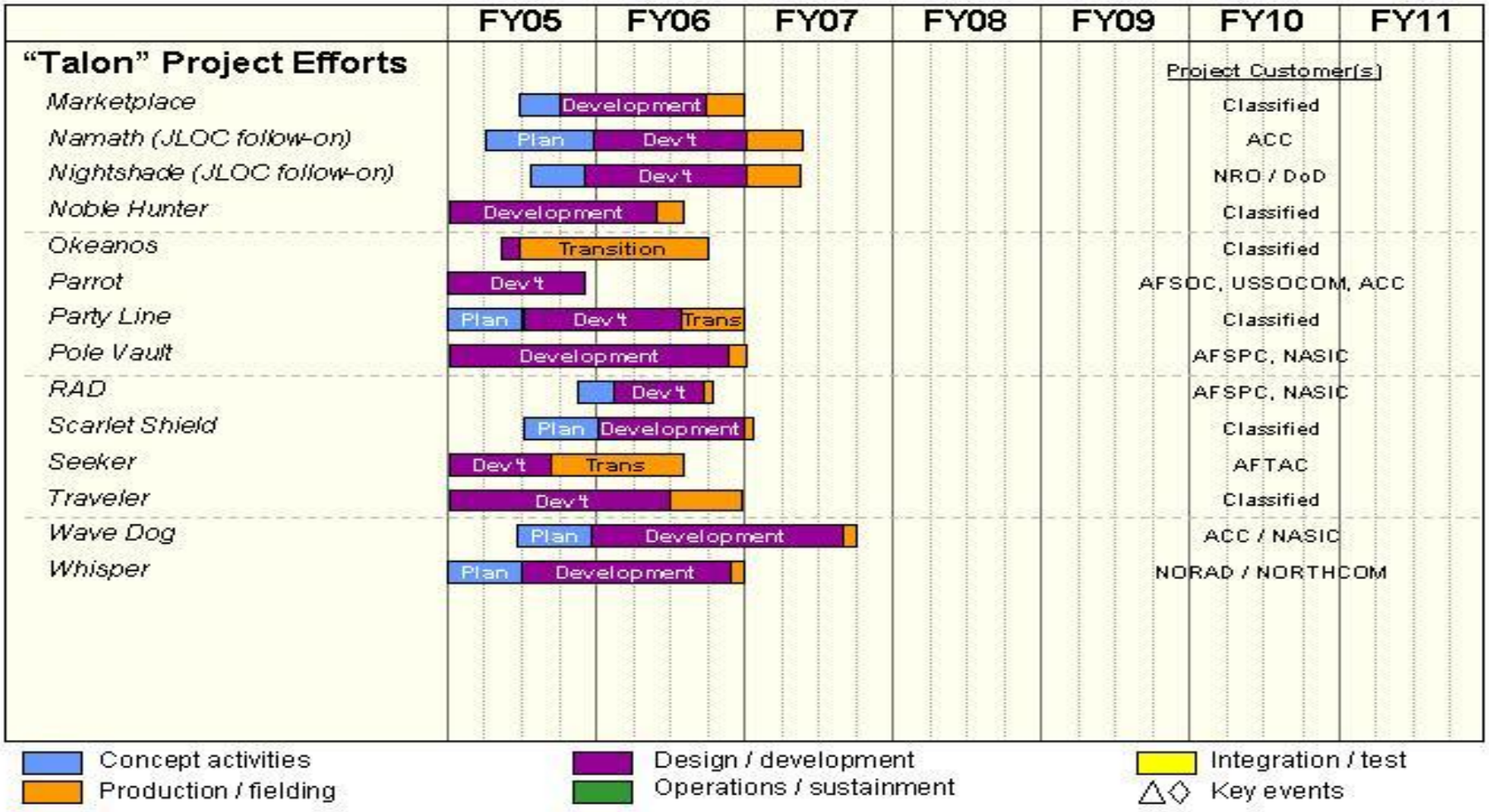

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207247F Air Force TENCAP	PROJECT NUMBER AND TITLE 0001 Air Force TENCAP

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) FY 2005 projects contracted	1Q		
(U) FY 2006 project concepts identified and approved	2-3Q		
(U) FY 2006 project contractor proposals requested/reviewed	2-4Q		
(U) FY 2006 projects approved for implementation	4Q		
(U) FY 2006 projects contracted		1Q	
(U) FY 2007 project concepts identified and approved		2-3Q	
(U) FY 2007 project contractor proposals requested/reviewed		2-4Q	
(U) FY 2007 projects approved for implementation		4Q	
(U) FY 2007 projects contracted			1Q
(U) FY 2008 project concepts identified and approved			2-3Q
(U) FY 2008 project contractor proposals requested/reviewed			2-4Q
(U) FY 2008 projects approved for implementation			4Q

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

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PE NUMBER: 0207253F
PE TITLE: Compass Call

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.952	9.907	4.469	0.000	0.000	4.942	4.994	Continuing	TBD
4804 Compass Call	3.952	9.907	4.469	0.000	0.000	4.942	4.994	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The EC-130H Compass Call aircraft is the USAF's wide-area coverage airborne electronic attack and offensive counter information weapon system. It disrupts or denies adversary voice and data communication as well as denies adversary radar reception, hampering the ability to gather information or control forces in the field. Compass Call has been a fielded capability since 1983, however, it must continue to evolve to keep pace with adversary developments in new communications and sensor technology as well as make use of rapidly advancing commercial technology. Compass Call's strength is in employing techniques that allow surgical disruption and denial of adversary systems while preserving use of the same electronic battlespace for friendly and neutral assets.

This program incorporates advanced capabilities into the operational system to include Block 30, Block 35, and related integration, testing, training, simulation and deploying systems. The evolution of the threat requires developmental investments in a wide range of activities and associated subsystems. These activities include significant effort in the development and operational fielding of the Human Machine Interface (HMI), Special Purpose Emitter Array (SPEAR), and other classified airborne electronic attack capabilities for Compass Call. Activities are also required in the related areas of software, testing and integration, signals analysis, systems engineering integration, countermeasure development for the evolving threat, mission planning development, Concept of Operations (CONOPS) development, and program planning. RDT&E articles include engineering and manufacturing development units necessary for these systems to evolve to counter emerging threats as well as other subsystems to counter the evolving threats.

Development funds are required to support the baseline development and upgrade strategy used to keep the mission equipment as current as possible in the face of rapidly advancing technology. New and upgraded communications and sensor systems are studied for vulnerabilities. Hardware and software techniques are developed and tested to add or upgrade disruption and denial capabilities to the mission equipment baseline. Rapid developments in support of urgent warfighter needs are fielded as quick reaction capabilities on specific aircraft.

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

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	3.990	4.650	4.451
(U)	Current PBR/President's Budget	3.952	9.907	4.469
(U)	Total Adjustments	-0.038	5.257	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.038	-0.143	
	Congressional Increases		5.400	
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

(U) Program RDT&E was zeroed out in FY08 and FY09 when a new PE was established for Airborne Electronic Attack. The Air Force is planning to re-instate funding levels (aproximately $4M per year) to restore PE to previous levels.

(U) FY06 Congressional Adds include: $1.4M for Radar Situational Awareness and Targeting (RSAT) demonstration concept; $4.0M for network centric information operations improvements

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207253F Compass Call

PROJECT NUMBER AND TITLE: 4804 Compass Call

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4804 Compass Call	3.952	9.907	4.469	0.000	0.000	4.942	4.994	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The EC-130H Compass Call aircraft is the USAF's wide-area coverage airborne electronic attack and offensive counter information weapon system. It disrupts or denies adversary voice and data communication as well as denies adversary radar reception, hampering the ability to gather information or control forces in the field. Compass Call has been a fielded capability since 1983, however, it must continue to evolve to keep pace with adversary developments in new communications and sensor technology as well as make use of rapidly advancing commercial technology. Compass Call's strength is in employing techniques that allow surgical disruption and denial of adversary systems while preserving use of the same electronic battlespace for friendly and neutral assets.

This program incorporates advanced capabilities into the operational system to include Block 30, Block 35, and related integration, testing, training, simulation and deploying systems. The evolution of the threat requires developmental investments in a wide range of activities and associated subsystems. These activities include significant effort in the development and operational fielding of the Human Machine Interface (HMI), Special Purpose Emitter Array (SPEAR), and other classified airborne electronic attack capabilities for Compass Call. Activities are also required in the related areas of software, testing and integration, signals analysis, systems engineering integration, countermeasure development for the evolving threat, mission planning development, Concept of Operations (CONOPS) development, and program planning. RDT&E articles include engineering and manufacturing development units necessary for these systems to evolve to counter emerging threats as well as other subsystems to counter the evolving threats.

Development funds are required to support the baseline development and upgrade strategy used to keep the mission equipment as current as possible in the face of rapidly advancing technology. New and upgraded communications and sensor systems are studied for vulnerabilities. Hardware and software techniques are developed and tested to add or upgrade disruption and denial capabilities to the mission equipment baseline. Rapid developments in support of urgent warfighter needs are fielded as quick reaction capabilities on specific aircraft.

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

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Development, integration, and test of classified techniques and electronic attack infrastructure (Special Purpose Emitter Array)	1.976	1.344	0.447
(U) Development,integration, and test of Digital Signal Acqusition and Analysis Subsystem	0.395	1.563	2.234
(U) Integration and test of Block 35 Human Machine Interface (HMI)	1.581	1.600	1.788
(U) Congressional Add: Radar Situational Awareness and Targeting (RSAT) demonstration concept		1.400	
(U) Congressional Add: Network centric information operations improvements		4.000	

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207253F Compass Call	PROJECT NUMBER AND TITLE 4804 Compass Call

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

	FY 2005	FY 2006	FY 2007
(U) Total Cost	3.952	9.907	4.469

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0207253F, Aircraft Modification (3010)	28.932	29.029	46.818	44.674	24.588	19.840	20.096	Continuing	TBD
(U) PE 0207253F, Aircraft Initial Spares (3010)	11.985	14.036	14.433	15.160	15.753	16.197	16.398	Continuing	TBD

(U) D. Acquisition Strategy

Compass Call baseline upgrade developments and quick reaction developments are acquired sole-source through the Big Safari Systems Group. Technique development is typically classified, due to the information required to support the analysis and the resulting techniques.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Compass Call RDT&E	SS/FFP&C PFF	BAE Systems, Nashua NH		3.952	Nov-04	9.907	Oct-05	4.469	Nov-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	3.952		9.907		4.469		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	3.952		9.907		4.469		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207253F Compass Call	PROJECT NUMBER AND TITLE: 4804 Compass Call

Compass Call R&D Efforts

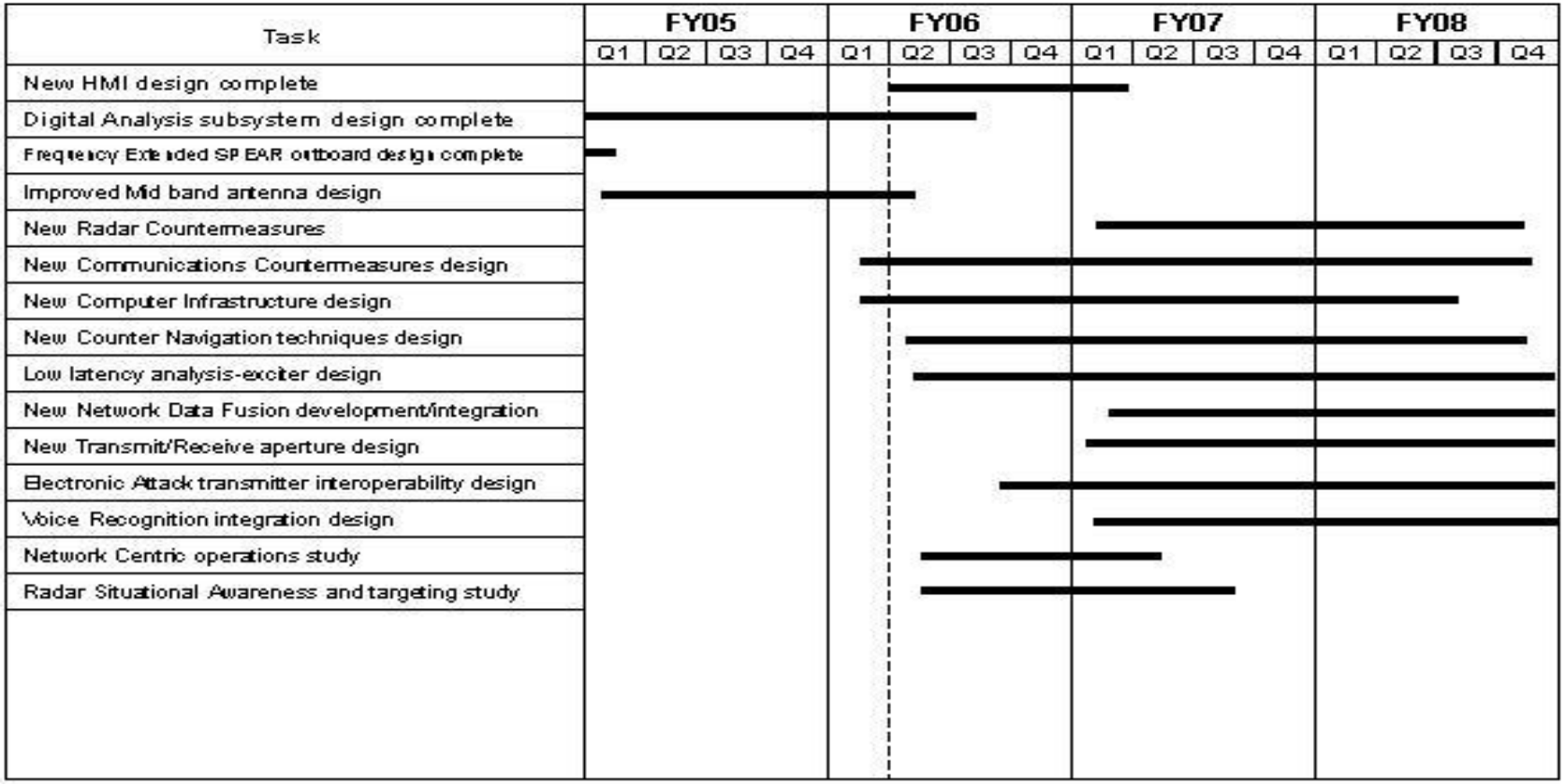

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207253F Compass Call	4804 Compass Call

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Frequency extended SPEAR inboard design complete	1Q		
(U) New digital analysis subsystem design complete		3Q	
(U) New mid-band antenna design starts	1Q		
(U) New mid-band antenna design complete		2Q	
(U) HMI upgrade design starts		1Q	
(U) HMI updgrade design complete			1Q
(U) New communications counter-measures design starts		1Q	
(U) New computer infrastructure design starts		1Q	
(U) New counter-Nav techniques design start		2Q	
(U) Low-latency analysis-exciter (AXE) development starts		2Q	
(U) New radar CM development starts			1Q
(U) New Network Data Fusion development/integration starts			1Q
(U) New Transmit/Receive Aperture Design starts			1Q
(U) New EA Transmitter Interoperability Design Starts		3Q	
(U) New Voice Recognition Integration Starts			1Q
(U) Radar Situational Awareness and Targeting Study Starts		2Q	
(U) Radar Situational Awareness and Targeting Study Complete			3Q
(U) Network Centric Operations Study Starts		2Q	
(U) Network Centric Operations Study Complete			3Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD
1012	Aircraft Engine Component Improvement Program	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning in FY06; this resulted in a zero-balance (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 65807F.

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines throughout their service life. The program's highest priority is to maintain flight safety. Engine CIP corrects service revealed deficiencies and reduces total ownership costs (RTOC). Additional goals include improved system Operational Readiness (OR) and Reliability and Maintainability (R&M). Historically, aircraft systems change missions, tactics, and environments to meet changing threats throughout their lives. Numerous new problems can develop in the engines through actual use and Engine CIP provides the only funds to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. Engine CIP starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP addresses out-of-warranty usage/life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Since operational and safety problems arise throughout a system's service life, Engine CIP must be maintained at a level to provide the engineering support to make the changes essential for continued satisfactory system performance at affordable costs. Engine CIP ensures continued improvements in engine R&M factors, which reduce outyear support costs. Historically, R&M related Engine CIP efforts significantly reduce outyear Operations and Maintenance (O&M) and spares costs. Air Force Major Commands assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the outyear cost avoidance provided by Engine CIP, outyear support funding would have to be significantly increased.

This program is in budget activity 7 - Operational System Development, because all efforts support fielded systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207268F Aircraft Engine Component Improvement Program (CIP)

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	164.150	153.265	151.722
(U)	Current PBR/President's Budget	141.803	151.082	154.319
(U)	Total Adjustments	-22.347	-2.183	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.126	-2.183	
	Congressional Increases			
	Reprogrammings	-17.704		
	SBIR/STTR Transfer	-4.517		
(U)	Significant Program Changes:			

FY2005-FY2006 decreased to support higher Air Force priorities.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 1012 Aircraft Engine Component Improvement Program

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
1012	Aircraft Engine Component Improvement Program	141.803	151.082	154.319	157.816	161.304	166.129	171.265	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Aircraft Engine Component Improvement Program (CIP) provides the only source of critical sustaining engineering support for in-service Air Force engines throughout their service life. The program's highest priority is to maintain flight safety. Engine CIP corrects service revealed deficiencies and reduces total ownership costs (RTOC). Additional goals include improved system Operational Readiness (OR) and Reliability and Maintainability (R&M). Historically, aircraft systems change missions, tactics, and environments to meet changing threats throughout their lives. Numerous new problems can develop in the engines through actual use and Engine CIP provides the only funds to develop fixes for these field problems. Engine CIP funding is driven by field events and types/maturity of engines, not by the total engine quantity. Engine CIP starts with delivery of the first production engine purchased with procurement funds, and continues over the engine's life, gradually decreasing to a minimum level (safety/depot repairs) sufficient to keep older inventory engines operational. Engine CIP addresses out-of-warranty usage/life and enables the Air Force to obtain additional warranties when manufacturers incorporate Engine CIP improvements into production engines. Since operational and safety problems arise throughout a system's service life, Engine CIP must be maintained at a level to provide the engineering support to make the changes essential for continued satisfactory system performance at affordable costs. Engine CIP ensures continued improvements in engine R&M factors, which reduce outyear support costs. Historically, R&M related Engine CIP efforts significantly reduce outyear Operations and Maintenance (O&M) and spares costs. Air Force Major Commands assume a viable Engine CIP effort is in place when submitting their budget requests for O&M and engine spares. Without the outyear cost avoidance provided by Engine CIP, outyear support funding would have to be significantly increased.

This program is in budget activity 7 - Operational System Development, because all efforts support fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continuing CIP tasks (such as, but not limited to, improvement, support equipment, and repair tasks)	112.693	137.872	138.609
(U) Continuing engine testing (such as, but not limited to, altitude, sea level, and flight tests) NOTE: FY06/07 test dollars decreased due to Test & Eval (T&E) Funding Realignment Policy (e.g. reduced FY06 $13.2M and FY07 $10.5M).	24.400	8.500	11.000
(U) Continuing mission support	4.710	4.710	4.710
(U) Total Cost	141.803	151.082	154.319

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

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

RELATED ACTIVITIES:

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

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

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
GE-Evandale, OH	CPAF			49.410	Jan-05	49.810	Jan-06	50.020	Jan-07	Continuing	TBD	
Pratt & Whitney	CPAF			54.473	Jan-05	79.032	Jan-06	79.469	Jan-07	Continuing	TBD	
GE-Lynn, MA	CPFF			3.780	Jan-05	3.850	Jan-06	3.890	Jan-07	Continuing	TBD	
Rolls Royce/Allison	CPFF			1.050	Jan-05	1.080	Jan-06	1.100	Jan-07	Continuing	TBD	
Teledyne	CPFF			0.580	Jan-05	0.600	Jan-06	0.610	Jan-07	Continuing	TBD	
Honeywell	CPFF			2.360	Jan-05	2.400	Jan-06	2.410	Jan-07	Continuing	TBD	
Williams International	CPFF			1.040	Jan-05	1.100	Jan-06	1.110	Jan-07	Continuing	TBD	
Subtotal Product Development			0.000	112.693		137.872		138.609		Continuing	TBD	0.000
Remarks:												
(U) Support												
In House Support/ Misc				4.710		4.710		4.710		Continuing	TBD	
Subtotal Support			0.000	4.710		4.710		4.710		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
AFFTC-Edwards AFB, CA				4.600		0.000		0.000		Continuing	TBD	
AEDC-Arnold AFB, TN				19.800		8.500		11.000		Continuing	TBD	
Subtotal Test & Evaluation			0.000	24.400		8.500		11.000		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	141.803		151.082		154.319		Continuing	TBD	0.000

Footnote: Total prior to FY 2005 is not reflected above because the program was funded in procurement through FY 1979 and RDT&E funding began in FY 1980.

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

Not Applicable. Engine CIP is a continuing engineering support program that funds 300-400 separate engineering tasks per year.

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207268F Aircraft Engine Component Improvement Program (CIP)**	PROJECT NUMBER AND TITLE **1012 Aircraft Engine Component Improvement Program**

(U) Schedule Profile

	FY 2005	FY 2006	FY 2007
(U) Not applicable. CIP is a continuing engineering support program that funds 300-400 separate engineering tasks per year.	1-4Q	1-4Q	1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.780	1.695	1.612	1.622	1.602	1.607	1.236	Continuing	TBD
4931 Eagle Vision	1.780	1.695	1.612	1.622	1.602	1.607	1.236	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	1.879	1.695	1.612
(U)	Current PBR/President's Budget	1.780	1.695	1.612
(U)	Total Adjustments	-0.099	0.000	
(U)	Congressional Program Reductions	-0.066		
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.033		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

PROJECT NUMBER AND TITLE: 4931 Eagle Vision

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4931 Eagle Vision	1.780	1.695	1.612	1.622	1.602	1.607	1.236	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue to update baselines and reduce footprints on Eagle Vision units	0.141	0.147	0.439
(U) Continue to provide sustaining system engineering and technical support	1.639	1.548	1.173
(U) Total Cost	1.780	1.695	1.612

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN	5.823	6.095	5.247	5.687	5.801	5.917		Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
TBD	SS/FFP	Various		0.750	Oct-05	0.618	Nov-06	0.457	Nov-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.750		0.618		0.457		Continuing	TBD	TBD
Remarks:												
(U) Support												
MITRE	SS/FFP	Various		0.600	Nov-05	0.627	Dec-06	0.655	Nov-07	Continuing	TBD	TBD
ITSP	C/FFP	Various		0.430	Nov-05	0.450	Dec-06	0.500	Nov-07	Continuing	TBD	TBD
Subtotal Support			0.000	1.030		1.077		1.155		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	1.780		1.695		1.612		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207277F Chief's Innovation Program	PROJECT NUMBER AND TITLE 4931 Eagle Vision

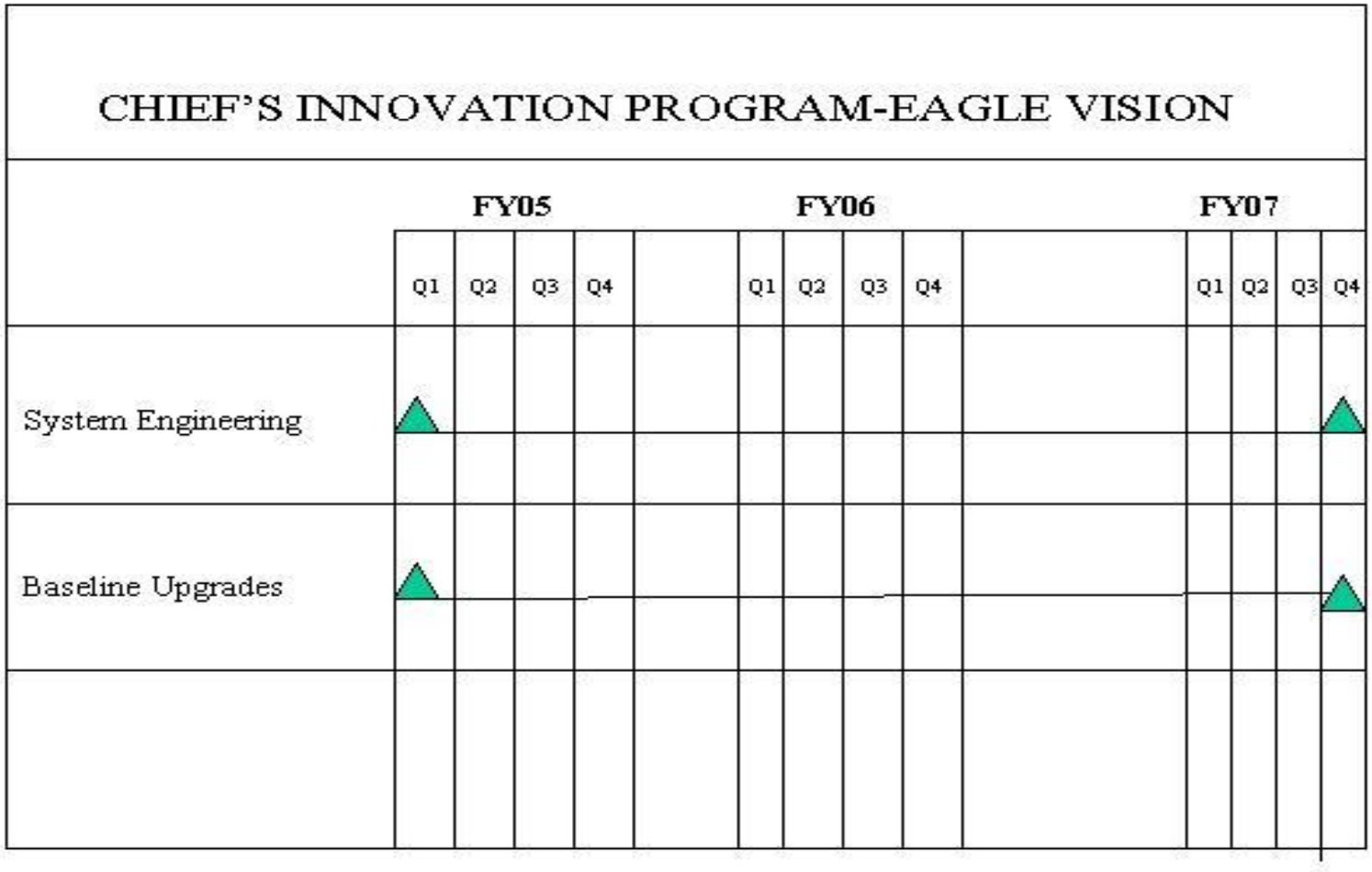

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207277F Chief's Innovation Program	4931 Eagle Vision

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Continue baseline upgrades and footprint reduction	1-4Q	1-4Q	1-4Q
(U) Systems engineering	1-4Q	1-4Q	1-4Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	43.298	66.042	40.881	9.935	0.000	0.000	0.000	0.000	1,063.807
4515	Joint Air-to-Surface Standoff Missile (JASSM)	43.298	66.042	40.881	9.935	0.000	0.000	0.000	0.000	1,063.807

The FY03 National Defense Authorization Act language directed Test & Evaluation (T&E) centers to charge only direct costs beginning in FY06. This resulted in a zero balance transfer (ZBT) of funding over the FYDP from the customer accounts (for indirect test costs) to T&E support, PE 0605807F.

(U) A. Mission Description and Budget Item Justification

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	45.374	66.997	30.696
(U)	Current PBR/President's Budget	43.298	66.042	40.881
(U)	Total Adjustments	-2.076	-0.955	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.035	-0.955	
	Congressional Increases			
	Reprogrammings	-0.831		
	SBIR/STTR Transfer	-1.210		
(U)	Significant Program Changes:			

Funding: FY07 funding increased by $10.185M ($10M add for Maritime Interdiction development)

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207325F Joint Air-to-Surface Standoff Missile (JASSM)**

Schedule: None.

Technical: None.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4515	Joint Air-to-Surface Standoff Missile (JASSM)	43.298	66.042	40.881	9.935	0.000	0.000	0.000	0.000	1,063.807
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

(U) B. Accomplishments/Planned Program ($ in Millions)		FY 2005	FY 2006	FY 2007
(U)	Complete JASSM EMD and follow-on development activities, including component upgrades studies/development.	1.003	0.000	0.000
(U)	Continue JASSM-ER Phase II development.	31.479	30.193	5.393
(U)	Continue JASSM Data Link development	0.000	11.442	15.761
(U)	Begin JASSM Maritime Interdiction	0.000	0.000	10.000
(U)	Continue JASSM-ER flight testing. Continue ground and live fire test support, and Reliability Program.	2.843	15.372	4.917
(U)	Continue JASSM-ER wind tunnel test support.	3.815	0.000	0.000
(U)	Continue JASSM-ER aircraft integration on B-1.	3.006	7.654	3.436
(U)	Continue mission planning and intelligence systems integration.	0.273	0.000	0.000
(U)	Continue program office/mission support.	0.879	1.381	1.374
(U)	Total Cost	43.298	66.042	40.881

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207325F Joint Air-to-Surface Standoff Missile (JASSM)**	PROJECT NUMBER AND TITLE **4515 Joint Air-to-Surface Standoff Missile (JASSM)**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Missile Procurement (AF) JASSM	136.388	98.676	184.191	233.799	342.978	292.410	203.984	2,106.738	3,790.443
(U)	SEEK EAGLE	2.826	0.000	2.974	0.000	0.000	0.000	0.000	0.000	10.277

Total includes prior year not shown.

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MDA - PDRR I	C/CPFF	McDonnell Douglas Aircraft, MO	120.571	0.000	N/A	0.000	N/A	0.000	N/A	0.000	120.571	120.571
LM - PDRR I& II	C/CPFF	Lockheed Martin, FL	151.109	0.000	N/A	0.000	N/A	0.000	N/A	0.000	151.109	151.109
LM - EMD & Follow on Development	C/CPAF	Lockheed Martin, FL	408.912	1.003	Nov-98	0.000	N/A	0.000	N/A	0.000	409.915	409.915
LM - JASSM ER Risk Reduction Phase I	SS/FFP	Lockheed Martin, FL	9.700	0.000	N/A	0.000	N/A	0.000	N/A	0.000	9.700	9.700
LM - JASSM ER Development Phase II	SS/CPAF	Lockheed Martin, FL	19.779	31.479	Feb-04	30.193	Feb-04	5.393	Feb-04	0.000	86.844	86.844
Data Link	SS/CPFF	Lockheed Martin, FL	0.000	0.000	N/A	11.442	Mar-06	15.761	Mar-06	7.179	34.382	34.382
LM - JASSM Maritime Interdiction			0.000	0.000	N/A	0.000	N/A	10.000	Jan-07	0.000	10.000	10.000
Subtotal Product Development			710.071	32.482		41.635		31.154		7.179	822.521	822.521
Remarks:												
(U) Support												
F-16 SPO	PO (in-house)	WPAFB, OH	26.605	0.000	N/A	0.000	N/A	0.000	N/A	0.000	26.605	26.605
B-52 SPO	PO (in-house)	Tinker AFB, OK	31.229	0.000	N/A	0.000	N/A	0.000	N/A	0.000	31.229	31.229
B-1 SPO	PO (in-house)	WPAFB, OH	0.025	3.006	N/A	7.654	N/A	3.436	N/A	0.000	14.121	14.121
Other Acft Integ	PO (in-house)	various	3.463	0.000	N/A	0.000	N/A	0.000	N/A	0.000	3.463	3.463
Sverdrup Inc.	C/CPAF	Eglin AFB, FL	15.952	0.000	N/A	0.000	N/A	0.000	N/A	0.000	15.952	15.952
Other Support	Misc	various	34.842	1.152	N/A	1.381	N/A	1.374	N/A	1.134	39.883	39.883
Subtotal Support			112.116	4.158		9.035		4.810		1.134	131.253	131.253
Remarks:												
(U) Test & Evaluation												
46TW	PO (in-house)	Eglin AFB, FL	79.757	2.843	N/A	15.372	N/A	4.917	N/A	1.622	104.511	104.511
Arnold Eng Dev Center	PO (in-house)	Arnold AFB, TN	1.707	3.815	N/A	0.000	N/A	0.000	N/A	0.000	5.522	5.522
Subtotal Test & Evaluation			81.464	6.658		15.372		4.917		1.622	110.033	110.033
Remarks:												
(U) Total Cost			903.651	43.298		66.042		40.881		9.935	1,063.807	1,063.807

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207325F Joint Air-to-Surface Standoff Missile (JASSM)	PROJECT NUMBER AND TITLE: 4515 Joint Air-to-Surface Standoff Missile (JASSM)

Top Level JASSM Schedule

For Official Use Only

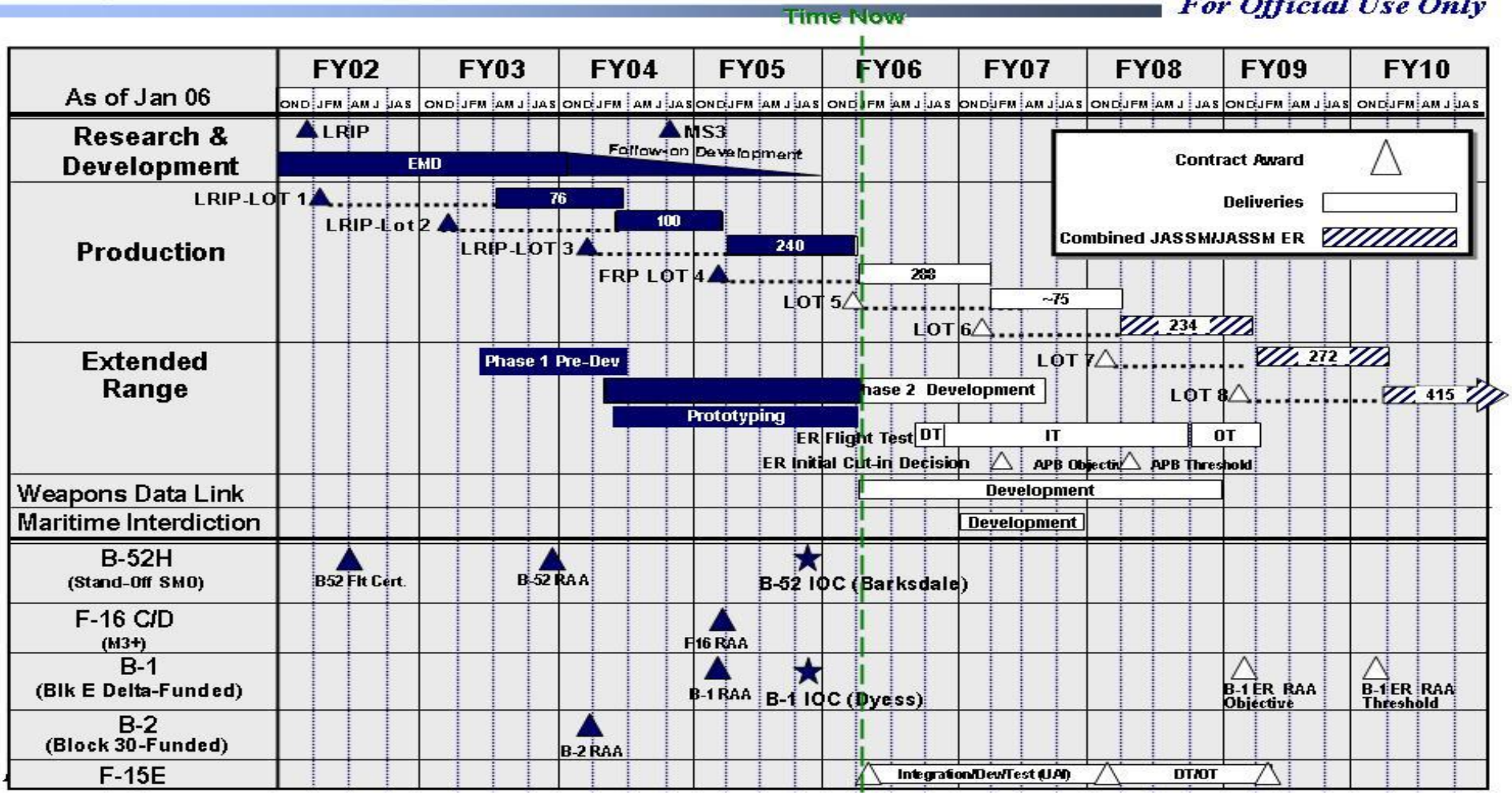

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207325F Joint Air-to-Surface Standoff Missile (JASSM)**	PROJECT NUMBER AND TITLE **4515 Joint Air-to-Surface Standoff Missile (JASSM)**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	F-16 Required Assets Available (RAA)	1Q		
(U)	B-1 RAA	1Q		
(U)	Complete JASSM-ER wind tunnel testing	4Q		
(U)	Begin JASSM-ER Flight Testing (DT/IT/OT)		2Q	
(U)	Data Link Contract Award		2Q	
(U)	Maritime Interdiction Contract Award			2Q

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

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

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

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	22.301	67.029	87.483	89.994	93.948	102.116	86.861	Continuing	TBD
4372	Time Critical Targeting	0.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.752
5117	Integration Development	21.560	67.029	87.483	89.994	93.948	102.116	86.861	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

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

The AOC WS program develops and integrates system hardware, software and integration training. The program consists of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and AOC Support (e.g. Formal Training Unit, Help Desk, Combined Air and Space Operations Center-Experimental [CAOC-X]). This development program will also provide a single integrated technical manual package to the user. To keep the future AOC WS evolving and to meet future warfighter needs, the AOC WS program plans to build on its current capability and develop a series of new capability increments.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	27.695	68.099	89.430
(U)	Current PBR/President's Budget	22.301	67.029	87.483
(U)	Total Adjustments	-5.394	-1.070	
(U)	Congressional Program Reductions	-0.648	-0.099	
	Congressional Rescissions		-0.971	
	Congressional Increases			
	Reprogrammings	-4.000		
	SBIR/STTR Transfer	-0.746		

(U) Significant Program Changes:

In FY06 & FY07 Project 834530 Other Procurement funds were realigned to RDT&E PE 0207410F, Project 675117 ($35M in FY06 and $31M in FY07) to fund Chief of

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

Staff, Air Force, directed Modernization and Integration efforts. There was a $4.0M reduction in FY05 as a result of higher Air Force priorities. In FY05, Time Critical Targeting Functionality (TCTF) Project 674372 was issued a termination notice for the convenience of the Government. Prior year TCTF funds are being used for termination cost and contract closeout. FY05 TCTF BPAC 674372 funds in the amount of $1.545M were reallocated to AOC WS Integration Development BPAC 675117. The FY05 TCTF balance of $0.741M will be used for contract closeout purposes.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Time Critical Targeting

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4372 Time Critical Targeting	0.741	0.000	0.000	0.000	0.000	0.000	0.000	0.000	26.752
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY05, TCTF was issued a termination notice at the convenience of the Government. Prior year TCTF funds are being used for termination cost and contract closeout. FY05 TCTF BPAC 674372 funds in the amount of $1.545M were reallocated to AOC WS Integration Development BPAC 675117. $0.741M remains in TCTF FY05 to closeout the contract.

(U) A. Mission Description and Budget Item Justification

The Time Critical Targeting Functionality (TCTF) is an integrated set of automated decision aids / tools that enable successful prosecution of Time Sensitive Targets (TSTs) with key functionality to include Terrain Analysis (TA), Intelligence Preparation of the Battlespace (IPB), tracking and nominating multiple TSTs, and Weapon Target Pairing (WTP). TCTF funding supports development of enhanced Command and Control (C2) capabilities to find, fix, track, target, engage, and assess time critical targets (TCTs).

The primary program objective of the TCTF program is to provide capabilities to collect, share and aggregate decision quality data between Command and Control Centers of Operation, ISR assets and attack aircraft; correlate/fuse information; reduce AOC forward footprint; improve deployability; and make improvements in information sharing among coalition partners.

In FY05, the Air Force issued a termination notice for the convenience of the Government to Time Critical Targeting Functionality (TCTF) Project 674372. FY05 and Prior year TCTF funds are being used for termination cost and contract closeout.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Complete final TCTF Contract Closeout Action.	0.741	0.000	0.000
(U) Total Cost	0.741	0.000	0.000

In FY05, TCTF was terminated for the convenience of the Government. Final Contract closeout action is being taken and the remaining program funds are being used for this purpose. FY05 TCTF BPAC 674372 funds in the amount of $1.545M were reallocated to AOC WS Integration Development BPAC 675117. $0.741M remains in TCTF FY05 to closeout the contract.

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF (3080) PEC: 27410F BPAC: 83453B	1.736	0.000	0.000	0.000	0.000	0.000	0.000	0.000	1.736

In FY05, Time Critical Targeting Functionality (TCTF) was issued a Termination Notice at the convenience of the Government. The $0.625M in FY06 and the $1.472M in

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**	PROJECT NUMBER AND TITLE **4372 Time Critical Targeting**

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

FY07 have been moved into AOC WS Increment Fielding PEC 0207410F, BPAC 83453A

(U) D. Acquisition Strategy

In FY05, TCTF was issued a Termination Notice at the convenience of the Government.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

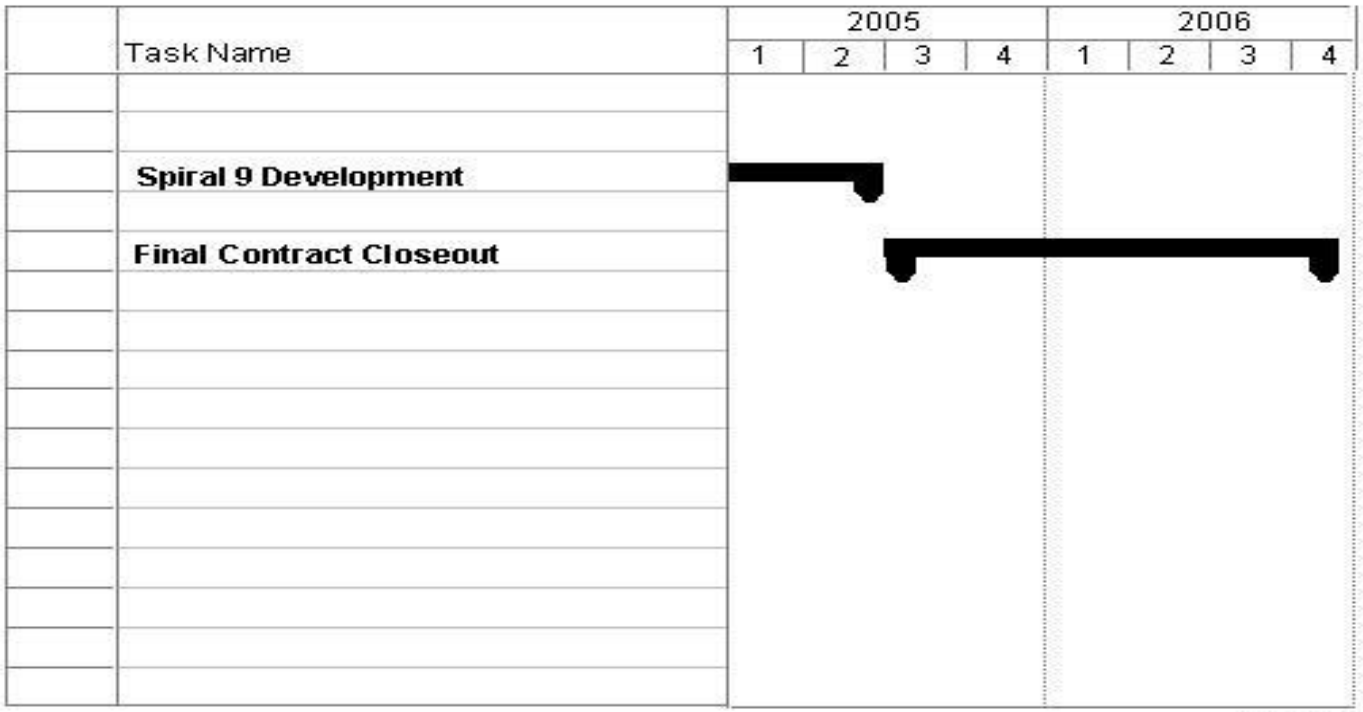
PE NUMBER AND TITLE: **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**

PROJECT NUMBER AND TITLE: **4372 Time Critical Targeting**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Software Development -Contract Termination	CPAF	Zel Technologies, Hampton, VA	13.885	0.741	Sep-06					0.000	14.626	TBD
Engineering/Requirements	CPFF	MITRE, Bedford, MA	3.280							0.000	3.280	TBD
Subtotal Product Development			17.165	0.741		0.000		0.000		0.000	17.906	TBD
Remarks:												
(U) Support												
Systems Engineering	FFP	MITRE, Bedford, MA	2.380							0.000	2.380	TBD
Program Support	FFP	A&AS, AFMC/ESC	3.248							0.000	3.248	TBD
Subtotal Support			5.628	0.000		0.000		0.000		0.000	5.628	TBD
Remarks:												
(U) Test & Evaluation												
Test Engineering	CPFF	A&AS, AFMC/ESC	0.248							0.000	0.248	TBD
Test Support	MIPR	46 TS, Eglin AFB, FL	0.600							0.000	0.600	TBD
Test Support	CPAF	Zel Technologies, Hampton, VA	0.825								0.825	TBD
Subtotal Test & Evaluation			1.673	0.000		0.000		0.000		0.000	1.673	TBD
Remarks:												
(U) Total Cost			24.466	0.741		0.000		0.000		0.000	25.207	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207410F Air and Space Operations Center - Weapon System (AOC-WS)**	PROJECT NUMBER AND TITLE **4372 Time Critical Targeting**

TCTF Termination Schedule
PE 27410F Project 674372



Current As Of: 10 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 4372 Time Critical Targeting

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Spiral 9 Development	1-2Q		
(U) TCT Final Contract Termination Closeout	3-4Q	1-4Q	

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5117 Integration Development	21.560	67.029	87.483	89.994	93.948	102.116	86.861	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY05 TCTF BPAC 674372 funds in the amount of $1.545M were reallocated to AOC WS Integration Development BPAC 675117. In FY05, Time Critical Targeting Functionality (TCTF) was issued a termination notice at the convenience of the Government.

(U) A. Mission Description and Budget Item Justification

Air and Space Operations Center Weapon System (AOC WS) Program: The AOC WS Integration Development project provides system hardware, software and documentation to make the AOC WS a viable weapons system. The program consists of Falconer AOCs, Tailored Falconer AOCs, Functional AOCs, and Support AOCs that are configured according to mission need. The project will develop and integrate C2 and ISR capabilities through software and hardware improvements to the AOC WS baseline. To keep the future AOC weapon system evolving to meet warfighter needs, the AOC WS Program plans to spirally develop the AOC with capability increments. The December 2003 Acquisition Decision Memorandum directed the Air and Space Operations Center Weapon System to use a Weapon System Integrator (WSI) to ensure system of system perspective and systems engineering rigor, move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments, to make recommendations on transitions to the "to be" architecture, and to conduct other weapon system standardization activities as defined in AOC WS requirements documents. This direction is driving significantly increased program funding. The AOC WS Integration Development program provides a structure to transition and act as the focal point for systems integration, technical transition, and process refinement for rapidly evolving C2 programs, processes and concepts.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue AOC development and integration of items to include, but not limited to, legacy systems, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.	13.560		21.800
(U) Integration to include, but not limited to, legacy systems, multi-level security, visualization, coalition interoperability, airspace management and deconfliction, strategy and assessment, information management, and predictive battlespace awareness for air and space operations.		27.721	26.695
(U) Modernization & Integration Systems Engineering Program Management and Data		5.756	17.664
(U) Integration Training (Type 1, Part Task Trainer, Distributed Mission Training)		1.219	4.569
(U) Modernization Integration Test and Evaluation		5.877	2.164
(U) Government Support to include, but not limited to, Government Systems Engineering, Government Test	5.000	15.817	9.036
(U) Program Management Support	3.000	10.639	5.555
(U) Total Cost	21.560	67.029	87.483

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF (3080) PEC: 27410F; BPAC: 83453A	39.534	20.302	24.889	38.318	34.923	43.503	29.569	Continuing	TBD

(U) D. Acquisition Strategy

The December 2003 Acquisition Decision Memorandum directed the Air and Space Operations Center Weapon System (AOC WS) to hire a Weapon System Integrator (WSI) through full and open competition, to ensure system of system perspective and systems engineering rigor and to move AOC Modernization to Network Centric Operations (NCO) through spirally developed increments. The acquisition strategy builds on existing capabilities, using evolutionary acquisition and spiral development, to standardize, modernize and sustain AOC WSs.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

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

PROJECT NUMBER AND TITLE: **5117 Integration Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AOC Software Development	CPAF	LMMS, Colorado Springs, CO	9.400					9.600	Nov-06	Continuing	TBD	TBD
Modernization & Integration	CPAF	ITSP & TBD WSI Contractor		2.206	Jul-05	10.177	Mar-06	30.943	Nov-06	Continuing	TBD	TBD
Integration & Version Upgrades 10.1.1	CPAF	WSI Contractor TBD				17.896	Feb-06	20.149	Nov-06	Continuing	TBD	TBD
Training	MIPR	AFMC/ESC, Hanscom AFB, MA	10.500	3.425	Jan-05	2.800	Nov-05	0.275	Nov-06	Continuing	TBD	TBD
Other Contracts (GSA, ETC)	MIPR	Various	21.072	7.651	Nov-04	9.139	Nov-05	2.955	Nov-06	Continuing	TBD	TBD
Increment 10.1 & 10.2 Development	CPAF	ISS , Colorado Springs, CO	9.363			12.500	Feb-06	12.200	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			50.335	13.282		52.512		76.122		Continuing	TBD	TBD
Remarks:												
(U) Support												
Systems Engineering	CPFF	MITRE, Bedford, MA	6.000	3.883	Oct-04	7.432	Oct-05	4.496	Oct-06	Continuing	TBD	TBD
Program Support	FFP	A&AS AFMC/ESC, Hanscom AFB, MA	12.147	0.939	Dec-04	3.400	Dec-05	5.200	Dec-06	Continuing	TBD	TBD
Program Office Support	Various	AFMC/ESC, Hanscom AFB, MA	1.400	1.556	Oct-04	1.300	Oct-05	0.700	Oct-06	Continuing	TBD	TBD
Subtotal Support			19.547	6.378		12.132		10.396		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46TS	MIPR	Eglin AFB, FL	1.524	1.900	Nov-04	2.385	Nov-05	0.965	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			1.524	1.900		2.385		0.965		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			71.406	21.560		67.029		87.483		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

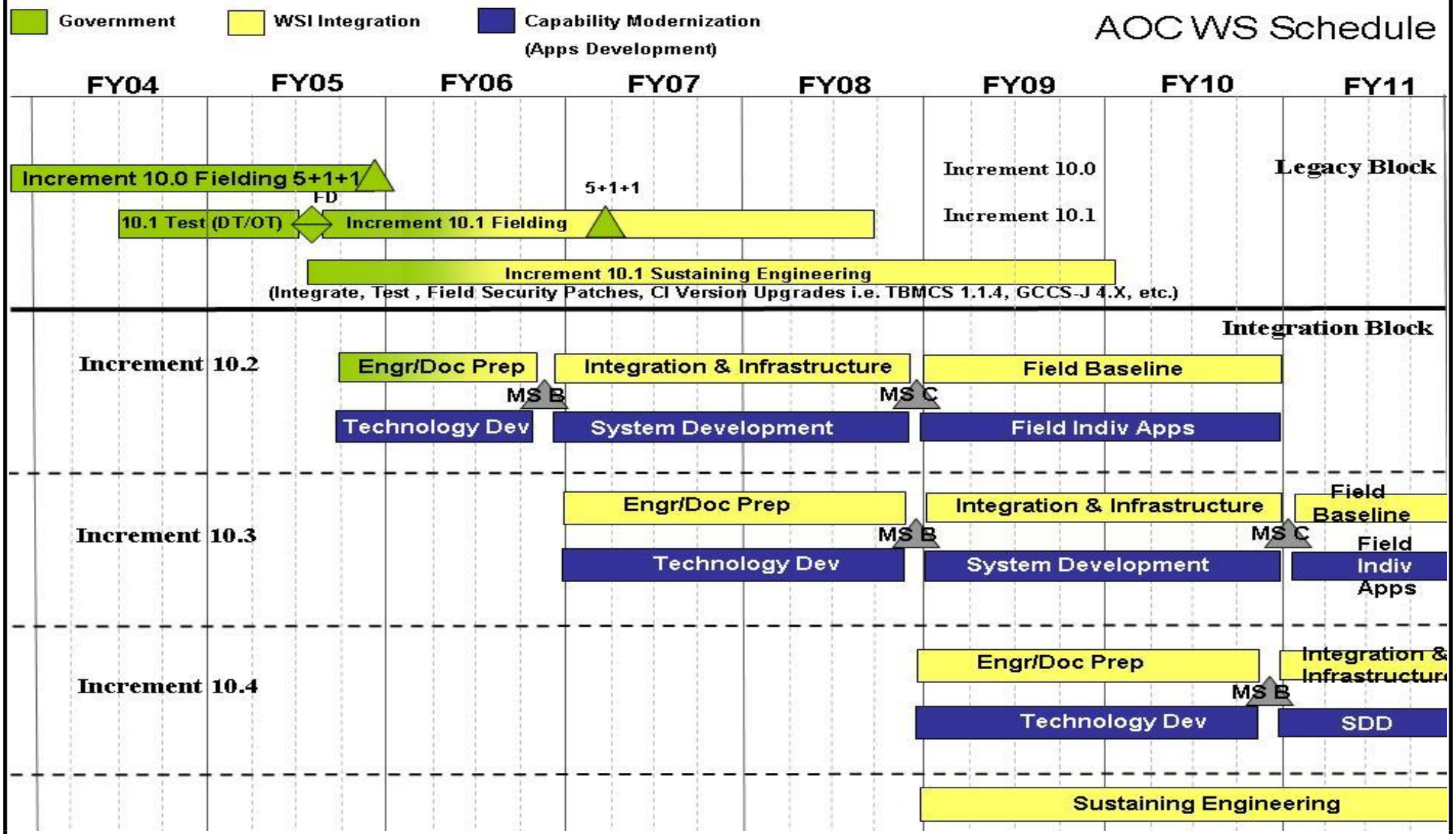


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207410F Air and Space Operations Center - Weapon System (AOC-WS)	PROJECT NUMBER AND TITLE: 5117 Integration Development

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Increment 10.0 Fielding 5+1+1	1-4Q		
(U) Increment 10.1 Test (DT/OT)	1-3Q		
(U) Increment 10.1 Fielding 5+1+1	3-4Q	1-4Q	1-4Q
(U) Increment 10.2 MS B		4Q	
(U) Increment 10.2 System Development		4Q	1-4Q
(U) Increment 10.3 Technology Development			1-4Q

PE NUMBER: 0207412F
PE TITLE: Modular Control System

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	9.660	18.892	8.798	16.248	23.160	20.770	22.633	Continuing	TBD
485L	Theater Air Control System Imp (TACSI)	9.660	18.892	8.798	16.248	23.160	20.770	22.633	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Operation Control Center, PE 0102326F, referred to herein as Battle Control System-Fixed {BCS-F}] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M}]. The BCS-M is the replacement of the legacy Control and Reporting Center (CRC).

Once fielded, the BCS-M tactical C2 execution node supports the Joint Forces Air Component Commander (JFACC) and provides interoperability among elements of the Theater Air Control System (TACS) to include the Tactical Air Control Party (TACP), Air Support Operations Center (ASOC), Airborne Warning and Control System (AWACS), Joint STARS, and the Air and Space Operations Center (AOC) as well as other Navy, Marine Corps, Army, and allied/coalition assets. BCS-M is the execution arm of the AOC and conducts both OCONUS and Homeland Defense missions; theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management are the critical tactical-level capabilities of BCS-M.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. The current legacy CRC is fully employed in IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy CRC to support ongoing operations.

BCS-M uses a spiral development acquisition strategy to further advance C2 capabilities on the battlefield and also leverages other acquisitions and successful experimental models. BCS-M acquisition activities include, but are not limited to requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development). The BCS-M capitalizes on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The battle management software is being developed in coordination with BCS-Fixed, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M program includes an incremental fielding of critical needs in order to deliver a product to the war fighter as soon as possible.

The program is in Budget Activity 7 because the CRC is a fielded, operational system that is being upgraded.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207412F Modular Control System

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	11.634	9.289	9.390
(U)	Current PBR/President's Budget	9.660	18.892	8.798
(U)	Total Adjustments	-1.974	9.603	
(U)	Congressional Program Reductions		-0.024	
	Congressional Rescissions	-0.286	-0.273	
	Congressional Increases			
	Reprogrammings	-1.375	9.900	
	SBIR/STTR Transfer	-0.313		

(U) Significant Program Changes:

- FY2005 reduction for higher Air Force needs, program rephased to align with current funding.
- FY2006 Air Force requested Congressional reprogramming of funds from procurement to RDT&E for BCS-M spiral 3 development.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
485L	Theater Air Control System Imp (TACSI)	9.660	18.892	8.798	16.248	23.160	20.770	22.633	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Battle Control System (BCS) Family of Systems (FOS) is comprised of fixed sites for Homeland Defense [Region/Sector Operation Control Center, PE 0102326F, referred to herein as Battle Control System-Fixed {BCS-F}] and mobile Theater Battle Management (TBM) Command and Control (C2) nodes [Modular Control System, PE 0207412F (called the Battle Control System-Mobile {BCS-M}]. The BCS-M is the replacement of the legacy Control and Reporting Center (CRC).

Once fielded, the BCS-M tactical C2 execution node supports the Joint Forces Air Component Commander (JFACC) and provides interoperability among elements of the Theater Air Control System (TACS) to include the Tactical Air Control Party (TACP), Air Support Operations Center (ASOC), Airborne Warning and Control System (AWACS), Joint STARS, and the Air and Space Operations Center (AOC) as well as other Navy, Marine Corps, Army, and allied/coalition assets. BCS-M is the execution arm of the AOC and conducts both OCONUS and Homeland Defense missions; theater air defense, airspace surveillance, aircraft identification, airspace management, and tactical data link management are the critical tactical-level capabilities of BCS-M.

BCS-M is a low density/high demand rapidly deployable ground C2 asset. The current legacy CRC is fully employed in IRAQI FREEDOM, ENDURING FREEDOM, and NOBLE EAGLE. CENTAF is urgently advocating the need to update and replace the legacy CRC to support ongoing operations.

BCS-M uses a spiral development acquisition strategy to further advance C2 capabilities on the battlefield and also leverages other acquisitions and successful experimental models. BCS-M acquisition activities include, but are not limited to requirements analysis, modeling and simulation, risk reduction, acquisition planning, enterprise integration, and prototype development (i.e., radio/radar/data link remoting, software development, radar development). The BCS-M capitalizes on technologies and lessons learned from the Area Cruise Missile Defense (ACMD) Advanced Capabilities Technology Demonstration (ACTD). The battle management software is being developed in coordination with BCS-Fixed, leverages capabilities from the AWACS 40/45 Program, and integrates evolutionary upgrades carried forward from the legacy CRC. This program will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability. The BCS-M program includes an incremental fielding of critical needs in order to deliver a product to the war fighter as soon as possible.

The program is in Budget Activity 7 because the CRC is a fielded, operational system that is being upgraded.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)			
(U) Continue concept definition & development of evolutionary upgrades to the BCS to include, but not limited to, advanced planning, Modular Control System (MCS) upgrades, enhanced radio/radar/data link remoting, transition of ACMD technology into BCS-M, leveraging capabilities from BCS-F and AWACS 40/45, integrating evolutionary	7.804	17.534	7.401

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207412F Modular Control System	PROJECT NUMBER AND TITLE 485L Theater Air Control System Imp (TACSI)

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

		FY 2005	FY 2006	FY 2007
	upgrades into BCS-M, and sensor replacement/upgrade.			
(U)	Continue Program Support (i.e., travel, supplies, equipment, miscellaneous)	0.163	0.208	0.189
(U)	Continue Systems Engineering	1.693	1.150	1.208
(U)	Total Cost	9.660	18.892	8.798

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	OPAF PE 0207412F (Other Procurement Air Force, WSC 833040, Theater Air Control System Improvement	25.937	39.075	42.585	31.847	63.834	67.850	84.679	Continuing	TBD

(U) D. Acquisition Strategy

The Battle Control System (BCS) Program Family of Systems is utilizing a spiral development acquisition strategy to further advance C2 concepts supporting future aerospace operations.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207412F Modular Control System**

PROJECT NUMBER AND TITLE: **485L Theater Air Control System Imp (TACSI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Concept Definition/Development of Evolutionary Upgrades	MIPR	Naval Air Warfare Center/Aircraft Division, Patuxent River, MD	28.258	3.414	Mar-05	1.718	Nov-05	2.260	Nov-06	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades	CPIF & CPAF/SS	Thales Raytheon Systems, Fullerton, CA	1.815	4.390	Jul-05	14.636	Dec-05	3.323	Nov-06	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Sensor Replacement/Upgrade	T&M	Technology Services Corp., Silver Spring, MD	0.158			0.230	Jan-06	0.242	Nov-06	Continuing	TBD	TBD
Concept Definition/Development of Evolutionary Upgrades - Sensor Replacement/Upgrade	T&M	Sensis Group, East Syracuse, NY				0.950	Jan-06	1.576	Nov-06	Continuing	TBD	TBD
Subtotal Product Development			30.231	7.804		17.534		7.401		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Office Support	Various	Various	2.819	0.163	Nov-04	0.208	Nov-05	0.189	Nov-06	Continuing	TBD	TBD
Systems Engineering.	Various	Bedford, MA	3.315	1.693	Nov-04	1.150	Nov-05	1.208	Nov-06	Continuing	TBD	TBD
Subtotal Support			6.134	1.856		1.358		1.397		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			36.365	9.660		18.892		8.798		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207412F Modular Control System	PROJECT NUMBER AND TITLE: 485L Theater Air Control System Imp (TACSI)

Exhibit R-4 – PE 0207412F – Modular Control System

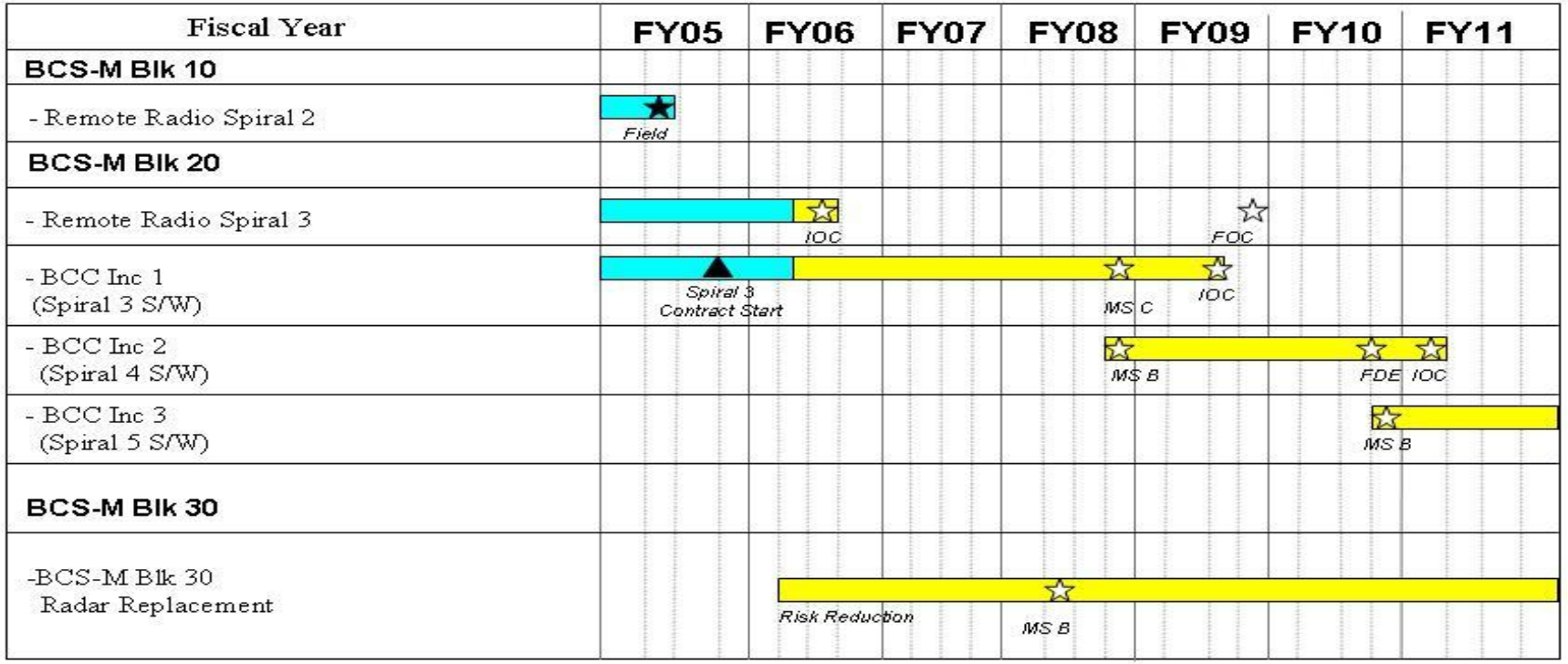


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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207412F Modular Control System**	PROJECT NUMBER AND TITLE **485L Theater Air Control System Imp (TACSI)**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	BCS-M Blk 10 Remote Radio Spiral 2 Field	2Q		
(U)	BCS-M Blk 20 Remote Radio Spiral 3 IOC		3Q	
(U)	BCS-M Blk 20 BCC Inc 1 Spiral 3 Contract Start	4Q		
(U)	BCS-M Blk 30 Radar Replacement Risk Reduction		2Q	
(U)	BCS-M Blk 20 BCC Inc 1 Spiral 3 Continued Development		4Q	1-4Q

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PE NUMBER: 0207417F
PE TITLE: Airborne Warning and Control System (AWACS)

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	273.971	119.746	165.820	138.540	108.704	128.624	145.296	Continuing	TBD
411L	Airborne Warning & Control System (AWACS)	273.971	119.746	165.820	138.540	108.704	128.624	145.296	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective Battle Management airborne surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts:
Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

B) GATM is a FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL--mandated ATC upgrade consisting of new Very High Frequency (VHF) radios with 8.33 kHz channel spacing, Traffic-alert Collision Avoidance System (TCAS)/Mode-S Identification Friend or Foe (IFF) transponder and Reduced Vertical Separation Minimum (RVSM) capability. The ATC enhancements will permit more aircraft to fly closer together in congested airspace worldwide, particularly in European airspace. Non-compliance has already resulted in airspace restrictions and denials, impacting AWACS's ability to support worldwide response in situations requiring immediate on-scene command and control (C2) battle management.

2) Block 40/45 is replacing AWACS 1970's vintage mission systems that are experiencing Diminishing Manufacturing Sources (DMS) issues, are difficult and expensive to upgrade, and limit overall AWACS system performance. The Block 40/45 upgrade will improve quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), provide sensor fusion capability in support of the Single Integrated Air Picture (SIAP) via multi-sensor integration (MSI), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, resolve radar electronics DMS, and enable more effective, faster upgrades via an open systems architecture.

3) Command & Control, Intelligence, Surveillance and Reconnaissance (C2ISR): C2ISR System Architecture Improvements provide timely enhancements to improve critical areas of the AWACS mission system, primarily in three areas:

A) Mission Capable (MC) rate improvement: Reliability, Maintainability & Availability (RM&A) analysis and development projects provide system improvements that help meet/exceed the MC rate standard of this critical C2 platform, therefore increasing airframe longevity in order to support its flight commitment to end of operational life. Such efforts focus on increasing reliability of the air vehicle, command and control, computer, sensor systems and infrastructure improvements as well as providing solutions to diminishing manufacturing sources. Efforts will also focus on insertion of new technologies with the aim of reducing maintenance man-hours

along with periodic depot maintenance improvements to increase aircraft availability. Programs will focus on risk reduction, development, and fielding.

B) C2ISR enhancement and integration: AWACS seeks to fulfill the requirements of Joint Vision 2020 as well as Aerospace Expeditionary Forces (AEF) and other Task Force Concept of Operations to meet the needs of the operator. AWACS seeks to enhance network-centric warfare capabilities with other C2ISR systems by horizontally integrating machine-to-machine interfaces into AWACS in order to digitize the kill chain. Sensor and communications improvements, such as IFF interrogator/transponder and the ability to send, receive and fuse the air (and ground) picture via data link to fighter aircraft, will be developed through rapid prototyping, modeling, simulation, and participation in live and simulated Joint exercises (e.g., Joint Combat Identification Evaluation Team (JCIET) and Joint Distributed Engineering Plant (JDEP)). Collaborative efforts with other sensor platforms through capabilities such as network-centric operations will also enhance horizontal integration efforts. Certain near-term efforts, required by the operator to improve the timeliness and accuracy of information passed to/from fighter aircraft in the engagement zone and to provide consistent and re-playable mission data once the mission is complete, are quick reaction capabilities that can be developed & fielded to support the air war. The program includes concept exploration, technology development and demonstration efforts that support continuous improvements to C2ISR capabilities of manned & unmanned platforms, space, data links and advanced Battle Management decision tools. C2ISR continues to support and develop self-protection capabilities to enable current and future threat deterrence. Fielding strategies will provide for immediate field retrofit when able, otherwise fielding will occur in subsequent modernization programs. All programs are designed to integrate with & transition into the next C2ISR Platform. The AWACS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability. The E-3 will serve as the lead platform to support the development of the Mark XXIIA Mode 5 IFF capability carried out in PE 63742F, Combat ID Technology.

4) The Training, Support, and Infrastructure programs cover an array of cross cutting programs and activities in support of AWACS modification and enhancement programs. These programs include managing the AWACS developmental infrastructure, support equipment development, modernization planning/analysis, and trainer/simulator integration and concurrency. The Radar Systems Integration Lab/Software Development Facility must be maintained, operated and supported by contract to provide customers with a functioning APY 1/2 radar configuration in support of AWACS radar development, production and sustainment support equipment technologies and test strategies to ensure concurrent capability to sustain current, modified and upgraded E-3 equipment. Trainer/simulator concurrency analysis and definition is required to ensure trainers and simulators are kept current with the AWACS baseline. Associate contractor agreements are used to establish concurrency between prime integrators and training service providers.

5) Test System 3/Integration Labs: The E-3 AWACS testbed aircraft, Test System 3 (TS-3, tail number 73-1674) and the Avionics Integration Laboratory (AIL) are Government owned/contractor managed, maintained and operated assets. These test-ready assets support AWACS modernization, including advanced projects and sustainment projects, and allow AWACS to participate in live-fly (e.g., Joint Expeditionary Force Experiment) and ground-based interoperability testing through the Joint Distributed Engineering Plant (JDEP) configured AIL. They also support multiple international Airborne Early Warning and Control (AEW&C) projects on a fee basis, including French, RSAF, UK, Japan, and NATO.

6) NAVWAR (Navigation Warfare) is mandated by CJCSI 6140.01A (31 Mar 04) and requires all DoD GPS users to incorporate NSA Selective Availability Anti-Spoofing Module (SAASM), make provisions for the transition to 'black keys', eliminate requirements to acquire GPS satellites using the civil signal (Coarse Acquisition (C/A code)) and incorporate new technology into the navigation sensor.

7) AMP (Avionics Modernization Program) completes the FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL mandated air traffic control system upgrades and equips the E-3 fleet with flight deck and other avionics capabilities that will allow AWACS to comply with mandated global Required Navigation Performance (RNP), surveillance and communication standards. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to

support worldwide responses to situations requiring immediate on-scene command and control (C2 battle management). The AMP modifications to the flight deck include the addition of data link communications, upgrade or replacement of emergency locating technologies, voice and data link digital radios, improved visual displays and flight management system, as well as automatic position reporting via data link. Replacement of critical avionics subsystems, unsustainable beyond 2010, will be included in the AMP.

8) Re-engining will replace the existing, original engines with new engines. New engines will ensure long-term viability of the platform and increase fuel-efficiency, improve reliability, and increase power quantity and quality available to on-board mission systems. Development will pursue synergies and leverage the efforts of other U.S. 707-based airframes as well as the International AWACS partners that operate the 707 AWACS (United Kingdom, France, and Saudi Arabia). Further refinement of the acquisition strategy is required to fully integrate the program into the AWACS modernization plan in FY11 and beyond.

9) Communication projects provide the AWACS system with an effective method for electronically transmitting and receiving critical mission information such as the Air Tasking Order (ATO). Comm projects will focus on engineering and retrofitting the entire fleet.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	285.737	121.565	94.498
(U)	Current PBR/President's Budget	273.971	119.746	165.820
(U)	Total Adjustments	-11.766	-1.819	
(U)	Congressional Program Reductions		-0.087	
	Congressional Rescissions	-0.318	-1.732	
	Congressional Increases			
	Reprogrammings	-4.067		
	SBIR/STTR Transfer	-7.381		

(U) Significant Program Changes:

Funds were reprogrammed from FY07 APAF to RDT&E to properly align Block 40/45 non-recurring engineering tasks into the System Development and Demonstration phase of the program. The realigned program slips the Block 40/45 IOC 32 months to 2013.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207417F Airborne Warning and Control System (AWACS)	PROJECT NUMBER AND TITLE: 411L Airborne Warning & Control System (AWACS)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
411L	Airborne Warning & Control System (AWACS)	273.971	119.746	165.820	138.540	108.704	128.624	145.296	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

A. Mission Description

The funding set forth in this document investigates, develops, and integrates system improvements to enable the E-3 AWACS to remain an effective Battle Management airborne surveillance system for command and control of combat forces and for strategic defense of the U.S. This PE funds the following efforts:

Modernization Programs: (RDT&E, AF)

1) The Integrated DAMA (Demand Assigned Multiple Access) / GATM (Global Air Traffic Management) Program seeks to make communications and navigation improvements required to meet current mandated DAMA SATCOM (Satellite Communication) and Air Traffic Control (ATC) requirements.

A) DAMA SATCOM is a Chairman Joint Chiefs of Staff (CJCS)--mandated Ultra-High Frequency (UHF) satellite communications upgrade consisting of two new UHF DAMA terminals and new Radio Frequency (RF) components, to mitigate co-site interference, replacing the two non-DAMA UHF SATCOM radios on each aircraft. The DAMA enhancements will expand user availability of severely limited DoD UHF SATCOM channels, improving the interoperability and efficiency of DoD UHF SATCOM systems.

B) GATM is a FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL--mandated ATC upgrade consisting of new Very High Frequency (VHF) radios with 8.33 kHz channel spacing, Traffic-alert Collision Avoidance System (TCAS)/Mode-S Identification Friend or Foe (IFF) transponder and Reduced Vertical Separation Minimum (RVSM) capability. The ATC enhancements will permit more aircraft to fly closer together in congested airspace worldwide, particularly in European airspace. Non-compliance has already resulted in airspace restrictions and denials, impacting AWACS's ability to support worldwide response in situations requiring immediate on-scene command and control (C2) battle management.

2) Block 40/45 is replacing AWACS 1970's vintage mission systems that are experiencing Diminishing Manufacturing Sources (DMS) issues, are difficult and expensive to upgrade, and limit overall AWACS system performance. The Block 40/45 upgrade will improve quality and timeliness of sensor data to the shooter, improve Combat Identification (CID), provide sensor fusion capability in support of the Single Integrated Air Picture (SIAP) via multi-sensor integration (MSI), improve AWACS contribution to Time Critical Targeting via Data Link Infrastructure, resolve radar electronics DMS, and enable more effective, faster upgrades via an open systems architecture.

3) Command & Control, Intelligence, Surveillance and Reconnaissance (C2ISR): C2ISR System Architecture Improvements provide timely enhancements to improve critical areas of the AWACS mission system, primarily in three areas:

A) Mission Capable (MC) rate improvement: Reliability, Maintainability & Availability (RM&A) analysis and development projects provide system improvements that help meet/exceed the MC rate standard of this critical C2 platform, therefore increasing airframe longevity in order to support its flight commitment to end of operational life. Such efforts focus on increasing reliability of the air vehicle, command and control, computer, sensor systems and infrastructure improvements as well as providing solutions to diminishing manufacturing sources. Efforts will also focus on insertion of new technologies with the aim of reducing maintenance man-hours along with periodic depot maintenance improvements to increase aircraft availability. Programs will focus on risk reduction, development, and fielding.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207417F Airborne Warning and Control System (AWACS)**	PROJECT NUMBER AND TITLE **411L Airborne Warning & Control System (AWACS)**

B) C2ISR enhancement and integration: AWACS seeks to fulfill the requirements of Joint Vision 2020 as well as Aerospace Expeditionary Forces (AEF) and other Task Force Concept of Operations to meet the needs of the operator. AWACS seeks to enhance network-centric warfare capabilities with other C2ISR systems by horizontally integrating machine-to-machine interfaces into AWACS in order to digitize the kill chain. Sensor and communications improvements, such as IFF interrogator/transponder and the ability to send, receive and fuse the air (and ground) picture via data link to fighter aircraft, will be developed through rapid prototyping, modeling, simulation, and participation in live and simulated Joint exercises (e.g., Joint Combat Identification Evaluation Team (JCIET) and Joint Distributed Engineering Plant (JDEP)). Collaborative efforts with other sensor platforms through capabilities such as network-centric operations will also enhance horizontal integration efforts. Certain near-term efforts, required by the operator to improve the timeliness and accuracy of information passed to/from fighter aircraft in the engagement zone and to provide consistent and re-playable mission data once the mission is complete, are quick reaction capabilities that can be developed & fielded to support the air war. The program includes concept exploration, technology development and demonstration efforts that support continuous improvements to C2ISR capabilities of manned & unmanned platforms, space, data links and advanced Battle Management decision tools. C2ISR continues to support and develop self-protection capabilities to enable current and future threat deterrence. Fielding strategies will provide for immediate field retrofit when able, otherwise fielding will occur in subsequent modernization programs. All programs are designed to integrate with & transition into the next C2ISR Platform. The AWACS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability. The E-3 will serve as the lead platform to support the development of the Mark XXIIA Mode 5 IFF capability carried out in PE 63742F, Combat ID Technology.

4) The Training, Support, and Infrastructure programs cover an array of cross cutting programs and activities in support of AWACS modification and enhancement programs. These programs include managing the AWACS developmental infrastructure, support equipment development, modernization planning/analysis, and trainer/simulator integration and concurrency. The Radar Systems Integration Lab/Software Development Facility must be maintained, operated and supported by contract to provide customers with a functioning APY 1/2 radar configuration in support of AWACS radar development, production and sustainment support equipment technologies and test strategies to ensure concurrent capability to sustain current, modified and upgraded E-3 equipment. Trainer/simulator concurrency analysis and definition is required to ensure trainers and simulators are kept current with the AWACS baseline. Associate contractor agreements are used to establish concurrency between prime integrators and training service providers.

5) Test System 3/Integration Labs: The E-3 AWACS testbed aircraft, Test System 3 (TS-3, tail number 73-1674) and the Avionics Integration Laboratory (AIL) are Government owned/contractor managed, maintained and operated assets. These test-ready assets support AWACS modernization, including advanced projects and sustainment projects, and allow AWACS to participate in live-fly (e.g., Joint Expeditionary Force Experiment) and ground-based interoperability testing through the Joint Distributed Engineering Plant (JDEP) configured AIL. They also support multiple international Airborne Early Warning and Control (AEW&C) projects on a fee basis, including French, RSAF, UK, Japan, and NATO.

6) NAVWAR (Navigation Warfare) is mandated by CJCSI 6140.01A (31 Mar 04) and requires all DoD GPS users to incorporate NSA Selective Availability Anti-Spoofing Module (SAASM), make provisions for the transition to 'black keys', eliminate requirements to acquire GPS satellites using the civil signal (Coarse Acquisition (C/A code)) and incorporate new technology into the navigation sensor.

7) AMP (Avionics Modernization Program) completes the FAA/International Civil Aviation Organization (ICAO)/EUROCONTROL mandated air traffic control system upgrades and equips the E-3 fleet with flight deck and other avionics capabilities that will allow AWACS to comply with mandated global Required Navigation Performance (RNP), surveillance and communication standards. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to support worldwide responses to situations requiring immediate on-scene command and control (C2 battle management). The AMP modifications to the flight deck

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207417F Airborne Warning and Control System (AWACS)**	PROJECT NUMBER AND TITLE **411L Airborne Warning & Control System (AWACS)**

include the addition of data link communications, upgrade or replacement of emergency locating technologies, voice and data link digital radios, improved visual displays and flight management system, as well as automatic position reporting via data link. Replacement of critical avionics subsystems, unsustainable beyond 2010, will be included in the AMP.

8) Re-engining will replace the existing, original engines with new engines. New engines will ensure long-term viability of the platform and increase fuel-efficiency, improve reliability, and increase power quantity and quality available to on-board mission systems. Development will pursue synergies and leverage the efforts of other U.S. 707-based airframes as well as the International AWACS partners that operate the 707 AWACS (United Kingdom, France, and Saudi Arabia). Further refinement of the acquisition strategy is required to fully integrate the program into the AWACS modernization plan in FY11 and beyond.

9) Communication projects provide the AWACS system with an effective method for electronically transmitting and receiving critical mission information such as the Air Tasking Order (ATO). Comm projects will focus on engineering and retrofitting the entire fleet.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a fielded, post Milestone III operational weapon system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Programs			
(U)	Continuing Test System-3/AITS support and Program Sustaining efforts	9.931	12.948	13.095
(U)	Continuing Trainers, Simulators and Infrastructure (TSI) efforts (previously included under Test System-3/AITS support and Program Sustaining efforts)	4.592	2.206	3.199
(U)	Continuing Block 40/45 SD&D effort	247.739	93.826	143.774
(U)	Continuing C2ISR System Architecture Improvements, Advanced Projects, MC Rate Improvements	4.908	5.999	5.752
(U)	Continuing Navigational Warfare (NAVWAR) SD&D	6.801	4.767	0.000
(U)	Total Cost	273.971	119.746	165.820

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	Aircraft Procurement, AF, E-3 Mods	46.548	49.591	64.547	192.838	313.828	436.693	462.750	Continuing	TBD
(U)	E-3 Initial Spares, AF	8.726	7.002	7.427	7.693	7.982	10.971	18.751	Continuing	TBD
(U)	Replacement Supt Equip	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	

(U) D. Acquisition Strategy

Most major programs (Block 40/45, NAVWAR, TS-3 and lab support) will be sole source to Boeing aircraft in Seattle, Wa.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207417F Airborne Warning and Control System (AWACS)**

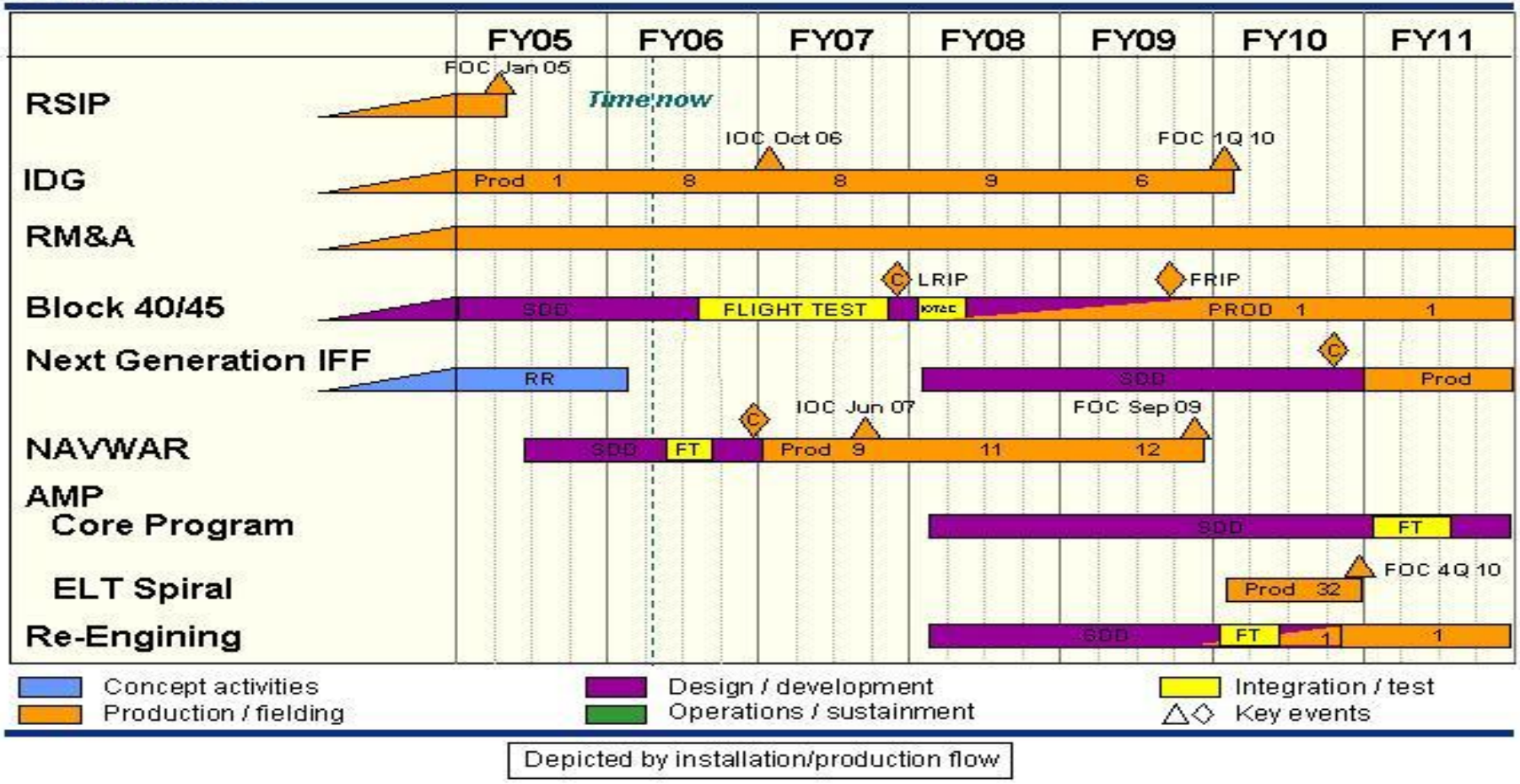
PROJECT NUMBER AND TITLE: **411L Airborne Warning & Control System (AWACS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
(U) Block 40/45 SD&D	SS/CPAF	Boeing - Seattle, WA	206.855	232.325	Oct-04	75.952	Oct-05	132.368	Oct-06	Continuing	TBD	TBD
(U) C2ISR Sys Arch Imp	SS/FPIF & CPAF	Boeing - Seattle, WA	40.568	3.062	Nov-04	3.530	Oct-05	0.641	Oct-06	Continuing	TBD	TBD
(U) NAVWAR/AMP	SS/Muliple	Boeing - Seattle, WA	0.000	6.331	Nov-04	4.170	Oct-05	0.000	N/A	Continuing	TBD	TBD
Subtotal Product Development			247.423	241.718		83.652		133.009		Continuing	TBD	TBD
Remarks: Note: Total Program does not include NATO funds.												
(U) Support												
(U)Support/ITSP MITRE, travel, other	Competitive Multiple	AWACS Program Office - Hanscom AFB, MA	613.810	19.184	N/A	21.431	N/A	17.888	N/A	Continuing	TBD	TBD
Subtotal Support			613.810	19.184		21.431		17.888		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
(U) Test System-3 ADAPT Contract/AITS Contract / Other test activities	SS/Multiple	Boeing - Seattle, WA	415.216	8.477	N/A	12.454	N/A	11.695	N/A	Continuing	TBD	TBD
(U) Trainers, Simulators & Infrastructure (TSI)	SS/Multiple	Boeing - Seattle, WA		4.592	Jan-05	2.209	Jan-06	3.228	Jan-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			415.216	13.069		14.663		14.923		Continuing	TBD	TBD
Remarks:												
(U) Management											0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			1,276.449	273.971		119.746		165.820		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207417F Airborne Warning and Control System (AWACS)	PROJECT NUMBER AND TITLE 411L Airborne Warning & Control System (AWACS)

U.S. AIR FORCE

AWACS Schedule



Depicted by installation/production flow

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207417F Airborne Warning and Control System (AWACS)**	PROJECT NUMBER AND TITLE **411L Airborne Warning & Control System (AWACS)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) NAVWAR SD&D Contract Award	1Q		
(U) RSIP Aircraft Modifications Complete	1Q		
(U) 40/45 Test Aircraft Modification Start	2Q		
(U) NAVWAR Software Development Progress Review	3Q		
(U) IDG Production Aircraft Modification Start	3Q		
(U) IDG Delta Testing		1Q	
(U) NAVWAR Flight Tests		2Q	
(U) 40/45 Airworthiness Testing		3Q	
(U) IDG Follow-On Contract Award		3Q	
(U) 40/45 Install & Checkout Complete		4Q	
(U) 40/45 Ground/Flight Test Starts		4Q	
(U) IDG IOC			1Q
(U) NAVWAR IOC			3Q
(U) 40/45 Ground/Flight Test Complete			4Q
(U) 40/45 Milestone C - LRIP			4Q

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PE NUMBER: 0207418F
PE TITLE: TAC AIRBORNE CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207418F TAC AIRBORNE CONTROL SYSTEM

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	2.286	3.300	1.500	0.000	0.000	Continuing	TBD
5234 TACP Support	0.000	0.000	2.286	3.300	1.500	0.000	0.000	Continuing	TBD

In FY 2007 this is the first time this program element (PE) has had Research, Development, Testing and Evaluation (RDT&E) funds, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. The JTC TRS will be able to connect to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. The JTC TRS will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking. Furthermore, the system will be capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS shall have the capability to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. JTC TRS will also allow JTACS/CCT teams to use their actual equipment in the trainer. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. JTC TRS will be fully interoperable with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	2.286
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY 07 is the first year this PE has had RDT&E funds.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207418F TAC AIRBORNE CONTROL SYSTEM	5234 TACP Support

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5234 TACP Support	0.000	0.000	2.286	3.300	1.500	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007, Project Number 5234, Tactical Air Control Party (TACP) Support, includes new start efforts.

(U) A. Mission Description and Budget Item Justification

The Joint Terminal Controller Training and Rehearsal System (JTC TRS) project under the Tactical Airborne Control System funds developments necessary to provide Distributed Mission Operations (DMO) capable high-fidelity Joint Terminal Attack Controller (JTAC), and Combat Control Team (CCT) training and rehearsal system. The JTC TRS will be able to connect to DMO networks to allow geographically separated high-fidelity close air support platforms and JTACs/CCT teams to train together. The JTC TRS will enable operators to conduct Joint Close Air Support (JCAS) training/mission rehearsal using tailored, dynamic scenarios that are relevant to mission tasking. Furthermore, the system will be capable of providing air traffic control training for CCT using tactical application of austere airbase operations. Using a system of systems approach JTC TRS shall have the capability to network in Increment 1 to aircrew full mission trainers and mission training centers, and by Increment 2, to Air Support Operations Centers (ASOCs) for Joint Tactical Air Strike Requests and air-ground coordination of Joint fires. JTC TRS will also allow JTACS/CCT teams to use their actual equipment in the trainer. Its primary focus is to provide a persistent total air-ground virtual training environment for networked air ground training and mission rehearsal capability that will develop both JTAC/CCT skills and train those air crews assigned to accomplish complex JCAS missions in close proximity to ground forces. JTC TRS will be fully interoperable with joint/sister Service air ground simulation using industry standards.

This program is in Budget Activity 7, Operational System Development, because it updates and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Development of high-fidelity simulation system for JTAC/CCT training	0.000	0.000	2.286
(U) Total Cost	0.000	0.000	2.286

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) N/A									

(U) D. Acquisition Strategy

The acquisition strategy will be based on full and open competition for an evolutionary acquisition approach using incremental development. Increment 1 will allow JTACS/CCT teams to network to aircrew full mission trainers and mission training centers. Future increments will be incorporated as funding and technology allow.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207418F TAC AIRBORNE CONTROL SYSTEM**

PROJECT NUMBER AND TITLE: **5234 TACP Support**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Joint Terminal Controller Training Rehearsal System	TBD	TBD	0.000	0.000		0.000		1.436	Apr-30	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		1.436		Continuing	TBD	TBD
Remarks:												
(U) Support												
			0.000	0.000		0.000				Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
			0.000	0.000		0.000				Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Management												
Air Force Material Command, Simulator Systems Group, System Program Office Cost			0.000	0.000		0.000		0.850		Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.850		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		2.286		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207418F TAC AIRBORNE CONTROL SYSTEM	PROJECT NUMBER AND TITLE 5234 TACP Support

Joint Terminal Controller Training Rehearsal System (JTC TRS)

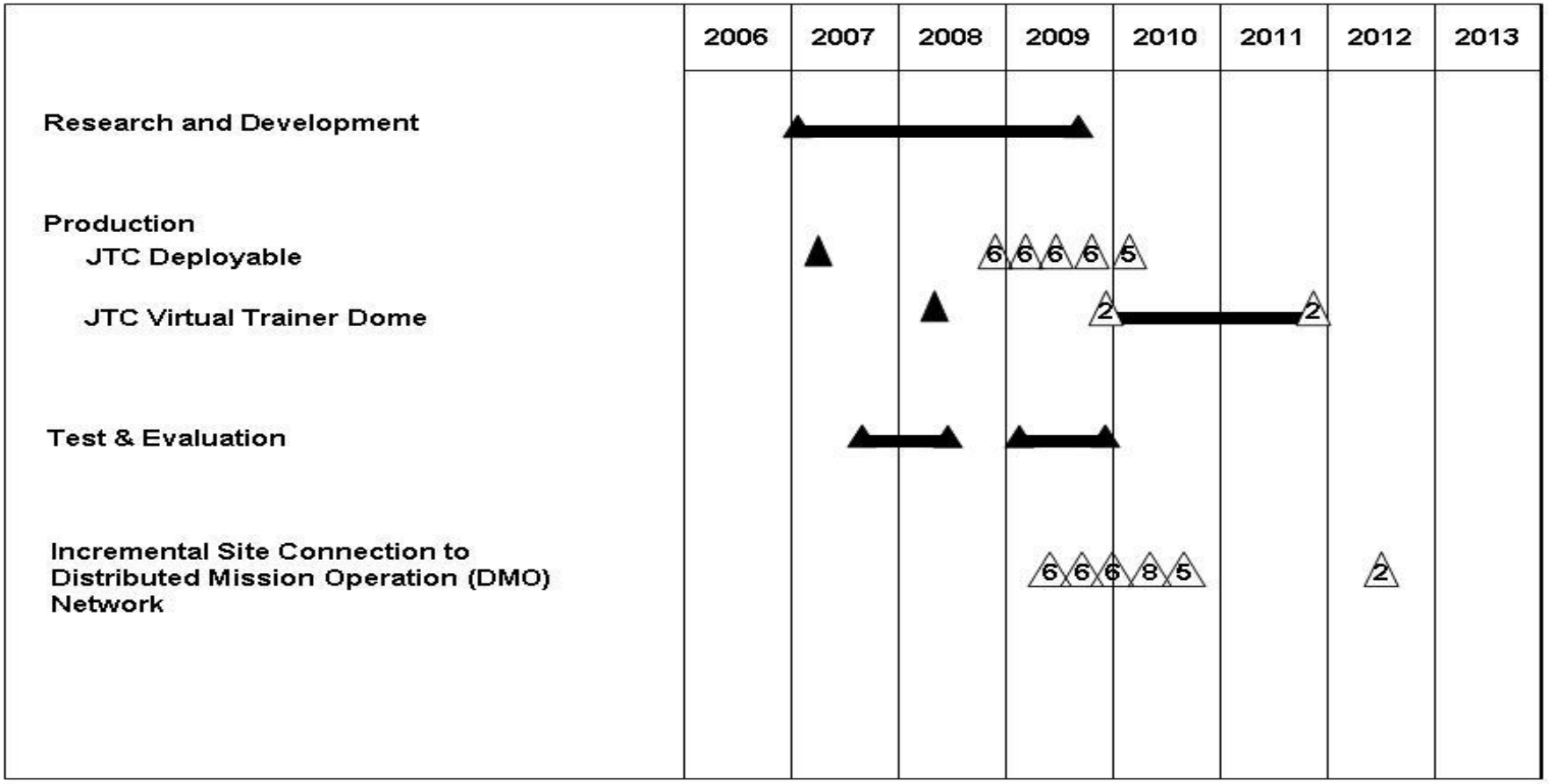

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207418F TAC AIRBORNE CONTROL SYSTEM**	PROJECT NUMBER AND TITLE **5234 TACP Support**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) JTC TRS Deployable Development			1-4Q
(U) JTC Deployable OT& E			3-4Q
(U) JTC Virtual Trainer (VT) Dome Development			4Q
(U) JTC Deployable Production Contract Award			1Q

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PE NUMBER: 0207423F
PE TITLE: Advanced Communications Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207423F Advanced Communications Systems

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	17.940	28.501	52.112	61.670	60.182	56.356	60.499	Continuing	TBD
4934	Tactical Air Control Party (TACP)	17.940	11.554	8.537	8.977	5.893	6.069	6.085	Continuing	TBD
5189	C2ISR JTRS Integration	0.000	16.947	43.575	52.693	54.289	50.287	54.414	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting air operations, aerospace C2 aircraft/agencies and Intelligence, Surveillance and Reconnaissance (ISR) aircraft/agencies. The TACP-Modernization (TACP-M) Program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and video technology available to improve the system's Situational Awareness (SA), increase targeting accuracy, reduce kill chain decision time, provide more mobility and flexibility, improve data flows/information exchange and increase joint and multinational interoperability and reduce fratricide. TACP-M is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized capability via a streamlined acquisition using non-developmental, Commercial off-the-shelf (COTS) Manpack Radios (MPR) and Handheld Radios (HHR), Laser Targeting Devices (LTD), and ruggedized mission computers combined with TACP SA software. In Sep 2005, the TACP-M program withdrew from the JTRS Cluster 1 program due to program (cost, schedule, techincal) delays. The Air Force directed the program to develop and interim Vehicular Communications System (VCS) using legacy technology until JTRS sets are available.

The integration of capability via Joint Tactical Radio System (JTRS) will provide Command and Control and Intelligence, Surveillance and Reconnaissance platforms with a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications. JTRS radios will be modular, scalable, and network ready. The funding provides such capabilities on various C2 and ISR platforms to include Global Hawk, Predator, AWACS, Rivet Joint, and JSTARS and non-traditional ISR platform such as F-22 and F-15E. These platforms will integrate an airborne network capability through JTRS along with selected legacy waveforms as required to meet mission and joint interoperability requirements. The airborne network will provide unprecedented capabilities allowing the platforms to exchange voice and data in a heterogeneous environment, including service-only, joint, coalition, and allied operations. This capability requires systems engineering efforts to standardize critical network parameters to permit the easy transmission and receipt of time-sensitive data that will give the tactical warrior transformational capabilities. Physical, functional, and data integration on the platforms will be resolved as part of this integration and engineering standardization. Information assurance system engineering will ensure the data exchange capabilities will meet operational commander, theatre, and national requirements in a multi-enclave environment.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of commercial (COTS) equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	18.040	28.938	0.000
(U)	Current PBR/President's Budget	17.940	28.501	52.112
(U)	Total Adjustments	-0.100	-0.437	
(U)	Congressional Program Reductions	-0.100	-0.022	
	Congressional Rescissions		-0.415	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY07 increase PE is related to C2ISR JTRS Integration efforts for system engineering, interoperability planning and testing associated with airborne networking integration, network standardization, and information assurance.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207423F Advanced Communications Systems	4934 Tactical Air Control Party (TACP)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4934 Tactical Air Control Party (TACP)	17.940	11.554	8.537	8.977	5.893	6.069	6.085	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

TACPs deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift and AF surveillance/reconnaissance missions. TACPs are equipped with various targeting and communications equipment needed to interface with ground maneuver forces, aircraft conducting air operations, aerospace C2 aircraft/agencies, and Intelligence, Surveillance and Reconnaissance (ISR) aircraft/agencies. TACP-M provides TACP and Air Support Operations Centers (ASOCs) personnel with the capability to precisely locate and target enemy ground forces by integrating various Laser Targeting Devices and ultra high frequency satellite communications (UHF SATCOM) for beyond-line-of-sight (BLOS) joint air request net (JARN) operations. The TACP-Modernization (TACP-M) Program is intended to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and video (i.e. Remote Operations Video Enhanced Receivers (ROVER III)) technology available to improve the system's Situational Awareness (SA), increase targeting accuracy, reduce kill chain decision time, provide more mobility and flexibility, improve data flows/information exchange and reduce fratricide. This will increase joint and multinational interoperability in direct support to the Army Modular Force Program. TACP-M is divided into two segments: Dismounted and Vehicular. The dismounted TACP provides a modernized/modular capability via a streamlined acquisition using non-developmental, commercial off-the-shelf (COTS) Manpack Radios (MPR) and Handheld Radios (HHR), Laser Targeting Devices (LTD), and ruggedized mission computer combined with TACP SA software. The TACP-M program is an active participant in the GWOT and continues to significantly increase the mission effectiveness of the TACPs and ASOCs during Operations Enduring and Iraqi Freedom. The TACP-M program was also instrumental in establishing ground communications support during recent Hurricanes (Katrina and Rita) strikes upon the US.

This program is in budget activity 7, Operational System Development, since it examines appropriate emerging technologies for the continuing spiral development of commercial (COTS) equipment, provides software development, and determines and resolves integration issues pertaining to COTS.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue JTRS TACP Vehicular Communication System (VCS) hardware development	12.416	5.734	4.553
(U) Software development and System integration	4.523	5.511	1.890
(U) Operational and interoperability test planning	1.001	0.309	2.094
(U) Total Cost	17.940	11.554	8.537

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Advanced Communications System Other Procurement, AF	37.037	16.407	58.791	124.036	140.415	99.019	93.964	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **4934 Tactical Air Control Party (TACP)**

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

PE 0207423F

(U) D. Acquisition Strategy

The TACP-M is executing an incremental/spiral development for the dismounted segment. System engineering, design, integration, and fielding support is being provided under a full and open competition award (Time and Materials (T&M)). The prototype Vehicular Communication System (VCS) is a current effort with Naval Surface Warfare Center-Crane, IN. This also is a T&M effort which will assist with the generation of key acquisition/contractual documentation (CONOPS, TTPs, ICDs, and TRD) for the FY07 full and open competition award. This contract will deliver an integrated system (both segments) with an emphasis on Reduced Total Ownership Cost (RTOC) over the life cycle of the program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207423F Advanced Communications Systems**

PROJECT NUMBER AND TITLE: **4934 Tactical Air Control Party (TACP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing Company	C/PAF	Army Tactical Command & Control Sys, Ft Monmouth, NJ		10.558	Nov-04					0.000	10.558	TBD
ESC Sys Int Software Dev't	T&M	MultiMax, Inc. Largo, Maryland		4.009	Nov-04	6.332	Nov-05	2.011	Nov-06	Continuing	TBD	TBD
VCS (JTRS compliant radios or alternate systems)						1.886	Apr-06	2.764	Apr-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	14.567		8.218		4.775		Continuing	TBD	TBD
Remarks:												
(U) Support												
ESC	C/FFP	Various		2.372	Oct-04	3.027	Oct-05	1.668	Oct-06	Continuing	TBD	TBD
Subtotal Support			0.000	2.372		3.027		1.668		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test Agency Support	MIPR	Various		1.001	Nov-04	0.309	Nov-05	2.094	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	1.001		0.309		2.094		Continuing	TBD	TBD
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	17.940		11.554		8.537		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 4934 Tactical Air Control Party (TACP)

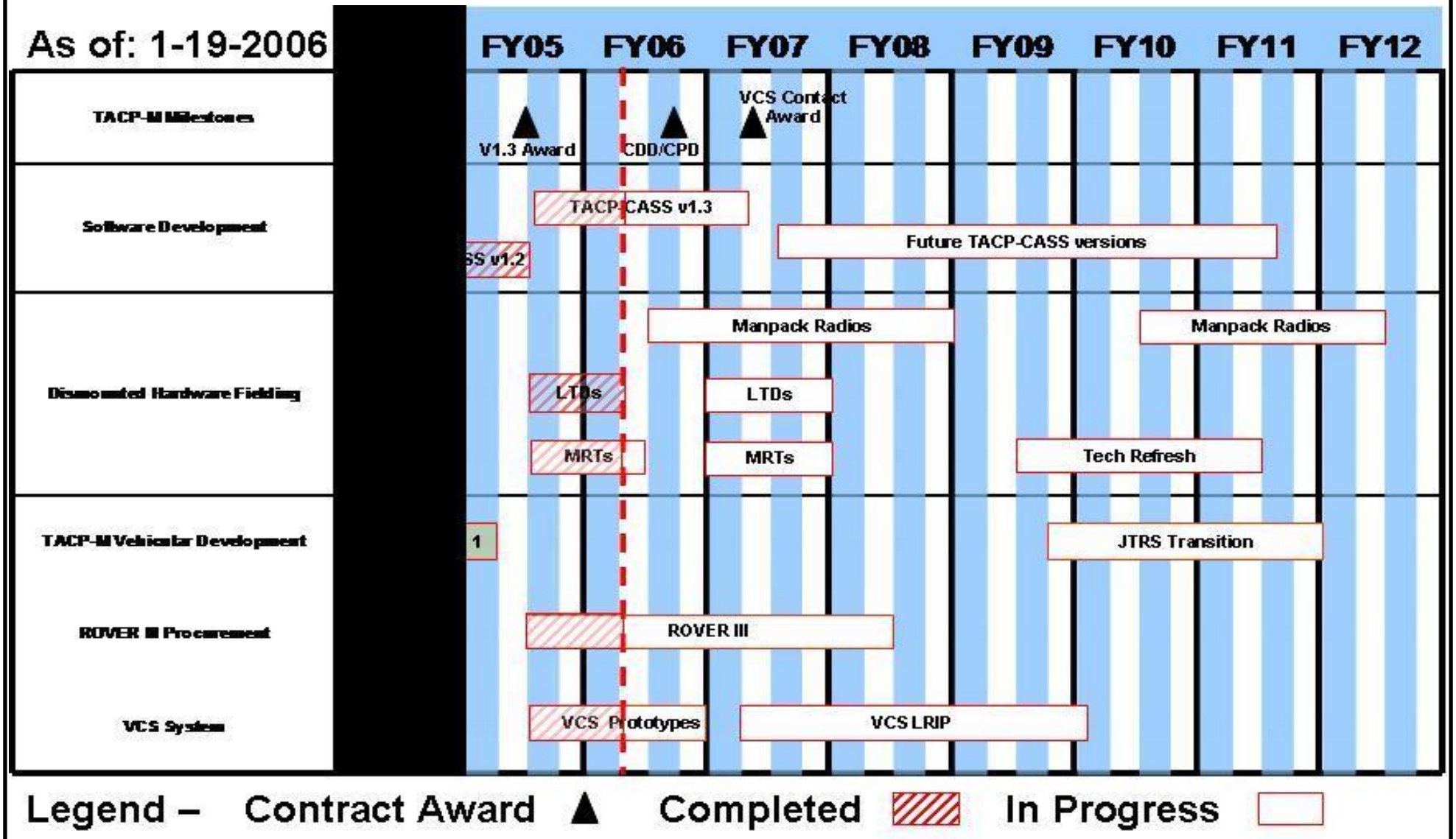

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207423F Advanced Communications Systems**	PROJECT NUMBER AND TITLE **4934 Tactical Air Control Party (TACP)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) TACP-CASS v1.3 Contract award	3Q		
(U) CDD/CPD		3Q	
(U) VCS Contract Award			2Q
(U) Software Development - TACP-CASS v1.2	1-2Q		
(U) Software Development - TACP-CASS v1.3	3-4Q	1-4Q	1Q
(U) Software Development - Future TACP-CASS Versions			3-4Q
(U) Dismounted Hardware Fielding - Manpack Radios		3-4Q	1-4Q
(U) Dismounted Hardware Fielding - LTDs	3-4Q	1Q	1-4Q
(U) Dismounted Hardware Fielding - Ruggedized Computers	3-4Q	1-2Q	1-4Q
(U) TACP-M Vehicular Development (JTRS)	1Q		
(U) ROVER III	3-4Q	1-4Q	1-4Q
(U) VCS System	3-4Q	1-4Q	2-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 5189 C2ISR JTRS Integration	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5189 C2ISR JTRS Integration	0.000	16.947	43.575	52.693	54.289	50.287	54.414	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The integration of capability via Joint Tactical Radio System (JTRS) will provide C2 and ISR platforms with a common family of software programmable radios for reliable multi-channel voice, data, imagery, and video communications. JTRS radios will be modular, scalable, and network ready. The funding provides such capabilities on various C2 and ISR platforms to include Global Hawk, Predator, AWACS, Rivet Joint, and JSTARS. These platforms will integrate an airborne network capability through JTRS along with selected legacy waveforms as required to meet mission and joint interoperability requirements. The airborne network will provide unprecedented capabilities allowing the platforms to exchange voice and data in a heterogeneous environment, including the service-only, joint, coalition, and allied operations. This capability requires systems engineering efforts to standardize critical network parameters to permit the easy transmission and receipt of time-sensitive data that will give the tactical warrior transformational capabilities. Physical, functional, as well as data integration onto the platforms will be resolved as part of this integration and engineering standardization. Information assurance system engineering will ensure the data exchange capabilities will meet operational commander, theatre, and national requirements in a multi-enclave environment.

C2ISR JTRS program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) System Engineering		6.778	17.430
(U) Planning and Integration		5.932	15.251
(U) Operational and interoperability test planning		4.237	10.894
(U) Total Cost	0.000	16.947	43.575

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Advanced Communication System-Aircraft Procurement, AF PE 0207423F		17.594	0.000	70.297	192.760	236.980	331.025		848.656
(U) Advanced Communication System-Other Procurement, AF PE 0207423F		11.404	39.514	112.760	161.941	168.992	246.383		

(U) D. Acquisition Strategy

All major contracts within this Program Element and progam will be awarded through a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207423F Advanced Communications Systems**

PROJECT NUMBER AND TITLE: **5189 C2ISR JTRS Integration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
System Engineering	TBD	Electronic Systems Center (Various), Hanscom AFB, MA		0.000		2.237	Feb-06	5.752	Nov-06	Continuing	TBD	TBD
System Engineering	MIPR/TBD	ASC/AA (Various), Wright-Patters on AFB, OH				4.541	Feb-06	11.678	Nov-06	Continuing	TBD	TBD
Planning and Integration	TBD	Electronic Systems Center (Various), Hanscom AFB, MA				1.958	Feb-06	5.033	Nov-06	Continuing	TBD	TBD
Planning and Integration	MIPR/TBD	ASC/AA (Various), Wright-Patters on AFB, OH				3.974	Feb-06	10.218	Nov-06	Continuing	TBD	TBD
Operational and Interoperability Test Planning	MIPR/TBD	Test Agency Support (Various)				4.237	Feb-06	10.894	Nov-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		16.947		43.575		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		16.947		43.575		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE 5189 C2ISR JTRS Integration

C2ISR JTRS Schedule

As of: 17 Jan 06

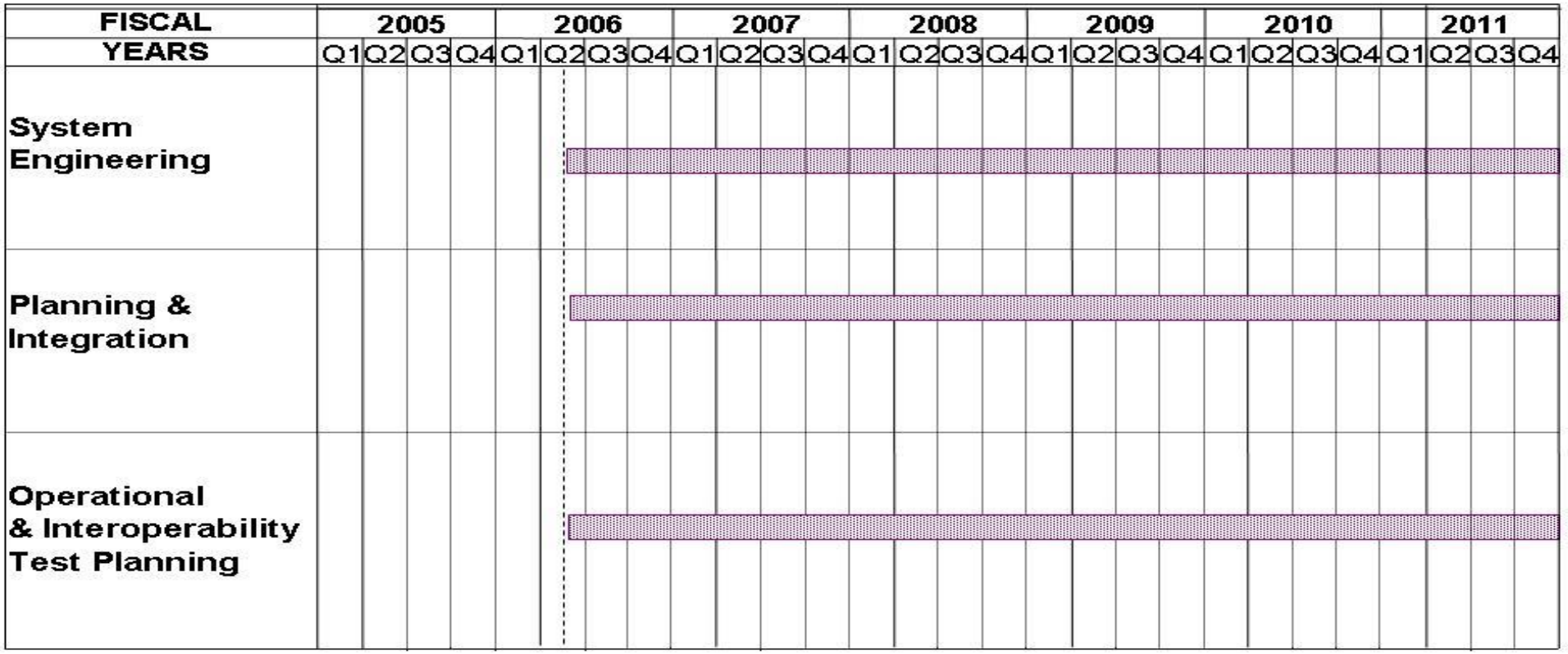

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207423F Advanced Communications Systems	PROJECT NUMBER AND TITLE: 5189 C2ISR JTRS Integration

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) ESC System Engineering Effort		2-4Q	1-4Q
(U) ASC/AA System Engineering Effort		2-4Q	1-4Q
(U) ESC Planning and Integration Contract Award		2-4Q	1-4Q
(U) ASC/AA Planning and Integration Contract Award		2-4Q	1-4Q
(U) Operational & Interoperability Test Planning Efforts		2-4Q	1-4Q

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PE NUMBER: 0207438F
PE TITLE: Theater Battle Management (TBM) C4I

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	34.948	39.787	31.835	31.883	32.685	36.753	37.213	Continuing	TBD
3330	Joint Targeting Toolbox (JTT)	0.000	3.857	0.000	0.000	0.000	0.000	0.000	3.857	3.857
4790	Theater Battle Management Core System (TBMCS)	20.347	22.839	22.067	22.029	22.631	25.149	25.445	Continuing	TBD
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	14.601	13.091	9.768	9.854	10.054	11.604	11.768	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

TBM C4I develops force-level and wing-level command, control, and intelligence systems which utilize DoD's Common Operating Environment (COE). Acquisition of these systems supports the Air Force's expeditionary force concept and will allow the execution of Theater Battle Management (TBM) planning, intelligence, and operational functions of the Joint Forces Air Component Commander (JFACC). Those functions include: generation and dissemination of the air tasking order (ATO) from the Air and Space Operations Center-Weapon System (AOC-WS) down to the wing and unit levels; aerospace defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control. Projects included in this program element are Command & Control Information Processing System (C2IPS), Theater Battle Management Core Systems (TBMCS), and Deliberate and Crisis Action Planning and Execution Segment (DCAPES). The C2IPS project as a whole has been retired by the Air Force but funding for Joint Targeting Toolbox (JTT), which enhances joint targeting functionality, was placed in the retired C2IPS project line.

The TBMCS effort is post Milestone B effort, and is in Budget Activity 7, Operational Systems Development because it incrementally upgrades and develops capabilities for currently operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	36.567	39.222	32.469
(U)	Current PBR/President's Budget	34.948	39.787	31.835
(U)	Total Adjustments	-1.619	0.565	
(U)	Congressional Program Reductions		-0.108	
	Congressional Rescissions	-0.090	-0.577	
	Congressional Increases			
	Reprogrammings	-0.790	1.250	
	SBIR/STTR Transfer	-0.739		

(U) Significant Program Changes:

The C2IPS project as a whole has been retired by the Air Force but FY06 funding for Joint Targeting Toolbox (JTT),

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**

which enhances joint targeting functionality, was placed in the retired C2IPS project line 3330. FY06 is the last year for JTT RDT&E funding.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 3330 Joint Targeting Toolbox (JTT)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3330 Joint Targeting Toolbox (JTT)	0.000	3.857	0.000	0.000	0.000	0.000	0.000	3.857	3.857
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Command & Control Information Processing System (C2IPS) project as a whole has been retired by the Air Force but Joint Targeting Toolbox (JTT) funds were placed in the C2IPS project line for FY06. JTT is a set of automated, interoperable targeting tools which enhace joint targeting functionality at national, theater, and tactical levels. These tools are designed to support each phase of the targeting cycle to allow targeting data to be shared dynamically across the national, theater, and tactical levels.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue development on JTT Release 3.1 which includes, but is not limited to, software development, test and evaluation as well as program management.	0.000	3.857	0.000
(U) Total Cost	0.000	3.857	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) N/A									

(U) D. Acquisition Strategy

JTT development contractor, Northrop Grumman Mission Systems, was awarded a cost plus award fee contract to develop JTT version 3.1 following a full and open competition. JTT's requirements are vetted and approved by the Joint Targeting Automated Steering Group (JTASG).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **3330 Joint Targeting Toolbox (JTT)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Software Development	CPAF/IDIQ	NGMS, Bellvue, NE		0.000		2.563	Jan-06	0.000			2.563	2.563
Subtotal Product Development			0.000	0.000		2.563		0.000		0.000	2.563	2.563
Remarks:												
(U) Support												
Systems Support				0.000		0.000		0.000		0.000	0.000	0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Development Contractor Costs	CPAF/IDIQ	NGMS, Bellvue, NE		0.000		0.541	Jan-06				0.541	0.541
Subtotal Test & Evaluation			0.000	0.000		0.541		0.000		0.000	0.541	0.541
Remarks:												
(U) Management												
Development Contractor	CPAF/IDIQ	NGMS, Bellvue, NE		0.000		0.353	Jan-06				0.353	0.353
Subtotal Management			0.000	0.000		0.353		0.000		0.000	0.353	0.353
Remarks:												
(U) Fielding												
Fielding	CPAF/IDIQ	NGMS, Bellvue, NE		0.000		0.400	Jan-06	0.000			0.400	0.400
Subtotal Fielding			0.000	0.000		0.400		0.000		0.000	0.400	0.400
Remarks:												
(U) Total Cost			0.000	0.000		3.857		0.000		0.000	3.857	3.857

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **3330 Joint Targeting Toolbox (JTT)**

JTT Schedule/PE 27438F
2006/2007

ID	Task Name
1	
2	
3	
4	
5	**Development of JTT Release 3.1**
6	
7	**Testing of JTT Release 3.1**
21	**Fielding of JTT Release 3.1**
22	
23	
24	
37	
54	
55	
56	

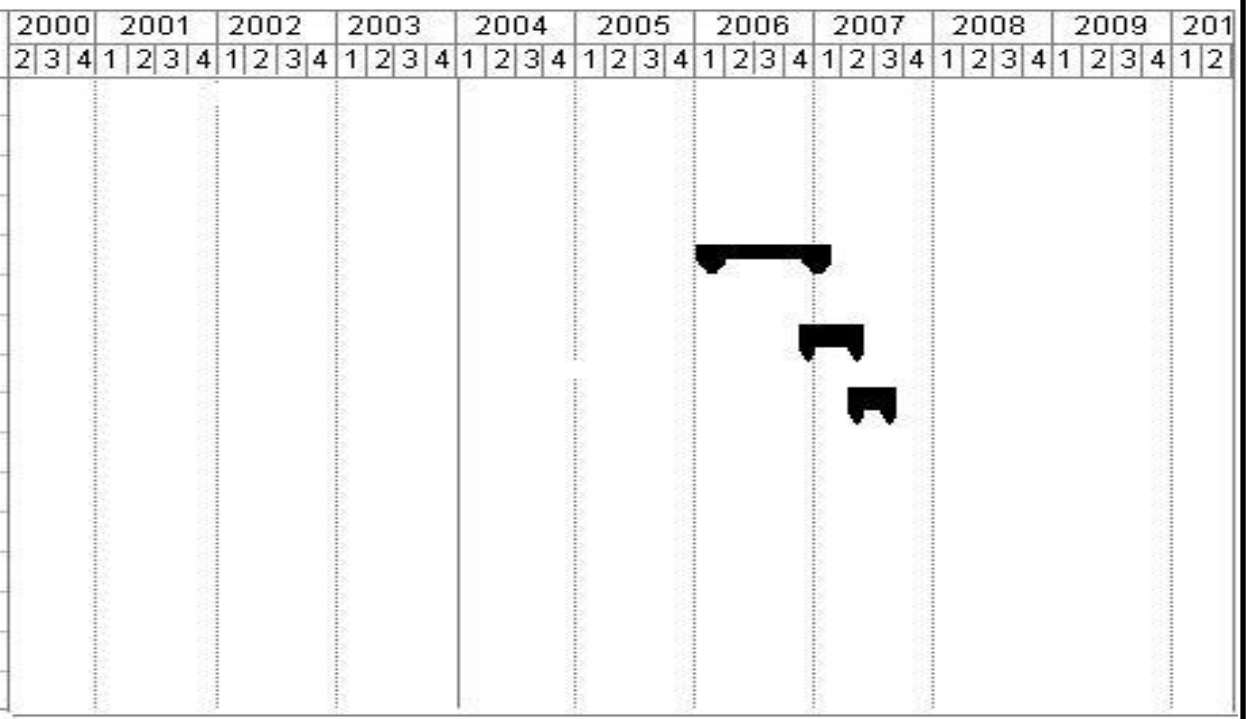

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 3330 Joint Targeting Toolbox (JTT)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Development of Release 3.1		1-4Q	1Q
(U) Testing of Release 3.1		4Q	1-2Q
(U) Fielding of Release 3.1			2-3Q

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4790	Theater Battle Management Core System (TBMCS)	20.347	22.839	22.067	22.029	22.631	25.149	25.445	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Theater Battle Management Core Systems (TBMCS) develops force-level and wing-level command, control, and intelligence systems which utilize DoD's Common Operating Environment (COE) and Joint Technical Architecture (JTA). It links planning, intelligence, and operations functions in an integrated battle management system for planning and executing the air war at the theater level. It also evaluates future aerospace command and control concepts identified through Global War on Terrorism (GWOT) and incorporates new capability via evolutionary acquisition. Functions supported include: generation and dissemination of the air tasking order in support of the Joint Forces Air Component Commander (JFACC) from the Air and Space Operations Center-Weapon System (AOC-WS) down to the wing and unit levels; aerospace defense planning and execution; airspace deconfliction; targeting and weaponeering; and many other applications supporting air operations command and control.

The TBMCS effort is post Milestone B effort, and is in Budget Activity 7, Operational Systems Development because it incrementally upgrades and develops capabilities for currently operational systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue TBMCS baseline Spirals (including Force Level, Unit Ops & Unit Intel Spirals)	6.299	4.674	3.735
(U)	Continue C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test and Field	8.239	12.245	13.134
(U)	TBMCS System engineering and interoperability with US, NATO, or other coalition systems	4.389	4.510	4.058
(U)	TBMCS Test Support for Force Level and Unit Level Spirals	1.420	1.410	1.140
(U)	Total Cost	20.347	22.839	22.067

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF, PE 0207438F, WSC 834520	41.327	41.113	23.586	27.978	27.518	33.671	31.274	Continuing	TBD

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **4790 Theater Battle Management Core System (TBMCS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
TBMCS - Increment/Spiral development	C/CPAF	LM IS&S, Colorado Springs, CO		13.058	Nov-04	11.509	Nov-05	16.072	Nov-06	Continuing	TBD	TBD
Unit Level Intel	MIPR	Various		0.225	Mar-05	0.410	Jan-06	0.797	Jan-07	Continuing	TBD	TBD
TBMCS Spiral 1.1.4 Core	C/CPFF	ISS, Colorado Springs CO				5.000	Dec-05				5.000	TBD
Joint Targeting Toolbox	CPAF/IDIQ	NGMS, Bellevue, NE	3.850	1.000	Jun-05					0.000	4.850	4.850
TBMCS GCCS-I3	MIPR	Northrop Grumman, Reston, VA		0.185	Sep-05					0.000	0.185	TBD
TBMCS IMOM	MIPR	453 AF/EWS, San Antonio TX		0.070	Sep-05					0.000	0.070	TBD
Subtotal Product Development			3.850	14.538		16.919		16.869		Continuing	TBD	TBD
Remarks:												
(U) Support												
TBMCS - System Engineering	C/CPAF	MITRE, Bedford MA		4.389	Nov-04	4.510	Oct-05	4.058	Oct-06	Continuing	TBD	TBD
Subtotal Support			0.000	4.389		4.510		4.058		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
TBMCS Test Support	MIPR	46TS, Eglin AFB, FL		1.420	Feb-05	1.410	Dec-05	1.140	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	1.420		1.410		1.140		Continuing	TBD	TBD
Remarks:												
(U) Management											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			3.850	20.347		22.839		22.067		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE: 4790 Theater Battle Management Core System (TBMCS)

TBMCS Schedule

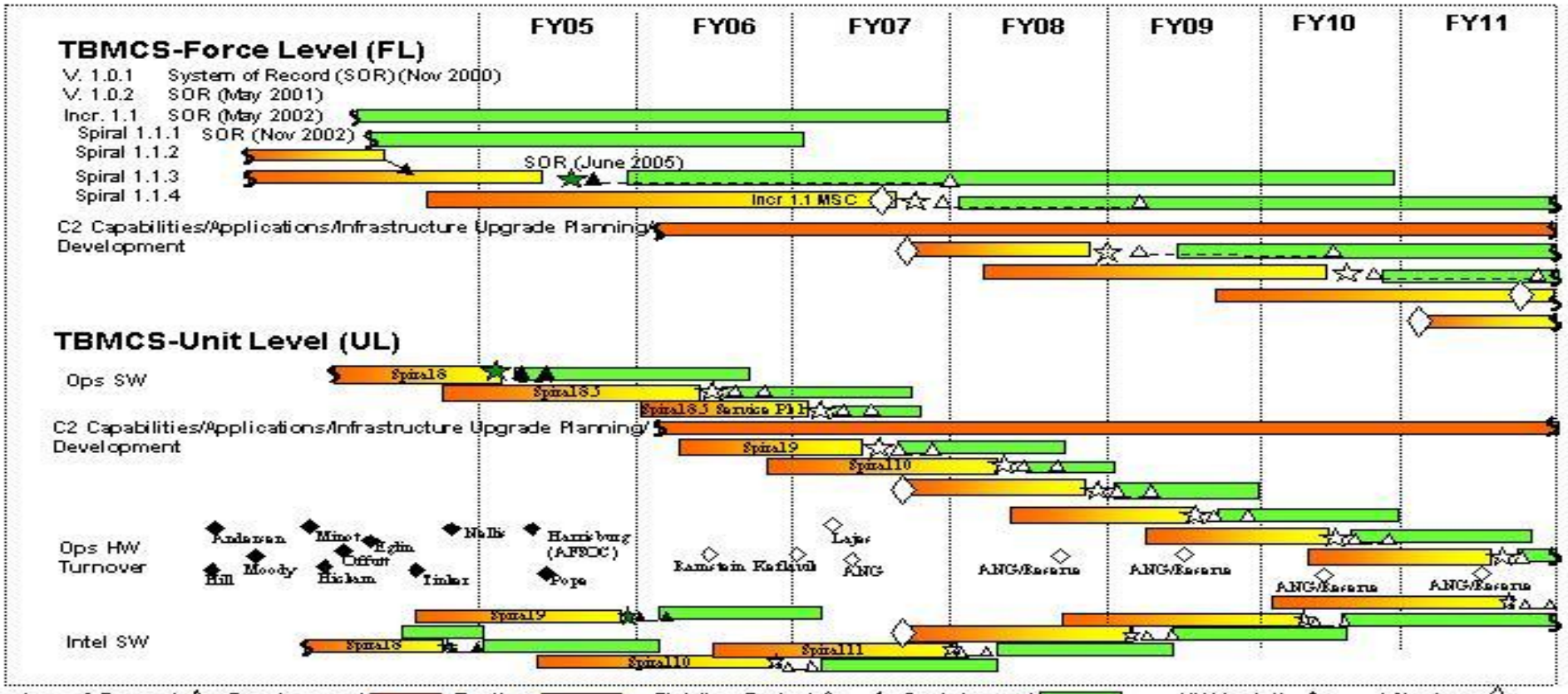

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4790 Theater Battle Management Core System (TBMCS)**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Continuing TBMCS Force Level Software spirals	1-4Q	1-4Q	1-4Q
(U)	Continuing C2 Capabilities/Applications/Infrastructure Upgrade Planning/Development, Test and Field	1-4Q	1-4Q	1-4Q
(U)	Continuing TBMCS Unit Level Ops Spirals	1-4Q	1-4Q	1-4Q
(U)	Continuing TBMCS Unit Level Intel Spirals	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0207438F Theater Battle Management (TBM) C4I	4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4802	Deliberate and Crisis Action Planning and Execution Segment (DCAPES)	14.601	13.091	9.768	9.854	10.054	11.604	11.768	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Deliberate and Crisis Action Planning and Execution Segments (DCAPES) is being developed as the next-generation AF interface to the Joint Operational Planning and Execution System (JOPES). This effort is an evolutionary follow-on to the Contingency Operations Mobility Planning and Execution System (COMPES). DCAPES replaced the operational tasking and priorities functionality of COMPES with modern relational databases, integrated-distributed database, and common and shared data consistent with the Joint vision for integrated Command and Control. DCAPES is intended to be more tightly coupled with the range of planning support systems to provide a more effective crisis action planning capability for a wider range of operational scenarios and will fully support the force provider function of the AF Forces (AFFOR) Commander. DCAPES along with numerous other war planning support legacy systesms are transitioning into a net-centric environment via a War Planning and Execution System (WPES) management construct. DCAPES provides a real time, two way interchange of personnel, manpower, logistics, and operational data between the Air Force and the warfighting Combatant Commanders. It matches people, cargo, and airframes/weapon systems to the Combatant Commander's warfighting requirements.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Programs			
(U) Continue DCAPES Increment 2 contractor development, requirements definition, prototyping, coding, and testing. Consists of Logistics Feasibility Analysis Capability (LOGFAC), Logistics Module/Manpower and Personnel Module-Base (LOGMOD/MANPER B), War and Mobilization Planning (WMP), Enhanced Contingency Rotational AEF Scheduling Tool (ECAST), Web Enablement, and JOPES Modernization Migration	8.546	10.890	7.498
(U) Support	0.921	1.297	1.335
(U) Program Management	4.545	0.333	0.333
(U) Test & Evaluation - Continue Government deployment operational testing and interoperability support	0.589	0.571	0.602
(U) Total Cost	14.601	13.091	9.768

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Operations and Maintenance	3.015	3.234	3.164	4.964	4.903	4.904	5.065	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) D. Acquisition Strategy

The program uses an evolutionary acquisition strategy with incremental spiral development with multiple software releases to accommodate refinement and prioritization of user requirements and improve adaptability with commercial technology.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207438F Theater Battle Management (TBM) C4I**

PROJECT NUMBER AND TITLE: **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CSC	CPFF	CSC, Falls Church, VA	22.123	8.546	Feb-05	10.890	Oct-05			0.000	41.559	TBD
TBD (DCAPES Increment 2b)	TBD	TBD						7.498	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			22.123	8.546		10.890		7.498		Continuing	TBD	TBD
Remarks:												
(U) Support												
ITSP Contract Logistic Functional Support	T&M	AC Technologies, Fairfax, VA	0.120	0.278	Jan-05	0.372	Jan-06	0.372	Jan-07	Continuing	TBD	TBD
Contract Engineering Support	T&M	DSD, Sudbury, MD		0.127	Mar-05	0.509	Mar-06	0.509	Mar-07	Continuing	TBD	TBD
FFRDC	CPAF	MITRE, Hanscom AFB, MA	2.700	0.348	Oct-04	0.360	Oct-05	0.398	Oct-06	Continuing	TBD	TBD
Other	Various	Various	0.669	0.168	Jan-05	0.056	Jan-06	0.056	Jan-07	Continuing	TBD	TBD
Subtotal Support			3.489	0.921		1.297		1.335		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46 Test Sqdn/JITC	MIPR	Eglin AFB, FL/Ft Huachuca, AZ	3.452	0.589	Oct-04	0.571	Oct-05	0.602	Oct-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			3.452	0.589		0.571		0.602		Continuing	TBD	TBD
Remarks:												
(U) Management												
Prorgram Management Office Support	Various	Various	13.727	4.545	Oct-04	0.333	Oct-05	0.333	Oct-06	Continuing	TBD	TBD
Subtotal Management			13.727	4.545		0.333		0.333		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			42.791	14.601		13.091		9.768		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207438F Theater Battle Management (TBM) C4I	PROJECT NUMBER AND TITLE 4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)

DCAPES

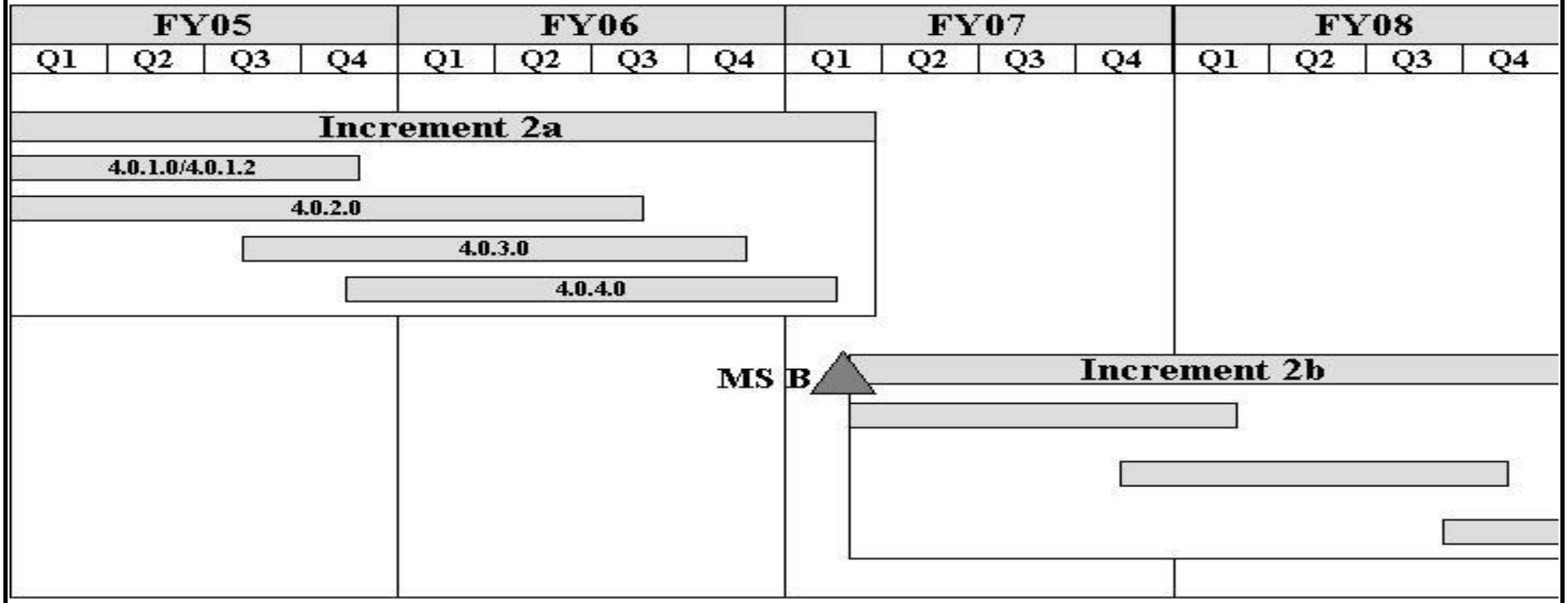

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207438F Theater Battle Management (TBM) C4I**	PROJECT NUMBER AND TITLE **4802 Deliberate and Crisis Action Planning and Execution Segment (DCAPES)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Increment 2a 4.0.1.2 Release Development	1-4Q		
(U) Increment 2a 4.0.1.2 Release Fielding	4Q		
(U) Increment 2a 4.0.2.0 Release Development	1-4Q	1-2Q	
(U) Increment 2a 4.0.2.0 Release Fielding		3Q	
(U) Increment 2a 4.0.3.0 Release Development	3-4Q	1-4Q	
(U) Increment 2a 4.0.3.0 Release Fielding		4Q	
(U) Increment 2a 4.0.4.0 Release Development	4Q	1-4Q	1Q
(U) Increment 2a 4.0.4.0 Release Fielding			1Q
(U) Increment 2b Milestone B			1Q
(U) Increment 2b TBD Release Development			1-4Q

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PE NUMBER: 0207445F
PE TITLE: FIGHTER TACTICAL DATA LINK

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	35.668	119.965	113.388	81.084	38.626	34.714	0.000	135.373	TBD
5043 Fighter Tactical Data Link	35.668	119.965	113.388	81.084	38.626	34.714	0.000	135.373	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capability for all Air Force fighter platforms to include, but not limited to, A/OA-10, F-15A-E, F-16 Blocks 30/40/50, F/A-22, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Programs (OFP) upgrade due to TDL integration and supports data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	50.093	122.160	84.513
(U)	Current PBR/President's Budget	35.668	119.965	113.388
(U)	Total Adjustments	-14.425	-2.195	
(U)	Congressional Program Reductions		-0.455	
	Congressional Rescissions	-0.509	-1.740	
	Congressional Increases			
	Reprogrammings	-13.916		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY07, additional funds were programmed to develop a Link 16 transmit capability for the F/A-22 compatible with the Integrated Avionics Architecture.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE: 5043 Fighter Tactical Data Link

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5043	Fighter Tactical Data Link	35.668	119.965	113.388	81.084	38.626	34.714	0.000	135.373	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant; secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link 16, Link 11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This effort provides for common development, integration, and interoperability of tactical data link aircraft, network, and weapon capability for all Air Force fighter platforms to include, but not limited to, A/OA-10, F-15A-E, F-16 Blocks 30/40/50, F/A-22, and F-35 aircraft. Keeps all fighter platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. TDLs increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Programs (OFP) upgrade due to TDL integration and supports data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Fighter Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Programs			
(U)	Develop and incorporate Tactical Data Link technologies	3.000	3.000	3.000
(U)	Develop and integrate Link 16 capability across fighter platforms	15.168	60.351	55.953
(U)	Link 16 integration into F/A-22 avionics suite	10.600	26.483	27.541
(U)	Development of A/OA-10 EPLRS capability	3.900	25.131	17.724
(U)	Provide Link 16 system engineering, testing, and technical support	3.000	5.000	3.670
(U)	F/A-22 and A-10 Early Interoperability Test			5.500

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE 5043 Fighter Tactical Data Link

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

	FY 2005	FY 2006	FY 2007
(U) Total Cost	35.668	119.965	113.388

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) 0207434F (Link 16 Sup & Sus)	120.633	161.345	172.625	142.449	152.320	154.994	156.665	Continuing	TBD
(U) 0207446F (Bomber TDL)	76.568	142.800	168.168	94.889	0.000	0.000	0.000		482.425
(U) 0207448F (C2ISR TDL)	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
(U) 0401839F (Airlift TDL)	0.000	0.000	32.099	0.000	0.000	0.000	0.000		32.099
(U) Other APPN									
(U) Procurement (3010)									
(U) 0207423F (JTRS I&I)	0.000	0.000	0.000	19.472	26.521	66.948	42.346	Continuing	TBD
(U) 0207434F (Link 16 Sup &Sus)	2.046	2.996	2.783	0.000	9.598	9.846	9.962	Continuing	TBD
(U) 0207445F (Fighter TDL)	95.934	89.222	61.623	12.688	0.000	0.000	0.000		259.467
(U) 0207446F (Bomber TDL)	44.245	21.940	11.818	4.456	0.000	0.000	0.000		82.459
(U) 0401839F (Airlift TDL)	0.000	24.118	11.539	14.616	12.603	26.263	26.591	Continuing	TBD
(U) O&M (3400)									
(U) 0207434F (Link 16 Sup & Sus 3400)	9.549	21.112	10.156	12.279	16.177	16.629	16.975	16.975	TBD
(U) 0401839F (Airlift TDL)	0.596	2.731	5.708	11.783	16.499	17.178	17.721	Continuing	TBD
(U) Other Procurement (3080)									
(U) 0207434F (Link 16 Sup & Sus)	26.231	42.462	30.740	12.777	8.435	8.508	8.612	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force Tactical Data Links System Program Office (SPO) provides for common development of integration and interoperability across all Air Force platforms and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

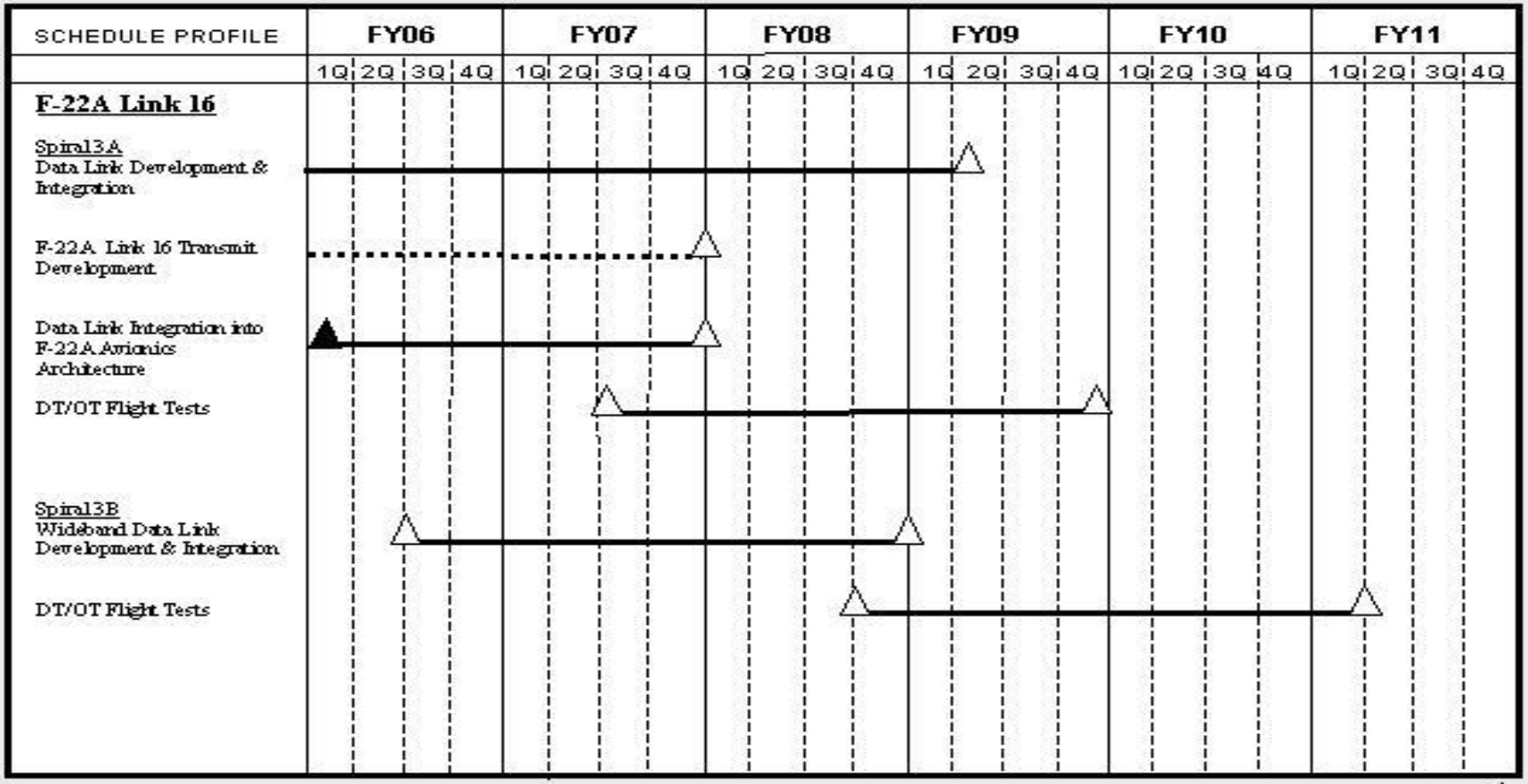
PE NUMBER AND TITLE: **0207445F FIGHTER TACTICAL DATA LINK**

PROJECT NUMBER AND TITLE: **5043 Fighter Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Link 16 EMD Terminal Purchases	MIPR to Navy	BAe Systems, Rockwell Collins DLS, Cedar Rapids, IA; Via-Sat, Carlsbad, CA managed by SPAWAR, San Diego CA									0.000	TBD
Link 16 Integration into F/A-22 avionics	MIPR to Navy	SPAWAR, San Diego, CA				26.483	Nov-05	27.541	Nov-06	Continuing	TBD	TBD
Fighter Link 16 Development Contractors **	MIPR to AFMC	Various contractors managed by ASC, WPAFB OH		32.668	Jan-05	88.482	Jan-06	76.677	Jan-07	Continuing	TBD	TBD
MITRE	SS/FFP	MITRE, Bedford MA		1.700	Dec-04	2.660	Dec-05	2.000	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	34.368		117.625		106.218		Continuing	TBD	TBD
Remarks: **MIPR funding to Fighter Platform System Program Offices for scheduled contract awards and development efforts.												
(U) Test & Evaluation												
46th Development Test Facility	MIPR to AFMC	46th Development Test Facility, Eglin AFB FL		0.000		0.000		5.500	Apr-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		5.500		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Office and Contractor Support	C/FFP	Various		1.300	Dec-04	2.340	Dec-05	1.670	Dec-06	Continuing	TBD	TBD
Subtotal Management			0.000	1.300		2.340		1.670		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	35.668		119.965		113.388		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207445F FIGHTER TACTICAL DATA LINK	PROJECT NUMBER AND TITLE: 5043 Fighter Tactical Data Link

F-22A Data Links - Long-Term Schedule



As of 12 January 06[1]

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207445F FIGHTER TACTICAL DATA LINK**	PROJECT NUMBER AND TITLE **5043 Fighter Tactical Data Link**

A/O-10 16- Long Term Schedule

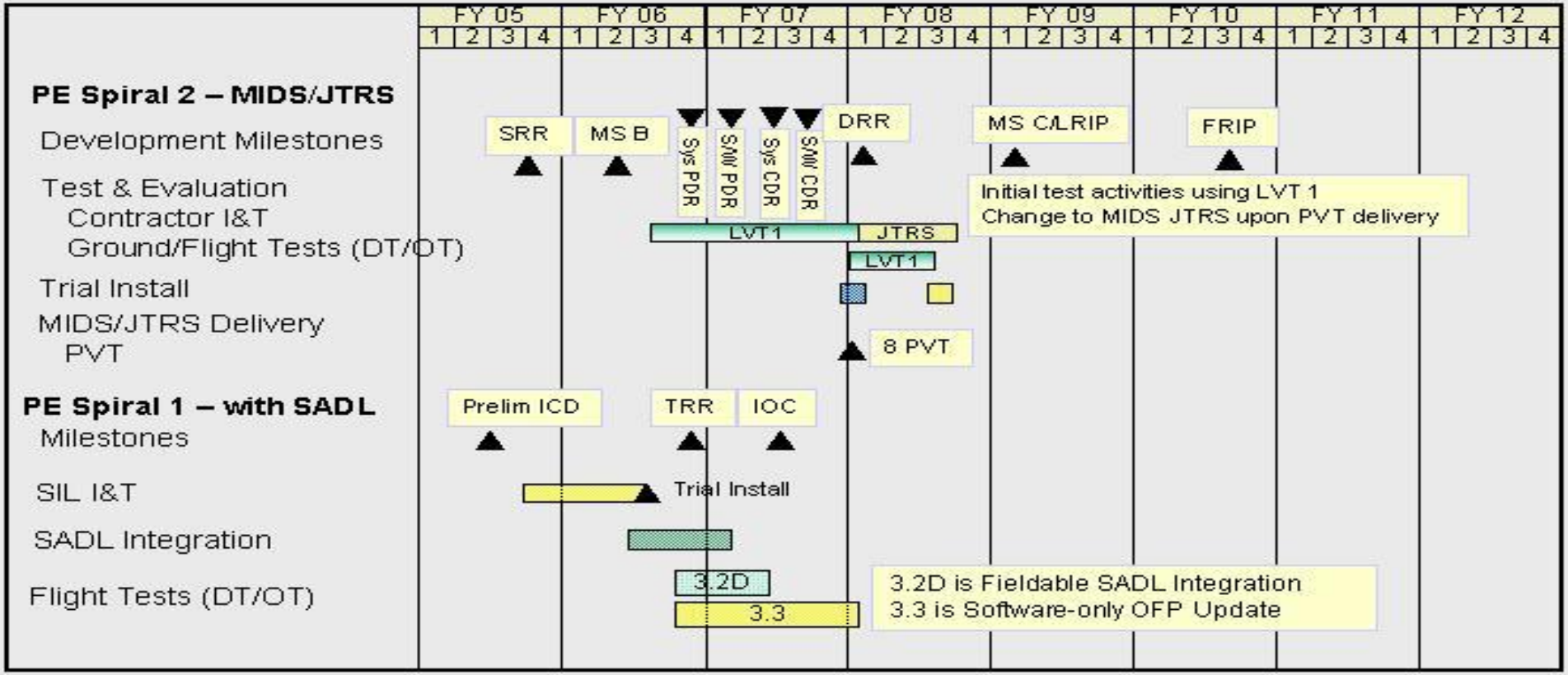


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207445F FIGHTER TACTICAL DATA LINK**	PROJECT NUMBER AND TITLE **5043 Fighter Tactical Data Link**

(U)	Schedule Profile	FY 2005	FY 2006	FY 2007
(U)	A-10 Spiral 2 SRR	3Q		
(U)	A-10 Spiral 2 MS B		2Q	
(U)	A-10 Spiral 2 Development		3-4Q	1-4Q
(U)	A-10 Spiral 2 Ground/Flight Tests		3-4Q	1-4Q
(U)	MIDS-J PVT Deliveries			4Q
(U)	A-10 Spiral 2 Trail Install			4Q
(U)	A-10 Prelim Spiral 1 ICD	3Q		
(U)	A-10 Spiral 1 EPLRS Software-in-the-Loop Testing	4Q	1-3Q	
(U)	A-10 Spiral 1 EPLRS Radio Integration		3-4Q	1Q
(U)	A-10 Spiral 1 Test Readiness Review		4Q	
(U)	A-10 Spiral 1 Flight Tests		4Q	1-4Q
(U)	F-22 Spiral 3A Data Link Development and Integration	1-4Q	1-4Q	1-4Q
(U)	F-22 Spiral 3A Link 16 Transmit Development	1-4Q	1-4Q	1-4Q
(U)	F-22 Spiral 3A Data Link Integration into Avionics Architecture		1-4Q	1-4Q
(U)	F-22 Spiral 3A DT/OT Flight Tests			3-4Q
(U)	F-22 Spiral 3B Wideband Data Link Development and Integration		3-4Q	1-4Q

PE NUMBER: 0207446F
PE TITLE: Bomber Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	76.568	142.800	168.168	94.889	0.000	0.000	0.000	Continuing	TBD
5041 Bomber Tactical Data Link	76.568	142.800	168.168	94.889	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This effort provides for common development, integration and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. It also expands Link 16 LOS and BLOS datalink capabilities. TDLs will increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. The BLOS datalink capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Programs (OFP) upgrade due to TDL integration and supports data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207446F Bomber Tactical Data Link**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	78.721	144.863	136.624
(U)	Current PBR/President's Budget	76.568	142.800	168.168
(U)	Total Adjustments	-2.153	-2.063	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-1.248	-2.063	
	Congressional Increases			
	Reprogrammings	-0.905		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY07, additional funds were programmed to align B-1 TDL Program development with B-1 flight test schedule to avoid multi-platform configurations and retrofit costs.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link

PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5041 Bomber Tactical Data Link	76.568	142.800	168.168	94.889	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing Line of Sight (LOS) and Beyond Line of Sight (BLOS) intra- and inter-flight communications. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This effort provides for common development, integration and interoperability of tactical data link aircraft, network, and weapon capabilities for all Air Force bomber platforms to include, but not limited to B-1B, B-2, and B-52 aircraft. Keeps all bomber platforms and datalinked weapons current, interoperable in the network, and compatible with the USAF Global Strike Task Force (GSTF) concept beyond 2020. It also expands Link 16 LOS and BLOS datalink capabilities. TDLs will increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. The BLOS datalink capability works with Link 16 to extend the range of local Link 16 networks to other areas/theaters. TDL efforts include incorporating changes and additions to the TDL message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs); assisting with AF and Joint interoperability certification testing; future development, integration, and verification of Operational Flight Programs (OFP) upgrade due to TDL integration and supports data gathering processes; studying and incorporating data link technologies to ensure effectiveness and efficiency of the Global Strike CONOPS; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

Bomber Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Contract for LOS Link 16 terminals and BLOS radios for development labs and aircraft.	2.000	1.440	1.440
(U) Provide Link 16 system engineering, testing, and technical support	11.100	7.000	4.000
(U) B-1 FIDL Pre-System Development and Demonstration (SDD)	3.500		
(U) B-1 FIDL System Development and Demonstration (SDD)	46.886	65.611	63.320
(U) B-52 IDL Pre-System Development and Demonstration (SDD)	13.082		
(U) B-52 IDL System Development and Demonstration (SDD)		68.749	99.408
(U) Total Cost	76.568	142.800	168.168

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE 5041 Bomber Tactical Data Link

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	0207434F (Link 16 Sup & Sus)	120.633	161.345	172.625	142.449	152.320	154.994	156.665	Continuing	TBD
(U)	0207445F (Fighter TDL)	35.668	119.965	113.388	81.084	38.626	34.714	0.000		343.735
(U)	0207448F (C2ISR TDL)	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
(U)	0401839F (Airlift TDL)	0.000	0.000	32.099	0.000	0.000	0.000	0.000		31.466
(U)	Other APPN									
(U)	Procurement (3010)									
(U)	0207423F (JTRS I&I)	0.000	0.000	0.000	19.472	26.521	66.948	42.346		
(U)	0207434F (Link 16 Sup & Sus)	2.046	2.996	2.783	0.000	9.598	9.846	9.962	Continuing	TBD
(U)	0207445F (Fighter TDL)	95.934	89.222	61.623	12.688	0.000	0.000	0.000		419.662
(U)	0207446F (Bomber TDL)	44.245	21.940	11.818	4.456	0.000	0.000	0.000		82.459
(U)	0401839F (Airlift TDL)	0.000	24.118	11.539	14.616	12.603	26.263	26.591	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	9.549	21.112	10.156	12.279	16.177	16.629	16.975	Continuing	TBD
(U)	0401839F (Airlift TDL)	0.596	2.731	5.708	11.783	16.499	17.178	17.271	Continuing	TBD
(U)	Other Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	26.231	42.462	30.740	12.777	8.435	8.508	8.612	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force Tactical Data Links System Program Office (SPO) provides for common development of integration and interoperability across all Air Force platforms and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

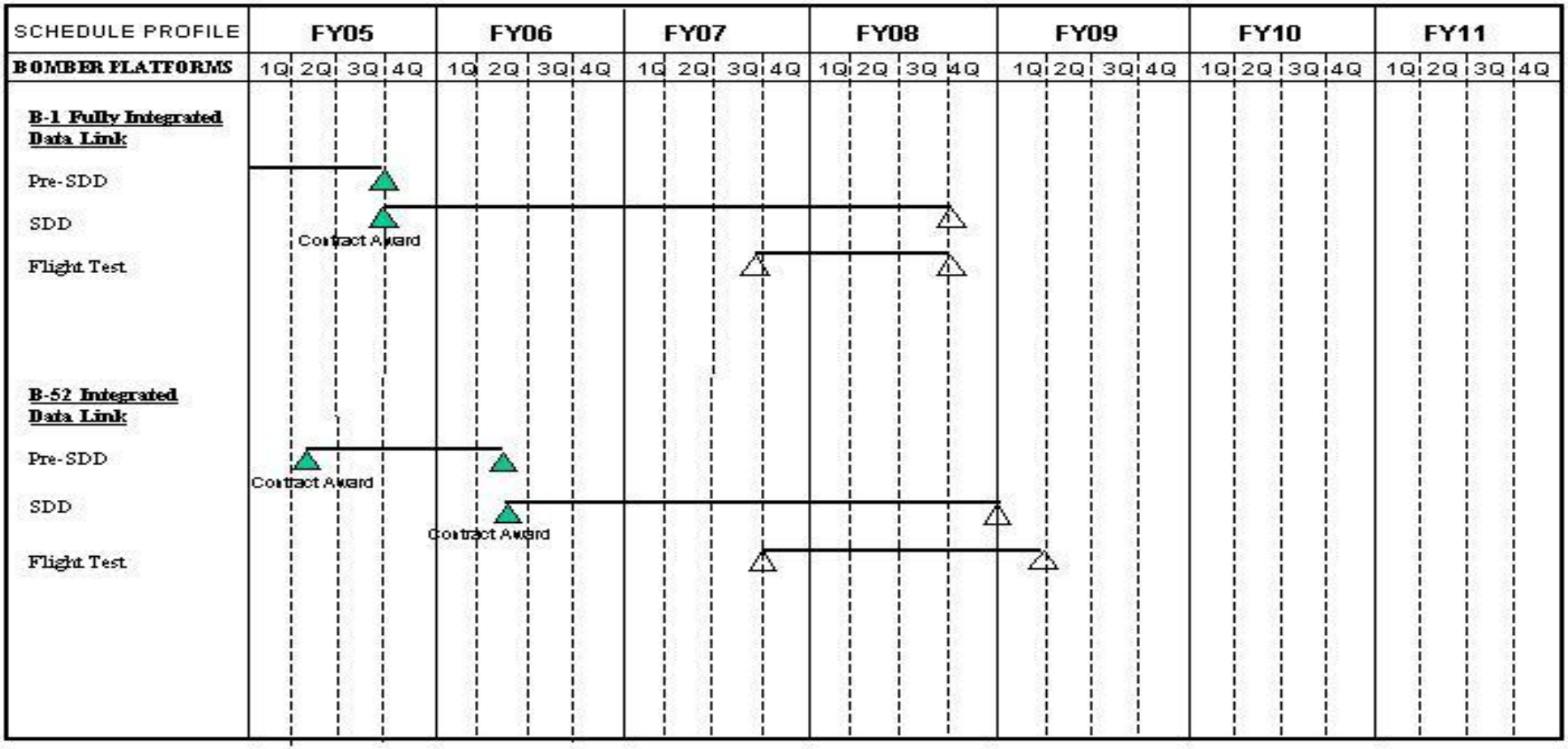
PE NUMBER AND TITLE: **0207446F Bomber Tactical Data Link**

PROJECT NUMBER AND TITLE: **5041 Bomber Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Link 16 Terminal EMD Terminal Purchases	MIPR	SPAWAR, San Diego CA	1.800							0.000	1.800	1.800
*B-1 JRE DEMO	CPFF	Northrop Grumman	0.600							0.000	0.600	0.600
*B-1/B-52 BLOS DEMO for JEFX		Northrop Grumman	3.600							0.000	3.600	3.600
*B-1 FIDL Pre-System Development and Demonstration (SDD)	SS/CPFF	Boeing Co. Long Beach CA	5.600	3.583	Oct-04					0.000	9.183	9.183
*B-1 FIDL System Development and Demonstration (SDD)	TBD	TBD		58.403	Apr-05	74.051	Apr-06	61.780	Apr-07	0.000	194.234	194.234
*B-52 Pre-System Development and Demonstration (SDD)	TBD	TBD		13.082	Feb-05						13.082	13.082
*B-52 System Development and Demonstration (SDD)	TBD	TBD				67.209	Feb-06	104.848	Feb-07	Continuing	TBD	TBD
MITRE	SS/FFP	MITRE, Bedford MA	0.200	0.200	Dec-04	0.200	Dec-05	0.200	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			11.800	75.268		141.460		166.828		Continuing	TBD	TBD
Remarks: *MIPR funding to Bomber Platform System Program Offices for scheduled contract awards and development efforts.												
(U) Management												
Program Office and Contractor Support	C/FFP	Various	0.249	1.300	Dec-04	1.340	Dec-05	1.340	Dec-06	Continuing	TBD	TBD
Subtotal Management			0.249	1.300		1.340		1.340		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			12.049	76.568		142.800		168.168		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207446F Bomber Tactical Data Link	PROJECT NUMBER AND TITLE: 5041 Bomber Tactical Data Link

BOMBER TACTICAL DATA LINK SCHEDULE



As of 13 January 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207446F Bomber Tactical Data Link**	PROJECT NUMBER AND TITLE **5041 Bomber Tactical Data Link**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) B-1 Fully Integrated Data Link Pre-SDD	1-3Q		
(U) B-1 Fully Integrated Data Link Contract Award (SDD)	3Q		
(U) B-1 Fully Integrated Data Link SDD	3-4Q	1-4Q	1-4Q
(U) B-1 Fully Integrated Data Link (DT&E, Flight Test)			4Q
(U) B-52 Integrated Data Link Contract Award (Pre-SDD)	2Q		
(U) B-52 Integrated Data Link Pre-SDD	2-4Q	1-2Q	
(U) B-52 Integrated Data Link Contract Award (SDD)		2Q	
(U) B-52 Integrated Data Link SDD		2-4Q	1-4Q
(U) B-52 Integrated Data Link FlightTest			4Q

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PE NUMBER: 0207448F
PE TITLE: C2ISR Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
5045 C2ISR Tactical Data Link	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to, Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Rivet Joint, Combat Sent, Cobra Ball, E-10, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs will increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	25.150	14.838	4.479
(U)	Current PBR/President's Budget	24.420	14.627	4.338
(U)	Total Adjustments	-0.730	-0.211	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.730	-0.211	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Beginning in FY06, funds were programmed to develop AWACS Block 30/35 TDL upgrades to address capability shortfalls in theater command and control and battle management identified during combat, which enables an enhanced TDL capability until AWACS Block 40/45 Final Operational Capability.

In FY06-07, funding was added to provide AWACS Block 40/45 Data Link Infrastructure (DLI) and Combat Identification (CID) capabilities. DLI and CID address recent combat lessons learned related to rapid exchange of fleeting target information, inter-service combat identification, and providing weapons-quality coordinates.

C2ISR Tactical Data Link baseline funding decreases across FY06-07 due to (1) JSTARS Attack Support Upgrade (ASU) completion in FY06, and (2) AWACS Block 40/45 Data Link Infrastructure completion in FY07.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link

PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5045 C2ISR Tactical Data Link	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data link (SADL), Variable Message Format (VMF).

This effort provides for common development, upgrade, integration, and interoperability of tactical data link capability to ground and air C2 platforms including, but not limited to, Airborne Warning and Control System (AWACS), Joint Surveillance Target Attack Radar System (JSTARS), the Air and Space Operations Center (AOC), Global Hawk, Rivet Joint, Combat Sent, Cobra Ball, E-10, and the North Atlantic Treaty Organization (NATO) Iceland Air Defense System (IADS). TDLs provide a jam-resistant, secure digital data transfer network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs will increase mission effectiveness, provide situational awareness, and provide positive identification of aircraft in the network, correlate on- and off-board sensor data sharing, target, and threat information, and provide the datalink to accomplish time critical targeting and other mission update functions. TDL efforts include incorporating changes and additions to the Link-16 message standard (MIL-STD-6016C) and applicable Interface Change Proposals (ICPs), assisting with AF and Joint interoperability certification testing with the Air Force Command and Control Intelligence Surveillance and Reconnaissance Center (AFC2ISRC) and Joint Interoperability Test Center (JITC); future development, integration, and verification of Operational Flight Program (OFP) upgrades due to TDL integration and supporting data gathering processes; and incorporating Interoperable Systems Management and Requirements Transformation (iSMART), a process which enables network centric interoperability assessments to be made more quickly and effectively.

C2ISR Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) AWACS Blocks 40/45 Upgrades	1.986		
(U) Support system integration for JSTARS Link 16 Attack Support Upgrade (ASU) capability	22.077	7.011	
(U) AWACS 40/45 Data Link Infrastructure (DLI)		2.120	0.602
(U) AWACS 40/45 Combat ID (CID)		3.496	1.741
(U) AWACS Block 30/35		2.000	1.995
(U) C2ISR Integration	0.357		
(U) Total Cost	24.420	14.627	4.338

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE 5045 C2ISR Tactical Data Link

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	0207434F (Link 16 Sup & Sus)	120.633	161.345	172.625	142.449	152.320	154.994	156.665	Continuing	TBD
(U)	0207445F (Fighter TDL)	35.668	119.965	113.388	81.084	38.626	34.714	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	76.568	142.800	168.168	94.889	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift/Other TDL)	0.000	0.000	32.099	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Aircraft Procurement, AF (3010)									
(U)	0207423F (JTRS I&I)	0.000	0.000	0.000	19.472	26.521	66.948	42.346		
(U)	0207434F (Link 16 Sup & Sus)	2.046	2.996	2.783	0.000	9.598	9.846	9.962	Continuing	TBD
(U)	0207445F (Fighter TDL)	95.934	89.222	61.623	12.688	0.000	0.000	0.000	Continuing	TBD
(U)	0207446F (Bomber TDL)	44.245	21.940	11.818	4.456	0.000	0.000	0.000	Continuing	TBD
(U)	0401839F (Airlift TDL)	0.000	24.118	11.539	14.616	12.603	26.263	26.591	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	9.549	21.112	10.156	12.279	16.177	16.629	16.975	Continuing	TBD
(U)	0401839F (Airlift 3400)	0.596	2.731	5.708	11.783	16.499	17.178	17.271	Continuing	TBD
(U)	Other Procurement, AF (3080)									
(U)	0207434F (Link 16 Sup & Sus)	26.231	42.462	30.740	12.777	8.435	8.508	8.612	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force Tactical Data Links Network (TDN) System Program Office (SPO) provides for common development of integration and interoperability across all Air Force platforms and ensures that Link 16 is procured and maintained as a joint, end-to-end, command and control system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

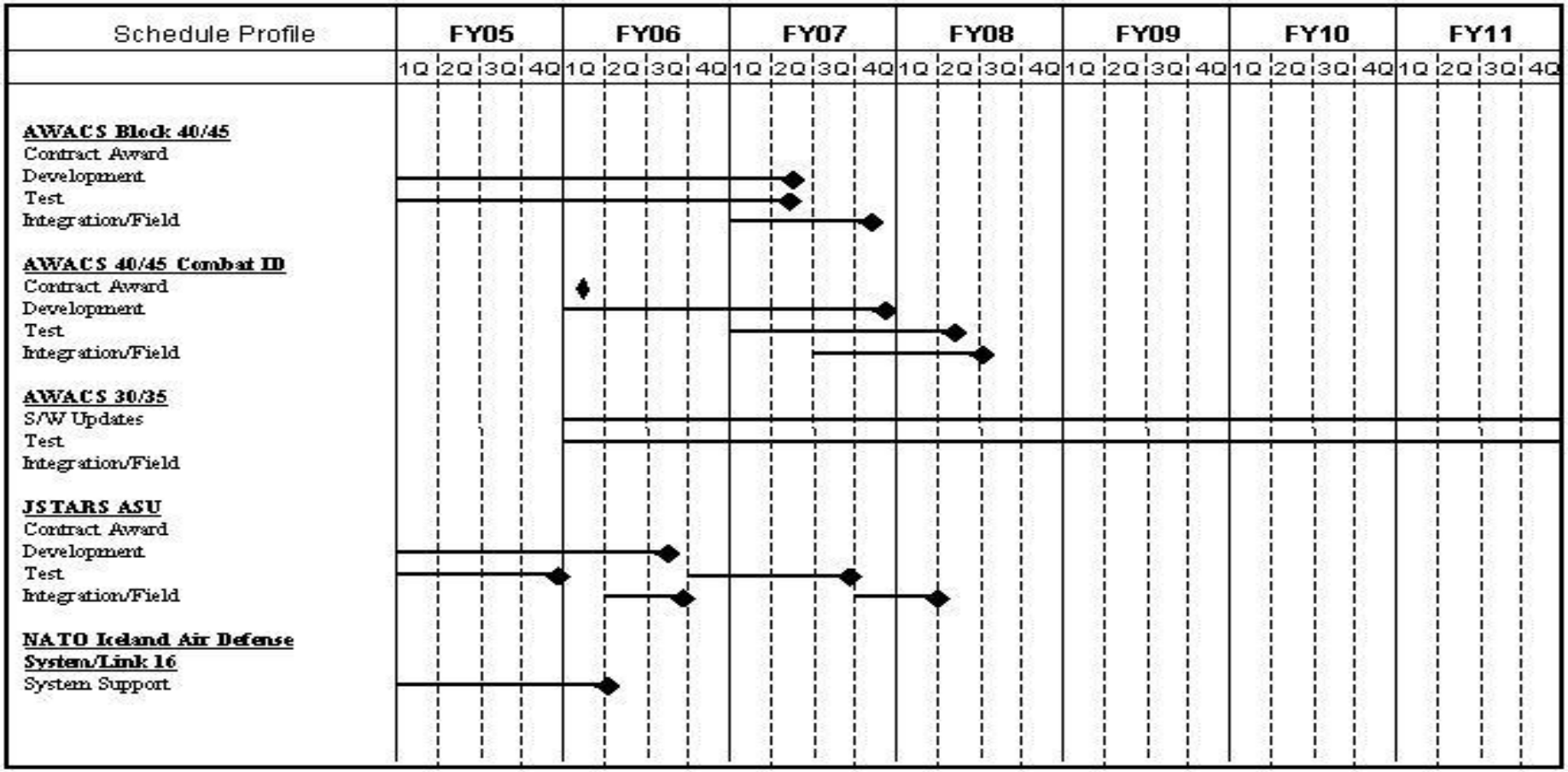
PE NUMBER AND TITLE: **0207448F C2ISR Tactical Data Link**

PROJECT NUMBER AND TITLE: **5045 C2ISR Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Joint STARS	SS/CPAF	Northrop Grumman, Melbourne FL		22.077	Nov-04	7.011	Nov-05				29.088	48.504
AWACS	SS/FPIF/CPAF	Boeing, Seattle WA		1.986	Dec-04	7.616	Dec-05	4.338	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	24.063		14.627		4.338		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks: FY05-07 test requirements are rolled to the platform level (i.e. E-3 AWACS, E-8 Joint STARS)												
(U) Management												
Program Office and Contractor Support	C/FFP	Various		0.357	Dec-04					Continuing	TBD	TBD
Subtotal Management			0.000	0.357		0.000		0.000		Continuing	TBD	TBD
Remarks: Joint STARS and TDL Program Office via Memorandum of Agreement (MOA) transfer on/off year support costs. The Joint STARS Program picks up responsibility in FY06-07.												
(U) Total Cost			0.000	24.420		14.627		4.338		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

PE27448F Schedule
C2ISR Tactical Data Link



As of 13 January 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207448F C2ISR Tactical Data Link	PROJECT NUMBER AND TITLE: 5045 C2ISR Tactical Data Link

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AWACS Block 40/45 Initiative Development	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Test	1-4Q	1-4Q	1-2Q
(U) AWACS Block 40/45 Initiative Integration/Field			1-3Q
(U) AWACS Block 40/45 Combat ID Initiative Contract Award		1Q	
(U) AWACS Block 40/45 Combat ID Initiative Development		1-4Q	1-4Q
(U) AWACS Block 40/45 Combat ID Initiative Test			1-4Q
(U) AWACS Block 40/45 Combat ID Initiative Integration/Field			3-4Q
(U) AWACS Block 30/35 Software Updates/Development		1-4Q	1-4Q
(U) AWACS Block 30/35 Test		1-4Q	1-4Q
(U) JSTARS ASU Development	1-4Q	1-3Q	
(U) JSTARS ASU Test	1-4Q	4Q	1-3Q
(U) JSTARS ASU Integration /Field		2-3Q	4Q
(U) C2ISR NATO IADS Link 16 Integration	1-4Q	1Q	

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PE NUMBER: 0207449F
PE TITLE: C2 Constellation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	38.288	40.334	44.027	56.663	56.317	56.976	57.313	Continuing	TBD
5078	Horizontal Integration	10.802	10.362	11.614	23.633	22.516	22.589	22.526	Continuing	TBD
5140	Joint Expeditionary Force Experiments	27.486	29.972	32.413	33.030	33.801	34.387	34.787	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Project 5078, Horizontal Integration (HI), is responsible for delivering integrated capabilities within the Command and Control, Information, Surveillance and Reconnaissance (C2ISR) warfighting domain of the Air Force enterprise. The Command and Control Constellation (C2C) identifies, prioritizes, develops and delivers Horizontal Integration Solutions (HISs) that support joint operations to the Warfighter. The C2C vision statement provides doctrine, organization, training, materiel, leadership/education, personnel and facilities (DOTMLPF) solutions to facilitate the horizontal flow of Warfighter Domain C2ISR information. Enterprise integration activities are performed through an annual capability-based requirements review process to surface and prioritize by criticality C2C shortfalls. Engineering analyses of the C2C operational/systems/technical architecture identify specifications, standards and solutions for each operational need becoming the foundation for data calls to solicit both material and non-material solutions. The C2C applies rapidly developing technologies to promote common standards, data sharing and information services across Air Force and Joint warfighter applications. C2C Program funds are then applied where appropriate to develop and deliver horizontal integration capabilities to the Warfighter.

Project 5140, Joint Expeditionary Force Experiments (JEFX), are large-scale warfighter experiments that address emerging operational challenges and are part of the total Air Force (AF) experimentation effort. They combine live-fly forces and simulations into an operationally representative warfighter environment. These experiments provide a vehicle for experimentation with operational concepts and attendant new technologies to evolve and transform our aerospace forces and capabilities for the 21st century. They are part of a broader effort to implement the Joint Vision 2020, exploit the Revolution in Military Affairs, demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation.

This program is in Budget Activity 7- Operational System Development because it provides a vehicle for developers, testers and warfighters to experiment, analyze,and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	44.035	41.071	45.409
(U)	Current PBR/President's Budget	38.288	40.334	44.027
(U)	Total Adjustments	-5.747	-0.737	
(U)	Congressional Program Reductions		-0.151	
	Congressional Rescissions	-0.561	-0.586	
	Congressional Increases			
	Reprogrammings	-4.086		
	SBIR/STTR Transfer	-1.100		

(U) Significant Program Changes:

The changes between the previous and current FY06 and FY07 President Budget are due to Congressional Reductions/Rescissions.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5078 Horizontal Integration	10.802	10.362	11.614	23.633	22.516	22.589	22.526	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Project 5078, Horizontal Integration, is established to develop an integrated capability to support network centric operations. Project 5078 defines the Command and Control Constellation (C2C) through six thrust areas: first, Operational Requirements and Planning documentation will be created/updated; second, Systems Engineering Policy & Guidance, Education and Architecture will be developed to further refine the C2C and provide baseline data for more detailed analysis; third, operators and systems engineers will perform analyses to validate and prioritize the major issues facing the C2C and develop net-centric roadmaps; fourth, various Modeling & Simulation and experimentation methods will be used to test both non-materiel and materiel solutions; fifth, Joint Integration/applicability will be researched and applied; and sixth, Horizontal Integration Initiatives will be built and transitioned to the warfighter as the final step in the C2C systems engineering process. Program specifics are:

(1) Operational Requirements documents (e.g., Program Management Directive, Concept of Employment, Initial Capability Document and C2C Architecture) will be published/revised. A FYDP Implementation plan identifying the most significant C2C net-centric integration issues will continue to be developed.

(2) Systems Engineering and Architecture Development is the 'glue' which will hold C2C elements together, and close the seams in the Command, Control Communications Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) architecture. C2C system and technical architectures, cross program requirements allocation, key cost drivers, risk assessments and corresponding risk mitigation strategies will be examined.

(3) Operators and System Engineers Analysis for Net-centric capability across C4ISR programs will continue. The resulting Net-centric Strategic Plan will impact C4ISR program roadmaps and feed directly into the Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) and C4ISR Net-centric Flight Plans. Provides Air Staff with issue development, data collection, data analysis, mapping of capabilities to system functions, and supports the ability to develop trade space recommendations through use of a Capability Evolution Methodology assessment tool.

(4) Modelling and Simulation (M&S) and Experimentation will leverage existing government/industry development and simulation sites to allow 'virtual' assessments of the C2 Constellation. Facility network architecture management, new or improved communications linkages between the various government and industry simulation sites, with the required accreditation and encryption systems will be developed. A series of experiments, exercises and simulations will provide alternatives and targets of opportunity for further engineering improvements and integration.

(5) Numerous C4ISR Joint Interoperability/Integration issues exist due to the dozens of non-Air Force programs/nodes contained within the C2 Constellation enterprise. Focuses on supporting several major venues including: Joint Battle Management Command and Control (JBMC2) Roadmap, Joint Forces Command (JFCOM) Board of Directors and the Multi - Service Working Group.

(6) Horizontal Integration Initiatives will capitalize on near-term opportunities to eliminate known horizontal integration deficiencies in the seamless C4ISR network vision. These initiatives will become integral to weapon systems' configuration controlled baselines.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5078 Horizontal Integration

This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration and provides developers, testers and warfighters a way to experiment, analyze,and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Operational Requirements/Planning documents creation/update	0.193	0.920	0.990
(U)	Systems Engineering Policy/Guidance and Architecture & Architecture Education Development	5.827	3.800	4.153
(U)	Operational Analysis supporting Net-Centric Integration;	2.071	1.906	2.671
(U)	M&S Infrastructure and Operational Experimentation	1.850	2.000	2.000
(U)	Joint Interoperability/Integration Efforts	0.086	0.764	0.800
(U)	Horizontal Integration Initiative focused on warfighting capability development	0.775	0.972	1.000
(U)	Total Cost	10.802	10.362	11.614

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

This project uses full and open competition for one or more operational requirements document creation, systems engineering & architecture development, modeling & simulation and experimentation, joint interoperability/integration, and horizontal integration approaches.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207449F C2 Constellation**

PROJECT NUMBER AND TITLE: **5078 Horizontal Integration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Systems Engineer, Operation Integration Analysis, M&S, and Experimentation	C/CPAF	Lockheed Martin, ESC Hanscom AFB, MA		2.666	Nov-04	0.823	Nov-05	3.020	Nov-06	Continuing	TBD	TBD
Horizontal Integration	C/CPAF	ACS Defense, ESC Hanscom AFB, MA		0.375	Apr-05	0.600	Apr-06	0.650	Apr-07	Continuing	TBD	TBD
Experimentation	SPO Managed	ESC/SR, ESC Hanscom AFB, MA		0.250	Dec-04	0.250	Dec-05	0.250	Dec-06	Continuing	TBD	TBD
System Engineering and Experimentation	C/T&M	MIT/LL, ESC Hanscom AFB, MA		1.200	Dec-04	1.200	Dec-05	1.100	Dec-06	Continuing	TBD	TBD
System Engineering	FFRDC	MITRE, ESC Hanscom AFB, MA		2.346	Dec-04	2.676	Dec-05	2.554	Dec-06	Continuing	TBD	TBD
Operational Integration Analysis	MIPR	AF/XI		1.000	Dec-04	1.000	Oct-05	1.000	Oct-06	Continuing	TBD	TBD
Operational Requirements Planning Documents, System Engineering, Operation Integration Analysis, and Joint Interoperability Integration efforts	MIPR	AFC2ISRC/CX		1.425	Oct-04	2.261	Oct-05	1.700	Oct-06	Continuing	TBD	TBD
Various	Various	ESC Hanscom AFB, MA		0.912	Dec-04	0.912	Dec-05	0.700	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	10.174		9.722		10.974		Continuing	TBD	TBD
Remarks:												
(U) Support												
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
T&E	PO	605th Test Squadron		0.300	Nov-04	0.300	Nov-05	0.300	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.300		0.300		0.300		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Management Support	FFRDC	MITRE, ESC Hanscom AFB, MA		0.328	Dec-04	0.340	Dec-05	0.340	Dec-05	Continuing	TBD	TBD
Subtotal Management			0.000	0.328		0.340		0.340		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207449F C2 Constellation**	**5078 Horizontal Integration**

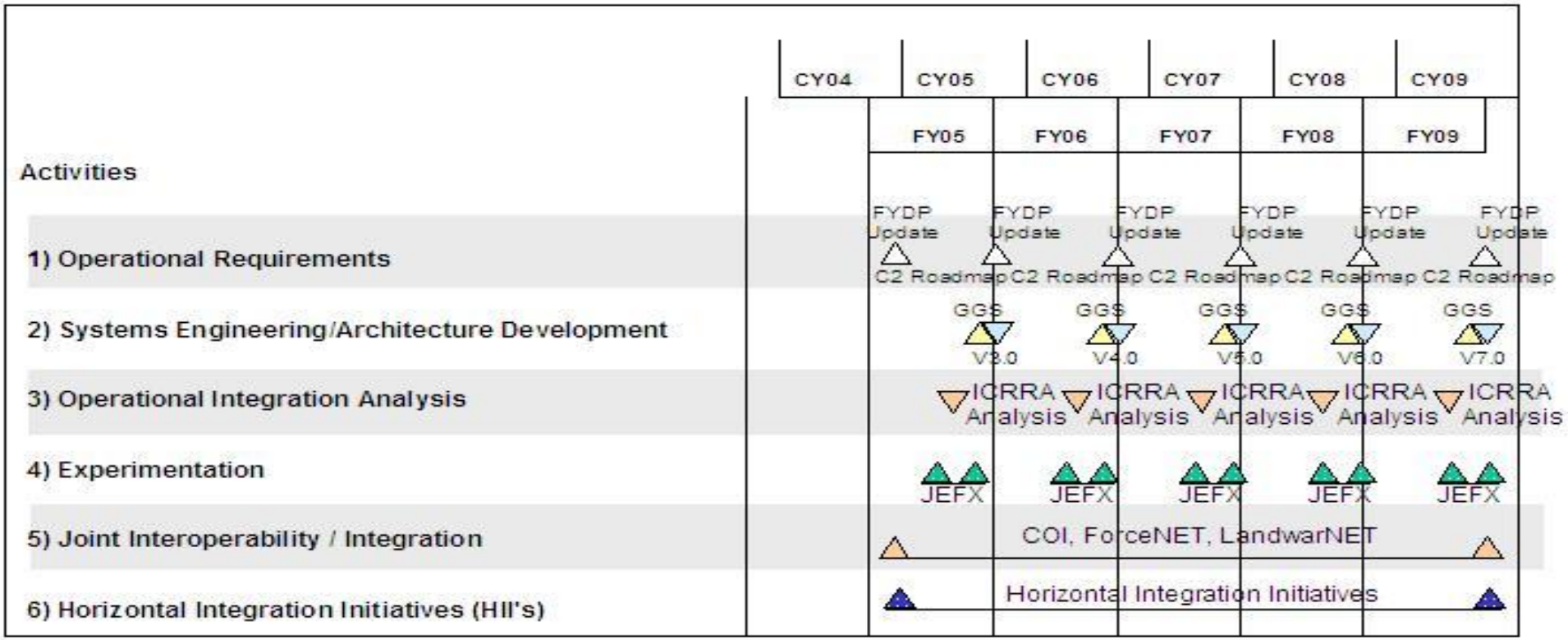
Remarks:

(U) Total Cost	0.000	10.802	10.362	11.614	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207449F C2 Constellation	PROJECT NUMBER AND TITLE 5078 Horizontal Integration

U.S. AIR FORCE

C2C Schedule



Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207449F C2 Constellation**	**5078 Horizontal Integration**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Operational Requirements Documents	3-4Q	3-4Q	3-4Q
(U) Systems Engineering & Architecture	4Q	4Q	4Q
(U) Operational Integration Analysis	2-3Q	2-3Q	2-3Q
(U) M&S Infrastructure and Experimentation	2-3Q	2-3Q	2-3Q
(U) Joint Interoperability/Integration	1-4Q	1-4Q	1-4Q
(U) Horizontal Integration Initiatives	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207449F C2 Constellation**

PROJECT NUMBER AND TITLE: **5140 Joint Expeditionary Force Experiments**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5140	Joint Expeditionary Force Experiments	27.486	29.972	32.413	33.030	33.801	34.387	34.787	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Expeditionary Force Experiments (JEFX) and Advanced Process Technology Experiments (APTX) are large-scale warfighter experiments that address emerging operational challenges and are part of the total Air Force (AF) experimentation effort. JEFX and APTX explore significant capability gaps across the range of AF Concept of Operations (CONOPS) and address critical lessons learned from recent operations. They combine live-fly forces and simulations into an operationally representative warfighter environment. JEFX, spirally conducted, and APTX provide a multi-dimensional, multi-national, multi-service environment for an end-to-end process of exploration, assessment, and transition of capabilities that will provide joint and coalition warfighters with solutions to gaps identified in the Integrated Capability Review and Risk Assessment (I-CRRA) process and through lessons learned in recent and current operations. They are part of a broader effort to implement the Joint Vision 2020, demonstrate emerging Air Force capabilities to deploy and employ decisive aerospace power for the Joint Force Commander, and are important enablers of innovation and transformation. JEFX occurs on even years and APTX on odd years.

This program is in Budget Activity 7 - Operational System Development because it provides horizontal integration, developers, testers, and warfighters to experiment, analyze, and explore operational concepts and new technologies to enhance operational system developments and improve capabilities of the 21st century aerospace force.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Spiral develop systems architecture, systems engineering, and integration of initiatives into a cohesive system of systems, the integration of systems and process is the major reason JEFX is an experiment and not simply a demonstration or exercise	4.236	3.583	6.098
(U)	Plan, design, coordinate, assess and report the APTX and JEFX experiments, provide expertise to support SPO functions of initiative selection, acquisition, program management, communications and systems planning	7.315	4.480	7.000
(U)	Develop initiatives to introduce new technologies and operational capabilities into the Aerospace Expeditionary Force (AEF) Concept of Operations (CONOPS).	6.861	5.731	6.935
(U)	Implement architectural configuration, conduct M&S, install and the test the communications infrastructure and execute the experiment	2.174	16.178	2.380
(U)	Transition successful JEFX assessed and CSAF approved warfighting capabilities for fielding into an integrated C2ISR baseline.	6.900	0.000	10.000
(U)	Total Cost	27.486	29.972	32.413

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207449F C2 Constellation**	PROJECT NUMBER AND TITLE **5140 Joint Expeditionary Force Experiments**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

JEFX supports evolutionary acquisition of multiple programs by providing a venue to experiment new and emerging technologies to be integrated into other systems-of-record.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207449F C2 Constellation**

PROJECT NUMBER AND TITLE: **5140 Joint Expeditionary Force Experiments**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Experimentation	FFRDC	MITRE, ESC Hanscom AFB, MA		2.324	Dec-04	1.882	Dec-05	2.360	Dec-06	Continuing	TBD	TBD
Experimentation	C/CPAF	Lockheed Martin, ESC Hanscom AFB, MA		1.800	Dec-04	3.000	Dec-05	1.800	Dec-06	Continuing	TBD	TBD
Experimentation	C/IDIQ	ACS Defense, ESC Hanscom AFB, MA		1.575	Apr-05	0.951	Apr-06	1.575	Apr-07	Continuing	TBD	TBD
Experimentation	C/T&M	Northrop Grumman, ESC Hanscom AFB, MA		0.200	Dec-04	0.275	Dec-05	0.200	Dec-06	Continuing	TBD	TBD
Experimentation	C/T&M	Logicon, ESC Hanscom AFB, MA		0.500	Dec-04	0.290	Dec-05	0.500	Dec-06	Continuing	TBD	TBD
Experimentation	MIPR	GSA		1.706	Dec-04	0.806	Dec-05	1.706	Dec-06	Continuing	TBD	TBD
Experimentation	MIPR	ASC/RAB								Continuing	TBD	TBD
Experimentation	MIPR	AFRL		0.500	Dec-04			0.500	Dec-06	Continuing	TBD	TBD
Experimentation	C/T&M	General Dynamics, ESC Hanscom AFB, MA		0.450	Dec-04	0.290	Oct-05	0.450	Oct-06	Continuing	TBD	TBD
Various	Various	ESC		0.180	Dec-04			0.180	Dec-06	Continuing	TBD	TBD
Various	MIPR	Various		4.589	Dec-04	1.513	Dec-05	5.043	Dec-06	Continuing	TBD	TBD
Various	C/T&M	CITPAD, ESC Hanscom AFB, MA								Continuing	TBD	TBD
Experimentation	MIPR	L3 Comm		1.000	Dec-04	1.050	Dec-05	1.050	Dec-06	Continuing	TBD	TBD
Experimentation	C/GSA	Sverdrup		0.175	Oct-04	0.175	Oct-05	0.175	Oct-06	Continuing	TBD	TBD
Experimentation	C/GSA	Northrop Grumman		0.250	Oct-04	0.250	Oct-05	0.250	Oct-06	Continuing	TBD	TBD
Experimentation	MIPR	505CCW Hurlburt Field, FL		0.000	Feb-05	8.025	Feb-06	0.000	Feb-07	Continuing	TBD	TBD
Experimentation	C/GSA	Alion, AFC2ISRC		1.675	Dec-04	1.850	Nov-05	1.850	Nov-06	Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207449F C2 Constellation

PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

			Langley AFB, VA										
	Experimentation	C/GSA	Lockheed Martin, AFC2ISRC Langley AFB, VA		0.500	Dec-04	0.500	Nov-05	0.500	Nov-05	Continuing	TBD	TBD
	Experimentation	C/GSA	SAIC, AFC2ISRC Langley AFB, VA		1.058	Dec-04	1.058	Nov-05	1.058	Nov-05	Continuing	TBD	TBD
	Experimentation	C/GSA	L3 Comm, AFC2ISRC Langley AFB, VA		1.207	Dec-04	1.207	Nov-05	1.207	Nov-06	Continuing	TBD	TBD
	Experimentation	C/GSA	Northrop Grumman, AFC2ISRC Langley AFB, VA		0.300	Dec-04	0.300	Nov-05	0.300	Nov-05	Continuing	TBD	TBD
	Experimentation	C/GSA	Zel Tech, AFC2ISRC Langley AFB, VA								Continuing	TBD	TBD
	Various	MIPR	Various		7.397	Feb-05	6.150	Jan-06	11.509	Oct-06	Continuing	TBD	TBD
	Subtotal Product Development			0.000	27.386		29.572		32.213		Continuing	TBD	TBD
	Remarks:												
(U)	Support												
												0.000	
	Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:												
(U)	Test & Evaluation												
	T&E	PO	46th Test Squadron		0.100	Dec-04	0.400	Dec-05	0.200	Dec-06	Continuing	TBD	TBD
	Subtotal Test & Evaluation			0.000	0.100		0.400		0.200		Continuing	TBD	TBD
	Remarks:												
(U)	Management												
												0.000	
	Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:												
(U)	Total Cost			0.000	27.486		29.972		32.413		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207449F C2 Constellation	PROJECT NUMBER AND TITLE: 5140 Joint Expeditionary Force Experiments

JEFX - KEY Milestones Schedule

as of 19 Jan 06

Fiscal Year (FY)	04				05				06				07				08				09			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Perform Assessment					★								★								★			
Start integration of select initiatives					★								★								★			
Call for initiatives, APTX			★								★								★					
Initiative selection, AFPX			★								★								★					
Architecture development				★								★								★				
Conduct APTX							★								★								★	
Call for initiatives JEFX			★								★								★					
Initiative Selection JEFX				★								★								★				
Architecture development JEFX					★								★								★			
Conduct Spiral I								★								★								★
Conduct Spiral II	★								★								★							
Conduct Spiral III		★								★								★						
Conduct JEFX experiments			★								★								★					
Key: ★ = Major Events																								

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207449F C2 Constellation**	**5140 Joint Expeditionary Force Experiments**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Assessment	1Q		1Q
(U) Integration of Initiatives	1Q		1Q
(U) APTX Call for Initiatives & Selection		3Q	
(U) Architecture Development		4Q	
(U) APTX	3Q		3Q
(U) JEFX Call for Initiatives		3Q	
(U) JEFX Selection		4Q	4Q
(U) JEFX Architecture Developed	1Q		1Q
(U) Conduct Spiral 1	4Q		4Q
(U) Conduct Spiral 2		1Q	
(U) Conduct Spiral 3		2Q	
(U) Conduct JEFX Experiments		3Q	

PE NUMBER: 0207581F
PE TITLE: JOINT STARS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207581F JOINT STARS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD
0003 JSTARS	98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (Joint STARS) program produces the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides radar-derived all-weather surveillance and targeting information on moving and stationary ground targets, slowly moving rotary and fixed wing aircraft, and rotating antennas. Joint STARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets, and can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground commanders to effectively make and execute battle decisions, and helps achieve predictive battlespace awareness.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions in tracking and killing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in Command/Control and ISR (C2ISR), Network Centric Operations Capabilities, and interoperability with Joint Service, allied, and coalition systems. These efforts include, but are not limited to, Re-Engining, manned and unmanned platforms, space data links, advanced Battle-Management Command, Control and Communications (BMC3) concepts, ISR Constellation, Air Moving Target Indicator (AMTI), Ground Moving Target Indicator (GMTI), Advanced Radar Modes (ARM), Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Enhanced Land/Maritime Mode (ELMM), Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) and other large airborne platform integration efforts including Affordable Moving Surface Target Engagement (AMSTE), weapons guidance capabilities, self defense capabilities, radar, SAR, and aircraft performance improvements. These efforts include the use of a dedicated test aircraft, laboratories, and test support facilities. The result is greater mission capability, higher mission reliability, and maximum weapon system availability. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

Items listed on R-2a are representative of items to be developed.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

Re-Engining - System Design and Development (SDD) is projected to be complete in FY09.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	88.238	78.084	79.836
(U)	Current PBR/President's Budget	98.394	104.321	152.696
(U)	Total Adjustments	10.156	26.237	
(U)	Congressional Program Reductions		-0.153	
	Congressional Rescissions	-0.112	-1.510	
	Congressional Increases		27.900	
	Reprogrammings	12.201		
	SBIR/STTR Transfer	-1.933		

(U) Significant Program Changes:

- FY05 received funding for Enhanced Land/Maritime Mode (ELMM) $6.9M, Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) $4.7M and Interim Cability for Airborne Networking (ICAN) $0.601M.
- FY06 received congressional adds for Re-Engining $12.5M and Advanced Radar Modes (ARM) $12.9M, Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) $1.7M and Interim Capability for Airborne Networking (ICAN) $0.800M .
- FY07 added funding for Affordable Moving Surface Target Engagement (AMSTE) $40.788M and Re-Engining $31.412M.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207581F JOINT STARS

PROJECT NUMBER AND TITLE: 0003 JSTARS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0003 JSTARS	98.394	104.321	152.696	100.538	57.048	57.667	59.037	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (Joint STARS) program produces the world's premier airborne ground surveillance platform, meeting joint combat capability requirements. The 707-based E-8C Joint STARS aircraft provides radar-derived all-weather surveillance and targeting information on moving and stationary ground targets, slowly moving rotary and fixed wing aircraft, and rotating antennas. Joint STARS provides target information for matching direct attack aircraft, standoff weapons, and ground-based attack assets against selected targets, and can be cued by other intelligence, surveillance, and reconnaissance (ISR) and target acquisition systems. This capability enables air and ground commanders to effectively make and execute battle decisions, and helps achieve predictive battlespace awareness.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions in tracking and killing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in Command/Control and ISR (C2ISR), Network Centric Operations Capabilities, and interoperability with Joint Service, allied, and coalition systems. These efforts include, but are not limited to, Re-Engining, manned and unmanned platforms, space data links, advanced Battle-Management Command, Control and Communications (BMC3) concepts, ISR Constellation, Air Moving Target Indicator (AMTI), Ground Moving Target Indicator (GMTI), Advanced Radar Modes (ARM), Enhanced Synthetic Aperture Radar (ESAR), Mode 5/S, Network Centric Collaborative Targeting (NCCT), Interim Capability for Airborne Networking (ICAN), Enhanced Land/Maritime Mode (ELMM), Blue Force Tracker/Force XXI Battle Command Brigade and Below (FBCB2) and other large airborne platform integration efforts including Affordable Moving Surface Target Engagement (AMSTE), weapons guidance capabilities, self defense capabilities, radar, SAR, and aircraft performance improvements. These efforts include the use of a dedicated test aircraft, laboratories, and test support facilities. The result is greater mission capability, higher mission reliability, and maximum weapon system availability. The Joint STARS program will coordinate with and participate in projects developing international standards (including NATO standards) to ensure joint, allied, and coalition interoperability.

Items listed on R-2a are representative of items to be developed.

This program is in Budget Activity 7, Operational Systems Development, due to efforts supporting a post-Milestone III operational weapon system.

Re-Engining - System Design and Development (SDD) is projected to be complete in FY09.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Spiral Development, Kill Chain and Integration/Analysis, Interoperability (including but not limited to Weapons Guidance, Wide Area Tracker, Automatic Target Recognition, NCCT, ICAN, ELMM, FBCB2, AFMTT, Find-Fix-Target-Track-Engage-Assess (F2T2EA), SPO operations, International, Knowledge Aided Sensor Signal Processing Expert Reason (KASSPER), Communications & Network Upgrade (CNU) previously JABM etc.)	24.232	9.169	7.190
(U) Affordable Moving Surface Target Engagement (AMSTE/ELMM)			40.788

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Communication, Navigation, and Surveillance/Air Traffic Management (CNS/ATM) formerly Global Air Traffic Mgmt (GATM) (i.e.; TCAS, Mode S, etc.)	42.034	29.385	34.583
(U)	Training & Support Systems development (including but not limited to Weapon System Trainer Motion/Visual, Navigation Trainer, etc.)	0.316	0.000	0.000
(U)	Link 16 ASU support, connectivity efforts, etc.	1.508	16.255	9.635
(U)	Test Effort (including but not limited to Joint Test Force, JSTARS Extended Test Support contract, Information Assurance, range support, PL-2 security, support of T-3 test aircraft, test labs, etc.)	30.304	24.700	29.088
(U)	Re-Engining	0.000	12.500	31.412
(U)	Advanced Radar Modes (ARM) (previously under Spiral Development) - Phase I (including but not limited to Swath SAR, Intelligent Band Width Compression (IBC) and Enhanced Synthetic Aperture Radar (ESAR)).		12.312	
(U)	Total Cost	98.394	104.321	152.696

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Modifications, BP11 (PE 0207581F)	61.023	15.283	138.162	150.932	147.426	120.071	273.706	Continuing	TBD
(U)	Spares, BP16 (PE 0207581F)	8.024	0.584	1.139	1.311	1.424	1.460	1.479	Continuing	TBD

(U) D. Acquisition Strategy

The AF will continue development for various fleetwide modifications throughout the life of the Joint STARS weapon system.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207581F JOINT STARS**

PROJECT NUMBER AND TITLE: **0003 JSTARS**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Weapon System Trainer (WST)	Various	Various		0.000		0.000		0.000		Continuing	TBD	TBD
ASU	SS/CPAF	HAFB, MA		1.395	Jan-05	16.255	Nov-05	9.635	Nov-06	Continuing	TBD	39.644
CNS/ATM (GATM)	Various	HAFB, MA		38.874	Jan-05	28.045	Nov-05	33.006	Nov-06	Continuing	TBD	TBD
Spiral Development	Various	Various		19.144	Nov-04	2.293	Nov-05	2.813	Nov-06	Continuing	TBD	TBD
AMSTE (ELMM)	TBD	TBD						36.734	Jul-07	Continuing	TBD	
ACI Migration (formally ABCCC)	SS/CPAF	HAFB, MA		0.000		0.000		0.000		Continuing	TBD	TBD
Advanced Radar Modes (ARM) - Phase I	Various	Various				12.312	Jul-06			Continuing	TBD	
Subtotal Product Development			0.000	59.413		58.905		82.188		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Support												
SPO Ops Support	Various	HAFB, MA		10.838	Oct-04	8.676	Oct-05	10.112	Oct-06	Continuing	TBD	TBD
Subtotal Support			0.000	10.838		8.676		10.112		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Test & Evaluation												
E-8C JSTARS Ext. Test Spt (JETS)	Various	Various		19.403	Nov-04	16.987	Nov-05	21.342	Nov-06	Continuing	TBD	TBD
JTF Range/Support	Various	Various		7.449	Nov-04	7.159	Nov-05	7.168	Nov-06	Continuing	TBD	TBD
PL-2	Various	Various		1.174	Nov-04	0.554	Nov-05	0.578	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	28.026		24.700		29.088		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Management												
Integration & Analysis				0.117		1.540		0.696		Continuing	TBD	TBD
Subtotal Management			0.000	0.117		1.540		0.696		Continuing	TBD	TBD
Remarks:												
(U) Re-Engining												
Re-Engining	TBD	TBD				10.500	Jan-07	30.612	Jan-07	Continuing	TBD	TBD
Subtotal Re-Engining			0.000	0.000		10.500		30.612		Continuing	TBD	TBD
Remarks: Where Various Contract Method & Types take place, earliest date funds will be obligated is noted.												
(U) Total Cost			0.000	98.394		104.321		152.696		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

U.S. AIR FORCE

Joint STARS Program Schedule

As of 19 Jan 2006

E-8 Joint STARS

E-8C Production Deliveries

CRP: Computer Replacement Program/**IDM**: Improved Data Modem

CSACI: Combined SATCOM/ABCCC Capability Integration

ASU: Attack Support Upgrade (Link 16): **AC/TMD**: Air Control/Theater Missile Defense; **FBM**: Full Battle Management

RF: Resultant Fury; **ELMM**: Enhanced Land-Maritime Mode; **AMSTE**: Affordable Moving Surface Target Engagement

CNU: Communications&Network Upgrade (JTRS,FAB-T, MP-CDL)

ARM: Advanced Radar Modes

FBCB2: Force Battle Command Brigade & Below

ICAN: Interim Capability for Airborne Networking

NCCT: Network Centric Collaborative Targeting

CCNU: Communications Computer Net-Centric Upgrade (JABM)

TCAS: Traffic Alert&Collision Avoidance Sys

CNS/ATM: Communications, Navigation, Surveillance & Air Traffic Management

STS: Support and Training System

Color Key:

Development/Demonstration Phase

Retrofit Phase

Red = Unfunded User Requirement

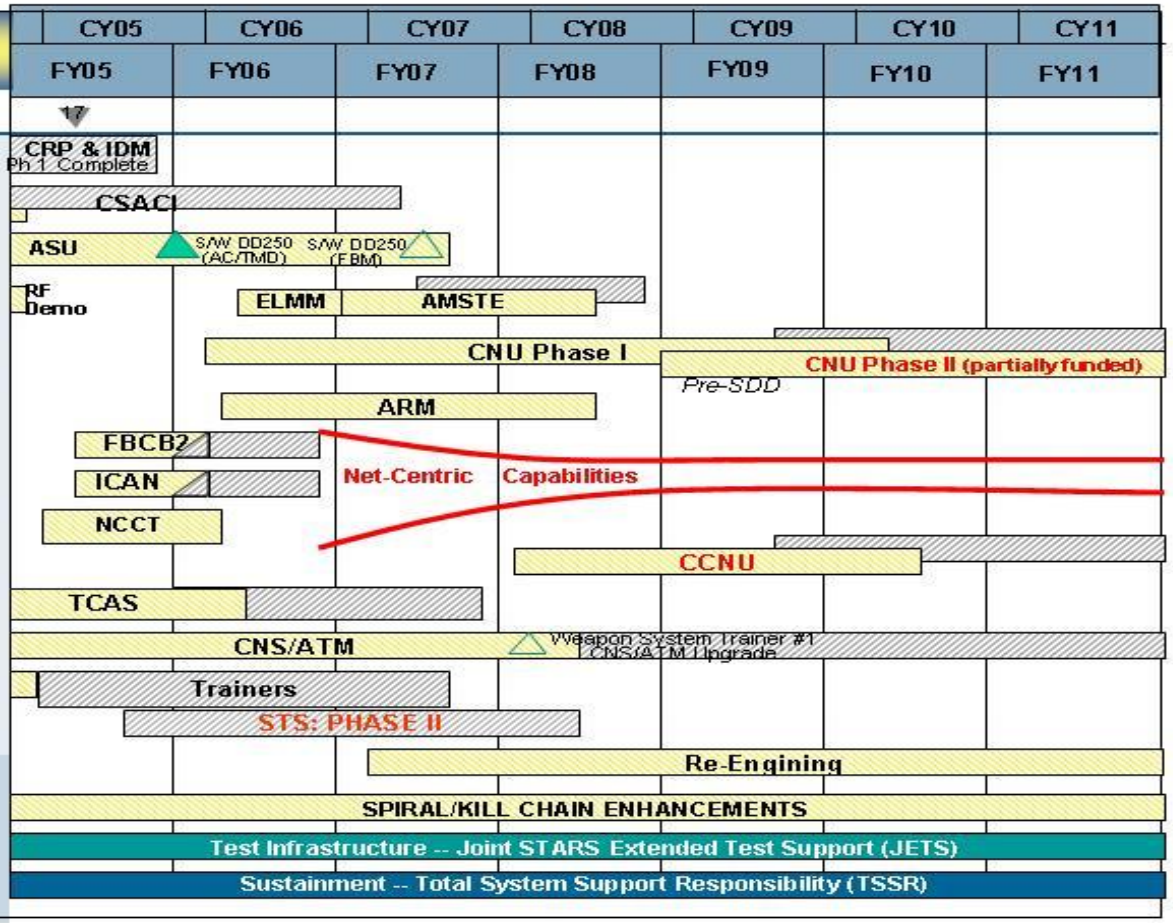


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207581F JOINT STARS	PROJECT NUMBER AND TITLE 0003 JSTARS

(U)	Schedule Profile	FY 2005	FY 2006	FY 2007
(U)	WST #1 Flight Crew Training System Visual Upgrade	1Q		
(U)	CNS/ATM Contract Award	2Q		
(U)	CNS/ATM WST Development Contract Award	3Q		
(U)	CNS/ATM Initial System Design Review		1Q	
(U)	CNS/ATM System Design Definition Complete		3Q	
(U)	CNS/ATM Critical Design Review			3Q
(U)	CNS/ATM Initial Flight/Ground Readiness Review			4Q
(U)	ACI Development Complete (formally ABCCC)	1Q		
(U)	ASU Air Control/Theater Missile Defense, S/W DD250		1Q	
(U)	ASU Full Battle Management, S/W DD250			4Q
(U)	Sys Test - JETS Wing Structural Integrity Program Complete/Delivered		1Q	
(U)	Sys Test - ACI Capability Insertion Flight Test	1Q		
(U)	Sys Test - ASU Phase I Flight Test	3Q		
(U)	Sys Test - CNS/ATM (Weather Radar & TCAS) Flight Test	4Q		
(U)	Sys Test - JETS II Contract Award		1Q	1Q
(U)	Sys Test - ASU Phase II Flight Test		2Q	
(U)	Sys Test - CNS/ATM Flight Test			2Q
(U)	Sys Test - Blue Force Situational Awareness Flight Test			3Q
(U)	Spiral Development - ICAN Proof of Concept @ Red Flag	1Q	4Q	4Q
(U)	Spiral Development - Track Mgt By Area (TMBA) Award	2Q		
(U)	Spiral Development - TMBA Integrated S/W Release			3Q
(U)	Spiral Development - ELMM Risk Reduction Contract Award		1Q	
(U)	Spiral Development - ELMM SDD RFP Release		2Q	
(U)	Spiral Development - ELMM SDD Contract Award		4Q	
(U)	Re-Engining Proposal Preparation			2Q
(U)	Re-Engining NRE Contract Award			2Q
(U)	JETS I D.O. (Year 5) Periodic Inspection		1Q	
(U)	JETS II D.O. (Year 1) Minor Inspections			1Q
(U)	FBCB2			1Q
(U)	AMSTE RFP Release			2Q
(U)	AMSTE SDD Contract Award			4Q
(U)	ARM Phase I RFP Release		2Q	

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207581F JOINT STARS**	PROJECT NUMBER AND TITLE **0003 JSTARS**

(U) ARM Phase I Contract Award	4Q

PE NUMBER: 0207590F
PE TITLE: Seek Eagle

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207590F Seek Eagle

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	22.316	19.232	16.426	19.948	20.118	20.481	20.612	Continuing	TBD
4037 SEEK EAGLE Certifications	22.316	19.232	16.426	19.948	20.118	20.481	20.612	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force has a variety of combat aircraft and numerous stores (munitions, missiles, fuel tanks, electronic countermeasures pods, etc.). Aircraft carry these stores in countless different loading combinations determined by operational scenarios, missions, and tactics. Loading configurations change as operational plans and tactics change, and as new aircraft and stores are developed and produced. Before operational use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), and must verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes these certifications through any combination of ground and flight testing, wind tunnel testing, modeling and simulation, and engineering analyses. Over 2000 aircraft/store combinations are recommended for flight testing each year. Depending upon the complexity, certification takes from weeks to years. The SEEK EAGLE program is also responsible for insertion of new and emerging technologies into the SEEK EAGLE process, and for providing resources for sustainment of a viable Air Force aircraft/store certification capability. Integrated solutions to combat aircrew weapon delivery planning problems are developed and provided to the warfighters via Combat Weapons Delivery Software (CWDS). This includes the development of electronic technical orders (TOs), which results in cost savings by eliminating paper TOs. SEEK EAGLE funds are currently budgeted to support certification for new weapons programs including Small Diameter Bomb (SDB), Joint Direct Attack Munition (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), and many other inventory stores on inventory aircraft. Planning and budgeting estimates are in progress for future certifications of weapons on F-22A, F-35, MQ-9 (Predator), and the Joint Unmanned Combat Aerial System (J-UCAS).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	22.955	19.510	16.620
(U)	Current PBR/President's Budget	22.316	19.232	16.426
(U)	Total Adjustments	-0.639	-0.278	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.018	-0.278	
	Congressional Increases			
	Reprogrammings	-0.383		
	SBIR/STTR Transfer	-0.238		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207590F Seek Eagle

PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4037 SEEK EAGLE Certifications	22.316	19.232	16.426	19.948	20.118	20.481	20.612	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force has a variety of combat aircraft and numerous stores (munitions, missiles, fuel tanks, electronic countermeasures pods, etc.). Aircraft carry these stores in countless different loading combinations determined by operational scenarios, missions, and tactics. Loading configurations change as operational plans and tactics change, and as new aircraft and stores are developed and produced. Before operational use, the Air Force must certify these configurations for safe loading, carriage, and separation (jettison and normal release), and must verify ballistics accuracy under the user-certified carriage and employment parameters. The Air Force SEEK EAGLE program completes these certifications through any combination of ground and flight testing, wind tunnel testing, modeling and simulation, and engineering analyses. Over 2000 aircraft/store combinations are recommended for flight testing each year. Depending upon the complexity, certification takes from weeks to years. The SEEK EAGLE program is also responsible for insertion of new and emerging technologies into the SEEK EAGLE process, and for providing resources for sustainment of a viable Air Force aircraft/store certification capability. Integrated solutions to combat aircrew weapon delivery planning problems are developed and provided to the warfighters via Combat Weapons Delivery Software (CWDS). This includes the development of electronic technical orders (TOs), which results in cost savings by eliminating paper TOs. SEEK EAGLE funds are currently budgeted to support certification for new weapons programs including Small Diameter Bomb (SDB), Joint Direct Attack Munition (JDAM), Joint Air-to-Surface Standoff Missile (JASSM), AIM-9X, AIM-120 (AMRAAM), Miniature Air-Launched Decoy (MALD), BRU-57 (Smart Bomb Racks), and many other inventory stores on inventory aircraft. Planning and budgeting estimates are in progress for future certifications of weapons on F-22A, F-35, MQ-9 (Predator), and the Joint Unmanned Combat Aerial System (J-UCAS).

The RDT&E Budget Activity is 07, Operational System Development, because the program supports fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue development of F-22A data and engineering models to use for follow-on F-22A weapons certification and follow-on technical support from the contractor.	1.000	0.500	0.500
(U) Conduct various automation projects and automated Technical Orders/mission planning projects using CWDS	3.300	3.100	2.800
(U) Continue/complete various technology process improvement projects and aircraft load/separation prediction capabilities using ACFD (Applied Computational Fluid Dynamics)	3.000	2.800	2.600
(U) Conduct various aircraft-store certifications on USAF fighter and bomber aircraft	15.016	12.832	10.526
(U) Total Cost	22.316	19.232	16.426

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications	

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

(U)	Proc of Ammunition, AF*							
(U)	- JDAM (PE 0207583F)	0.000	0.000	0.107	0.000	0.000	Continuing	TBD
(U)	- WCMD (PE 0207600F)	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Missile Procurement, AF*							
(U)	- JSOW (PE 0207324F)	0.000	0.958	0.000	0.000	0.000	Continuing	TBD
(U)	- AIM-120 C7 (AMRAAM) (PE 0207163F)	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	- AIM-9X (PE 0207161F)	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	- JASSM (PE 0207325F)	2.826	0.000	2.974	0.000	0.000	Continuing	TBD

* Note: The SEEK EAGLE procurement dollars shown above are appropriated in each weapon's P-1 line.

(U) D. Acquisition Strategy

Budget authorization for procurement funds are given directly to the weapon system program offices, who then procure the required certification test articles through the weapon production contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207590F Seek Eagle**

PROJECT NUMBER AND TITLE: **4037 SEEK EAGLE Certifications**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	C/CPFF	Marietta, GA	3.975	0.350		0.500		0.500		Continuing	TBD	
Leigh Aerosystems	FFP	Carlsbad, CA	0.943	0.000		0.000		0.000		0.000	0.943	
Subtotal Product Development			4.918	0.350		0.500		0.500		Continuing	TBD	0.000
Remarks:												
(U) Support												
Mission Support	PO/REO	Eglin AFB, FL	12.904	1.100		1.150		1.200		Continuing	TBD	
Subtotal Support			12.904	1.100		1.150		1.200		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
46th Test Wing	PO/REO	Eglin AFB, FL	138.661	14.611		11.600		10.660		Continuing	TBD	
AEDC	PO/REO	Arnold Engineering Dev Center TN	17.766	0.000		1.250		0.806		Continuing	TBD	
Various	PO/REO/MIPR	Multiple other for T&E Support	70.043	6.255		4.732		3.260		Continuing	TBD	
Subtotal Test & Evaluation			226.470	20.866		17.582		14.726		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			244.292	22.316		19.232		16.426		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207590F Seek Eagle	PROJECT NUMBER AND TITLE 4037 SEEK EAGLE Certifications

The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Each aircraft/store configuration requested by the user goes through the SEEK EAGLE process by the designated user priority.

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207590F Seek Eagle	PROJECT NUMBER AND TITLE: 4037 SEEK EAGLE Certifications

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) JDAM			1-4Q
(U) JSOW		1-4Q	
(U) JASSM	1-4Q		1-4Q

Note: The SEEK EAGLE program does not execute in accordance with established acquisition program milestones. Each aircraft-store configuration requested by the user goes through the SEEK EAGLE process by the designated user priority.

PE NUMBER: 0207601F
PE TITLE: USAF Modeling and Simulation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	10.784	25.145	23.470	22.931	29.056	27.814	30.663	Continuing	TBD
4567	M&S Foundations	2.495	6.114	6.024	6.284	6.315	6.389	6.421	Continuing	TBD
4991	Accelerated Acquisitions	2.316	4.755	3.900	5.131	5.126	5.243	5.333	Continuing	TBD
5004	New and Emerging Capabilities	0.000	1.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5135	Warfighter Readiness	5.973	13.276	13.546	11.516	17.615	16.182	18.909	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

United States Air Force (USAF) Modeling & Simulation (M&S) was aligned into four thrusts to better support customer needs. This resulted in project 4567; which included the Executive Agent For Air/Space Natural Environment (ASNE) project for M&S Foundations (MSF); project 4991 for Accelerated Acquisitions (AA); project 5004 for New and Emerging Warfighting Capabilities (NEWC), and project 5135 for Warfighter Readiness (WR). The four thrusts enable the communities of interest to focus and prioritize the PE's next generation M&S capabilities.

Modeling & Simulation Foundations (MSF) provides realistic representations of friendly and threat warfighting capabilities, realistic representations of the natural environment where the warfighting capabilities exists, and an architecture framework to support developing representations that allow the easy and rapid integration of those representations into synthetic battlespaces. Accelerated Acquisitions (AA) connects combat system engineering sites within the Air Force-Integrated Collaborative Environment (AF-ICE), formally known as Joint Distributed Engineering Plant (JDEP), which replicates the Joint Force Combat system to create a network test-bed to assess Joint Battle Management, Command, Control, Communication, Computers and Intelligence. AA's objective is to improve interoperability of weapons systems and platforms through more rigorous interoperability evaluation in a replicated battlefield environment. AA provides the capability to improve Service and Joint system performance in a system-of-systems environment. New and Emerging Warfighting Capabilities (NEWC) focuses on future capabilities and force structure. Examples include Science and Technology, analysis, concept exploration and future wargaming. Models are being developed for a broad range of areas including acquisition, analysis, test and evaluation and training. Warfighter Readiness (WR) focuses on improving warfighting decision-making, execution, skills and processes using modeling and simulation. WR leverages AA, MSF, and Distributed Mission Operations/Training (mission rehearsal/training) programs to create the most efficient robust, collaborative M&S environment available.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	18.693	30.541	24.347
(U)	Current PBR/President's Budget	10.784	25.145	23.470
(U)	Total Adjustments	-7.909	-5.396	
(U)	Congressional Program Reductions		-6.031	
	Congressional Rescissions	-0.239	-0.365	
	Congressional Increases		1.000	
	Reprogrammings	-7.245		
	SBIR/STTR Transfer	-0.425		

(U) Significant Program Changes:

In FY05, the difference in the previous President's budget and the current President's budget is due to reprogramming within the Department of Defense to meet higher programming priorities.

In FY06, Congress removed $6.031M from the Warfighter Readiness thrust, project 5135, due to excessive program growth and added $1.000M to the New and Emerging Capabilities thrust, project 5004, for the Synthetic Theater Operations Research Model (STORM).

In FY07, the difference between the previous and current President's budget is due to higher programming priorities within the Department of Defense. One million was reprogrammed from Project 4991 to support the Testing in a Joint Environment initiative.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4567 M&S Foundations

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4567 M&S Foundations	2.495	6.114	6.024	6.284	6.315	6.389	6.421	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

M&S Foundations (MSF) focuses on integrating foundational capabilities needed to improve the usefulness, productivity, scalability and efficiency of M&S capabilities derived from Warfighter Readiness (WR), Accelerated Acquisitions (AA), and New and Emerging Warfighting Capabilities (NEWC). The efforts supporting the M&S Foundations thrust include both concept exploration and development.

MSF will provide standards and interfaces to be used by model developers to ensure model reuse. M&S Foundations will provide the capability to rapidly create realistic and accurate synthetic operational battlespaces to support the full spectrum of activities associated with mission preparation and acquisition of warfighting capabilities by providing appropriate component representations. Users will access readily available repositories of reusable, validated, and integrated synthetic components. Synthetic components will include representations of operational battlespace entities such as friendly and enemy assets and representations of the natural environment that include the terrain, atmospheric and space weather effects, and energy and signal propagation effects. The rapid composition will be based on a durable common architecture framework and common standards.

Air Force Director of Weather (AF/XOO-W) is designated as the DoD Air and Space Natural Environment Modeling and Simulation Executive Agent (ASNE MSEA). ASNE MSEA coordinates all aspects of DoD M&S related to representations of the air and space natural environment, ensuring air and space weather is properly represented in Joint and Service models, simulations, war games, and experiments. The ASNE MSEA part of this project primarily funds the following: Environmental Scenario Generator, Environmental Hypercube (pre-runtime rules-based weather effects), and Space Weather Analysis as required to support joint M&S program offices and activities like OSD Program, Analysis, and Evaluation; Air Force Studies and Analyses Agency; Joint Warfare Simulation; Joint National Training Capability; Distributed Mission Operations & Training; One Semi-Automated Force; Navy Probability of Raid Annihilation Assessment; Unified Engagement; Hazard Prediction and Assessment Capability; and Joint Expeditionary Force Experiment. Primary customers are combatant commanders, service components, and various DoD organizations conducting simulations and exercises involving air, ground, sea, and space assets. ASNE MSEA develops authoritative natural environment scenarios necessary for robust "What-if" mission planning and rehearsal and for realistic Training, Analysis, and Acquisition models and simulations. ASNE MSEA leads the development and execution of the DoD Integrated Natural Environment Authoritative Representation Process (INEARP) Concept of Operations.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MSF Concept exploration/model development/model transition	1.585	5.158	5.049
(U) Provide DoD M&S community with tools to search Air & Space Natural Environment scenarios; measure effects on weapon systems and subsystems and access tailored reusable databases	0.910	0.956	0.975
(U) Total Cost	2.495	6.114	6.024

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

Electronic Systems Center (ESC) at Hanscom AFB, MA and ASC, Wright Patterson AFB, OH will manage the acquisition and model development process for all M&S Foundation activities. All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **4567 M&S Foundations**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
System Engineering and Technology Support	Various	Northrop Grumman, ESC, Hanscom AFB, MA	8.825							Continuing	TBD	TBD
Concept Exploration and Technology Support	Various	ASC, Wright Patterson AFB, OH	14.507	1.585	Oct-04	5.158	Oct-05	5.049	Oct-06	Continuing	TBD	TBD
ASNE	Various	Various	0.000	0.910	Oct-04	0.956	Oct-05	0.975	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			23.332	2.495		6.114		6.024		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			23.332	2.495		6.114		6.024		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

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ASNE Schedule

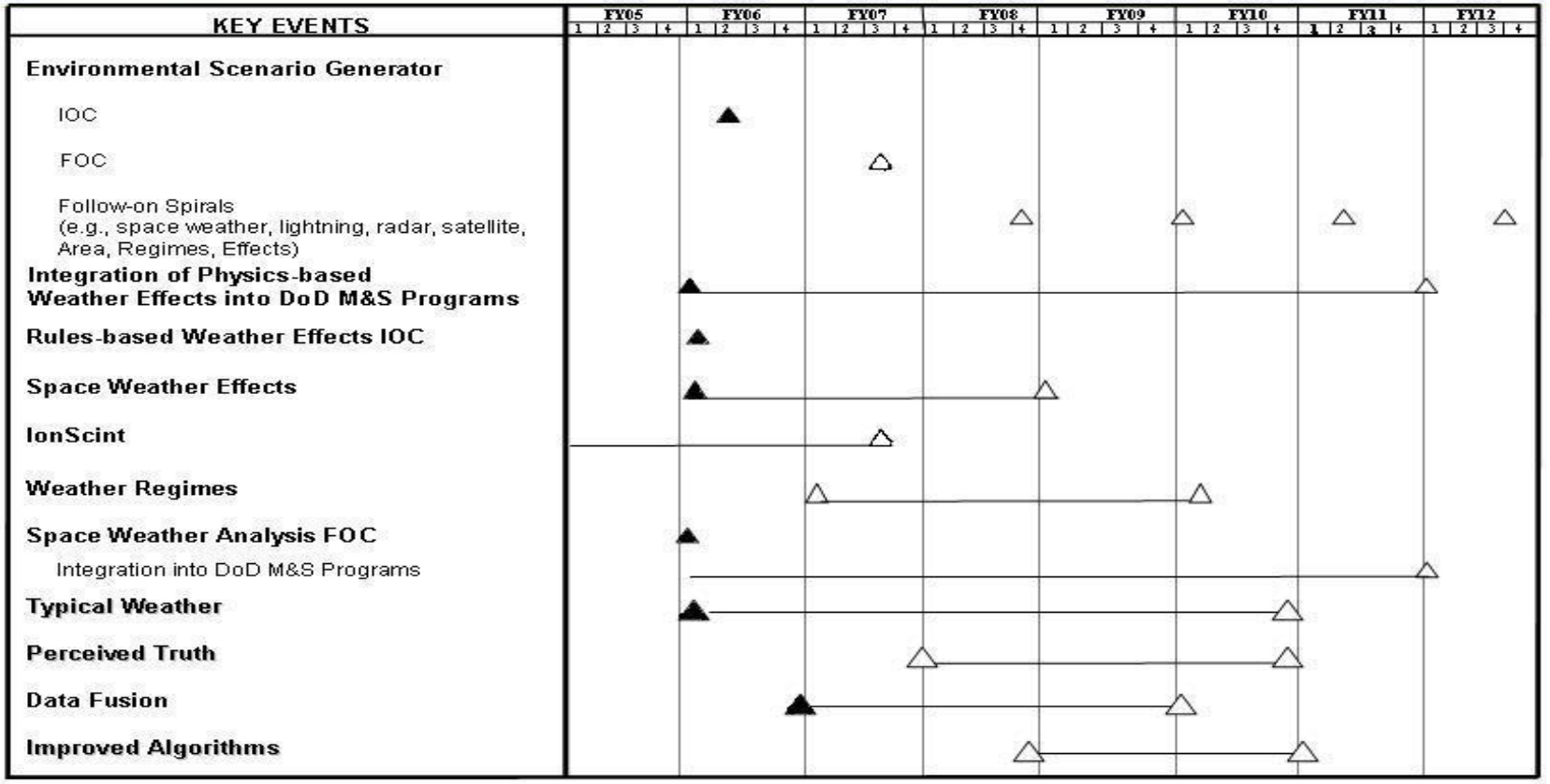

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Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 4567 M&S Foundations

Exhibit R-4: M&S Foundations (MSF)

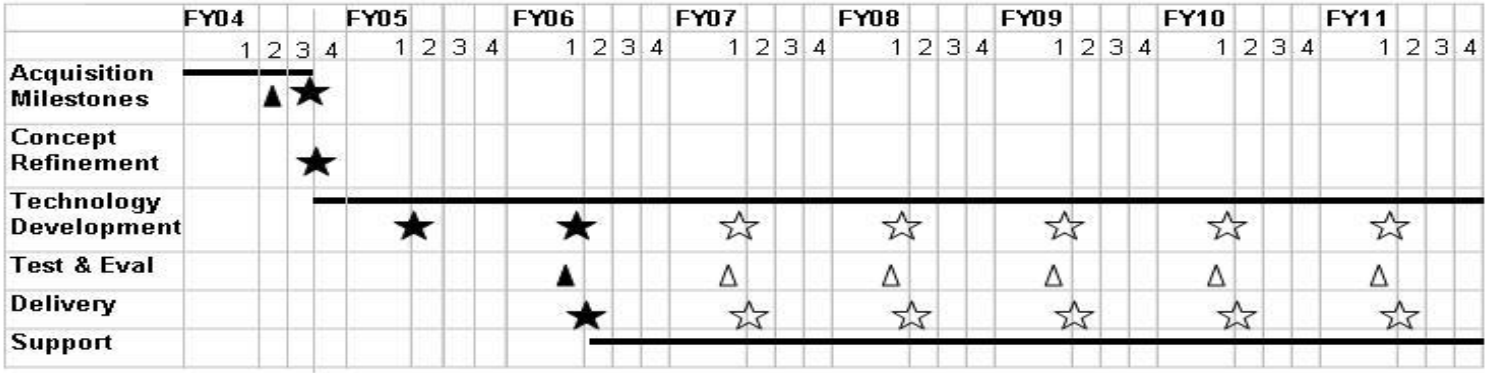

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4567 M&S Foundations**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) MSF concept exploration/ refinement, development, and enhancement of next generation modeling & simulation efforts	1-4Q	1-4Q	1-4Q
(U) Environmental Scenario Production Initial Operating Capability (IOC)		2Q	
(U) Environmental Scenario Production Final Operating Capability (FOC)			3Q
(U) Rules-based Weather Effects IOC		1Q	
(U) Space Weather Effects IOC		1Q	
(U) IONScint FOC			3Q
(U) Space Weather Analysis FOC/Integration into DoD M&S programs		1-4Q	1-4Q
(U) Typical Weather		1-4Q	1-4Q
(U) Perceived Truth			4Q
(U) Data Fusion		4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4991 Accelerated Acquisitions	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4991 Accelerated Acquisitions	2.316	4.755	3.900	5.131	5.126	5.243	5.333	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Accelerated Acquisitions (AA) focuses on reducing the time and resources required to provide material solutions to the Warfighter. Examples include more efficient and coordinated processes for design, development, test and evaluation, maintainability and sustainment.

AA's objective is to improve interoperability of weapon systems and platforms through more rigorous interoperability evaluation in a replicated battlefield environment. The AA thrust area includes the Air Force-Integrated Collaborative Environment (AF-ICE) which connects combat system engineering sites and replicates Joint Force Combat Systems to create a network testbed to assess network centric systems and Command, Control, Communication, Computers and Intelligence (C4I).

In addition, AA provides the capability to improve both Service and Joint system performance in a System-of-Systems environment. AF-ICE will use this network to build upon existing Service and Joint combat system engineering and test sites, such as C4I hardware in the loop and computer-program-in-the-loop engineering sites (including Design Activities, software support activities, test & evaluation facilities and training commands). AF-ICE will develop the concept of operations, business rules, and procedures to enable acquisition managers to effectively use the network. The AF-ICE initiative supports the Homeland Defense Testbed, Command & Control (C2) Constellation, Node Additions, and various other activities that use the network infrastructure located around the country.

The AF-ICE will coordinate activities involving Air Force engineering and test sites. AF-ICE will ensure that accurately represented C4I networks are established for system development and testing activities and will evaluate those systems for interoperability and integration into a joint environment.

This project is in Budget Activity 7 - Operational System Development because it enhances operational system developments.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue communications architectures, links and operations support Air Force-Integrated Collaborative Environment (AF-ICE) activities	1.000	1.526	1.255
(U) Continue to expand existing Infrastructure to support AF-ICE activities to include the management, operations and test support along with contracted personnel to assist in DT/OT activities	1.000	1.500	1.156
(U) Provide event analysis support to product centers	0.316	0.829	0.589
(U) Develop and execute various simulations/stimulation environments for test events	0.000	0.900	0.900
(U) Total Cost	2.316	4.755	3.900

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **4991 Accelerated Acquisitions**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) Not applicable

(U) D. Acquisition Strategy

Air Force Material Command (AFMC) Wright-Patterson AFB will manage the acquisition and development process for the experimentation, integration, and site activation activities for AA. All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **4991 Accelerated Acquisitions**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
HLD Testbed	Various	ESC Hanscom AFB, MA		0.220	Nov-04					Continuing	TBD	TBD
AF-ICE Core Development	Various	BOEING, ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		1.000	Oct-04	0.457	Nov-05	1.395	Nov-06	Continuing	TBD	TBD
AWSIM Support	T&M	NORTHROP GRUMMAN, ESC Hanscom AFB, MA		0.000		0.500	Nov-05			Continuing	TBD	TBD
AF-ICE Architecture Infrastructure	Various	ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		0.000		1.600	Nov-05	1.349	Nov-06	Continuing	TBD	TBD
HLD Testbed/AF-ICE Activities Support	C/CPFF	Solipsys, ESC Hanscom AFB, MA		0.000		0.200	Dec-05			Continuing	TBD	TBD
AF-ICE Domain Infrastructure	Various	ASC Wright-Patt AFB OH, ESC Hanscom AFB MA, AAC Eglin AFB FL		1.000	Dec-04	0.500	Dec-05	1.156	Jan-07	Continuing	TBD	TBD
AF-ICE Support	C/CPFF	RAYTHEON, ESC Hanscom AFB, MA		0.000		0.298	Dec-05			Continuing	TBD	TBD
Various	Various	Mitre, ESC Hanscom AFB, MA		0.000		0.300	Oct-05			Continuing	TBD	TBD
ITSP Support	Various	ESC Hanscom AFB, MA		0.096	Oct-04	0.500	Mar-06			Continuing	TBD	TBD
Subtotal Product Development			0.000	2.316		4.355		3.900		Continuing	TBD	TBD
Remarks:												
(U) Support												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **4991 Accelerated Acquisitions**

	46th Test Squadron	Project Order	Various			0.400	Nov-05		Continuing	TBD	TBD
	Subtotal Support			0.000	0.000	0.400		0.000	Continuing	TBD	TBD
	Remarks:										
(U)	Test & Evaluation										
										0.000	
	Subtotal Test & Evaluation			0.000	0.000	0.000		0.000	0.000	0.000	0.000
	Remarks:										
(U)	Management										
										0.000	
	Subtotal Management			0.000	0.000	0.000		0.000	0.000	0.000	0.000
	Remarks:										
(U)	Total Cost			0.000	2.316	4.755		3.900	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 4991 Accelerated Acquisitions

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AF-ICE Schedule

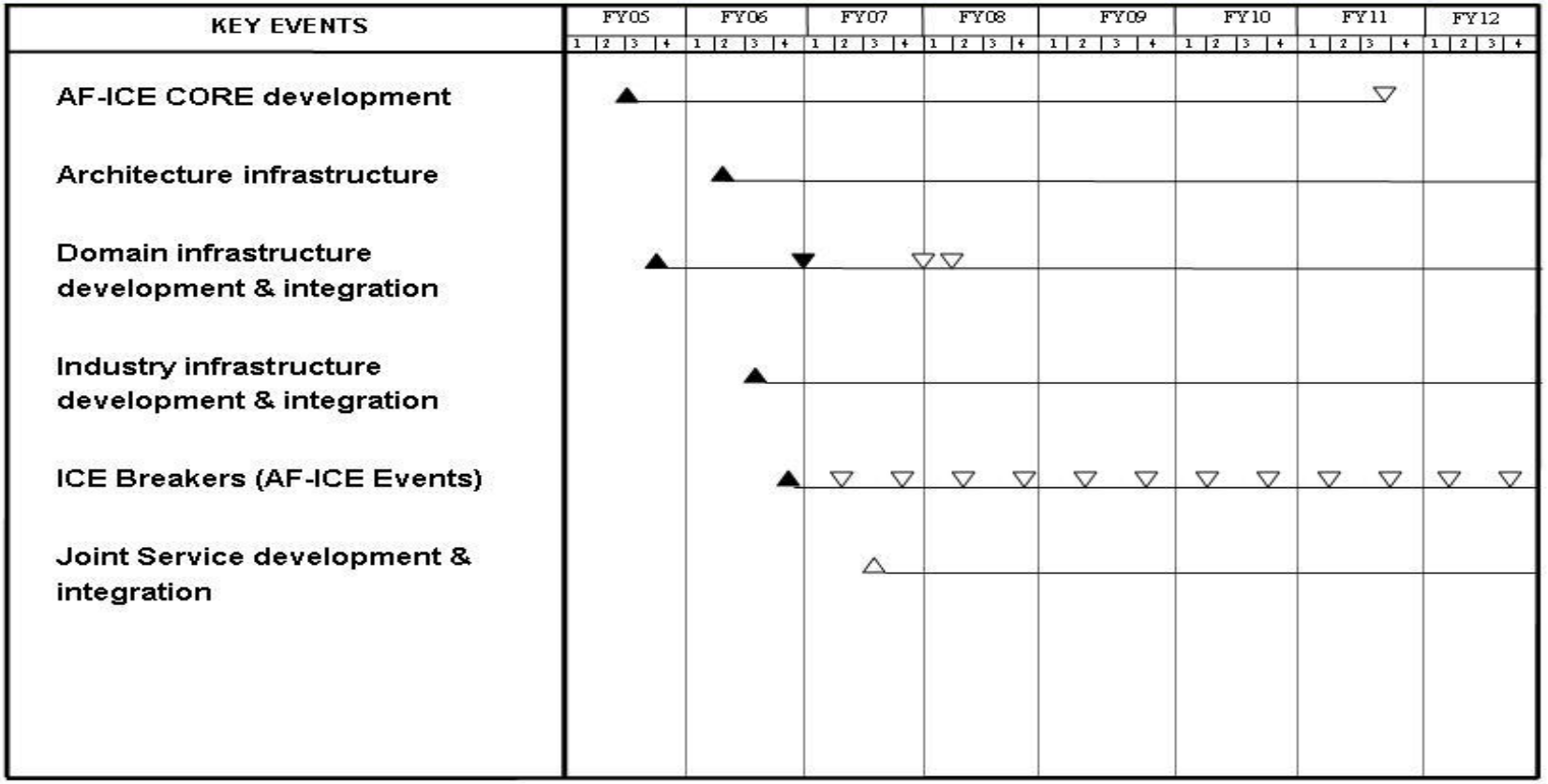

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 4991 Accelerated Acquisitions

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Event planning, development, integration, and infrastructure support	3-4Q	1-4Q	1-4Q
(U) AF-ICE events		4Q	1-4Q
(U) Joint Service support			3Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207601F USAF Modeling and Simulation**	**5004 New and Emerging Capabilities**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5004	New and Emerging Capabilities	0.000	1.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

New and Emerging Warfighting Capabilities (NEWC) focuses on future capabilities and force structure. Examples include Science & Technology, analysis, concept exploration and futures wargaming. Numerous models are being developed for a broad range of areas including acquisition, analysis, test and evaluation, and training.

In FY06, this Program Element (PE) contains the Congressional add that enables the development of Synthetic Theater Operations Research Model (STORM). STORM will replace the current Air Force theater level campaign model, THUNDER, with enhanced capability to feed aerospace representation in the joint analysis efforts and support Quadrennial Defense Reviews.

No activity is currently planned for FY07.

This program is in Budget Activity 7 - Operational System Development, Research Category because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Develop STORM	0.000	1.000	0.000
(U) Total Cost	0.000	1.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

All major contracts for model development were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **5004 New and Emerging Capabilities**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
STORM development	T&M	AFSAA, Rosslyn, VA				1.000				Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		1.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support										Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation										Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Management										Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		1.000		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE 5004 New and Emerging Capabilities

STORM

	FY06	FY07	FY08	FY09
Storm Development	▬▬			

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 5004 New and Emerging Capabilities

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Storm development		1-4Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 5135 Warfighter Readiness	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5135 Warfighter Readiness	5.973	13.276	13.546	11.516	17.615	16.182	18.909	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Warfighter Readiness (WR) focuses on putting the Warfighter in a simulated environment to improve warfighting decision-making, execution, skills and processes. Examples include operational training, mission rehearsal, operational decision-making, mission execution, concept development and wargaming.

WR includes the Air and Space Constructive Environment (ACE), which is the constructive back plane for live and virtual assets to work within for Distributed Mission Operations (DMO). Distributive Mission Operations (DMO) is the Air Force's contribution to the Joint National Training Concept (JNTC). WR's capabilities provided within the environment are the AF's contribution to the Joint Training Confederation's battle staff training environment used to support Combatant Commanders, Joint Task Force, and component commander staff readiness training. The capabilities support Joint/Service exercises including, but not limited to: Joint National Training Concept (JNTC), Yama Sakura, Reception, Staging, Onward-movement & Integration (RSO&I), Ulchi Focus Lens, Roving Sands, Austere Challenge, Flexible Leader, Blue Flag, Joint Expeditionary Force Experiment, and Red/Virtual Flag.

Other capabilities will provide for Intelligence, Surveillance, and Reconnaissance (ISR) training and exercise supported by using a virtual ISR system for command and staff level training. The simulation provides commanders, staffs and operators with a common training system for the employment, tasking, exploitation and dissemination of imagery. The environment also provides models simulating electronic combat, electronic warfare, targeting, ISR representation, and intelligence integral to the Air and Space Operations Center training.

WR also includes the Air Force Modeling & Simulation Training Toolkit (AFMSTT) modernization. AFMSTT provides: the Air Warfare Simulation System (AWSIM) which interfaces to Command, Control, Communications, Computers, and Intelligence (C4I) to Theater Battle Management Core System (TBMCS) and the Graphical Input Aggregate Control (GIAC), the Logistics Simulation (LOGSIM), the Intelligence Management Controller Node (IMCN), the AWSIM Analysis Tool (AAT), and the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS). AFMSTT's capabilities require modernization to support Air Force Title X requirements.

In addition, project 675135 supports the Joint Model Transition (formerly known as Legacy Model Transition) which supports the development and upgrade of models selected through a board process. The selection process allows the board to influence the direction of model development and integration for the modeling and simulation community. Emphasis is placed on standardization, integration, capabilities improvement, joint applicability and acceptance.

This program is in Budget Activity 7 - Operational System Development because it provides RDT&E funding for major USAF Modeling and Simulation efforts.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **5135 Warfighter Readiness**

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

		FY 2005	FY 2006	FY 2007
(U)	AFMSTT Modernization	5.600	9.801	8.000
(U)	Distributed Mission Operations Integration (DMOI)	0.000	2.975	4.846
(U)	Perform JMT cost-benefit analysis, develop and integrate models, simulations and interface standards	0.373	0.350	0.500
(U)	Aggregate Level Simulation Protocol (ALSP)	0.000	0.150	0.200
(U)	Total Cost	5.973	13.276	13.546

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Electronic Systems Center (ESC) at Hanscom AFB, MA will manage full and open acquisition and model development process for all WR activities.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207601F USAF Modeling and Simulation**

PROJECT NUMBER AND TITLE: **5135 Warfighter Readiness**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFMSTT	Various	ESC, Hanscom AFB, MA		5.600	Dec-04	9.801	Jan-06	8.000	Dec-06	Continuing	TBD	TBD
DMOI	Various	ESC, Hanscom AFB, MA				2.975	Jan-06	4.846	Dec-06	Continuing	TBD	TBD
JMT	Various	General Services Administration (GSA)and Office of Aerospace Studies (OAS), Kirtland AFB, NM		0.373	Feb-05	0.350	Dec-05	0.500	Dec-06	Continuing	TBD	TBD
ALSP	Various	ESC, Hanscom AFB, MA				0.150	Dec-05	0.200	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	5.973		13.276		13.546		Continuing	TBD	TBD
Remarks:												
(U) Support											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	5.973		13.276		13.546		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2006**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207601F USAF Modeling and Simulation**	PROJECT NUMBER AND TITLE **5135 Warfighter Readiness**

Exhibit R-4: Warfighter Readiness (WR)

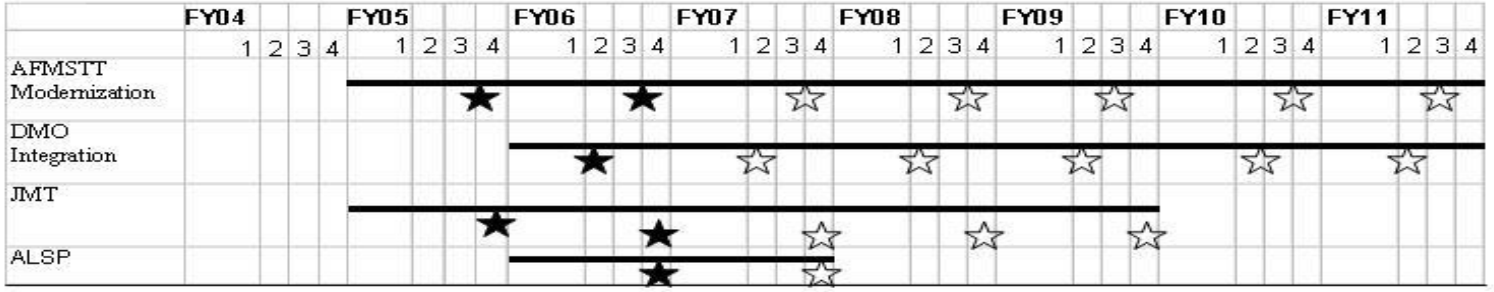

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207601F USAF Modeling and Simulation	PROJECT NUMBER AND TITLE: 5135 Warfighter Readiness

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AFMSTT Modernization	1-4Q	1-4Q	1-4Q
(U) DMOI Development		1-4Q	1-4Q
(U) JMT-perform cost-benefit analysis, develop and integrate models, simulations and interface standards according to Modeling & Simulation Strategic Plan (MSSP) and architecture.	1-4Q	1-4Q	1-4Q
(U) ALSP Development		1-4Q	1-4Q

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PE NUMBER: 0207605F
PE TITLE: Wargaming and Simulation Centers

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207605F Wargaming and Simulation Centers

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.993	6.278	6.595	6.457	3.878	7.149	7.263	Continuing	TBD
2888	Distributed Mission Operations Center (DMOC)	6.993	6.278	6.595	6.457	3.878	7.149	7.263	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The United States Air Force (USAF) Distributed Mission Operations Center (DMOC) is an Air Combat Command, Air Warfare Center, 505th Command and Control Wing organization. It provides Joint interoperability training and testing to geographically separated Live, Virtual, and Constructive (LVC) assets--real-world weapon systems, warfighter-in-the-loop (WITL), and computer-driven simulations. Responsibilities include: integrating DMO training and test events, networks, scenarios, and databases in support of service, joint and coalition warfighters. DMOC is the lead integrator for AF DMO and virtual contributions to the Joint National Training Capability (JNTC). Additionally, it is the lead agency for Virtual Flag (VF) exercises and the DMO Multi-Level Security (MLS) Testbed.

This program is categorized as Budget Activity (BA) 7 because it provides for development of technology in support of Distributed Mission Operations.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.377	6.369	6.580
(U)	Current PBR/President's Budget	6.993	6.278	6.595
(U)	Total Adjustments	-0.384	-0.091	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.095	-0.091	
	Congressional Increases			
	Reprogrammings	-0.084		
	SBIR/STTR Transfer	-0.205		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207605F Wargaming and Simulation Centers	PROJECT NUMBER AND TITLE: 2888 Distributed Mission Operations Center (DMOC)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2888	Distributed Mission Operations Center (DMOC)	6.993	6.278	6.595	6.457	3.878	7.149	7.263	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The United States Air Force (USAF) Distributed Mission Operations Center (DMOC) is an Air Combat Command, Air Warfare Center, 505th Command and Control Wing organization. It provides Joint interoperability training and testing to geographically separated Live, Virtual, and Constructive (LVC) assets--real-world weapon systems, warfighter-in-the-loop (WITL), and computer-driven simulations. Responsibilities include: integrating DMO training and test events, networks, scenarios, and databases in support of service, joint and coalition warfighters. DMOC is the lead integrator for AF DMO and virtual contributions to the Joint National Training Capability (JNTC). Additionally, it is the lead agency for Virtual Flag (VF) exercises and the DMO Multi-Level Security (MLS) Testbed.

This program is categorized as Budget Activity (BA) 7 because it provides for development of technology in support of Distributed Mission Operations.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue to maintain core structure to support users conducting RDT&E, mission rehearsal, and concepts of operation development	5.799	5.075	5.373
(U) Continue to support requirements definition, test support, scenario development, analysis, system engineering support, and Verification, Validation and Accreditation (VV&A) of core systems	0.680	0.681	0.685
(U) Communications connectivity between DMOC and various other modeling & simulation (M&S) facilities	0.209	0.207	0.212
(U) Program Management Office support	0.305	0.315	0.325
(U) Total Cost	6.993	6.278	6.595

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

One contract is full and open competition, and one contract is small business set-aside.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207605F Wargaming and Simulation Centers**

PROJECT NUMBER AND TITLE: **2888 Distributed Mission Operations Center (DMOC)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Mission Rehearsals/Concept of Operations	CPFF	Lockheed Martin/505 Distributed Warfare Group (DWG), Kirtland AFB, NM		5.799	Oct-04	5.075	Oct-05	5.373	Oct-06	Continuing	TBD	TBD
Verify, Validate, and Accredit Core Systems	CPFF	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.680	Oct-04	0.681	Oct-05	0.685	Oct-06	Continuing	TBD	TBD
Communications Connectivity	CPFF	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.209	Oct-04	0.207	Oct-05	0.212	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	6.688		5.963		6.270		Continuing	TBD	TBD
Remarks:												
(U) Support											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Program Management Support	ITSP	Lockheed Martin/505 DWG, Kirtland AFB, NM		0.305	Oct-04	0.315	Oct-05	0.325	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	0.305		0.315		0.325		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	6.993		6.278		6.595		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207605F Wargaming and Simulation Centers**	PROJECT NUMBER AND TITLE **2888 Distributed Mission Operations Center (DMOC)**

UNCLASS

DMOC Schedule

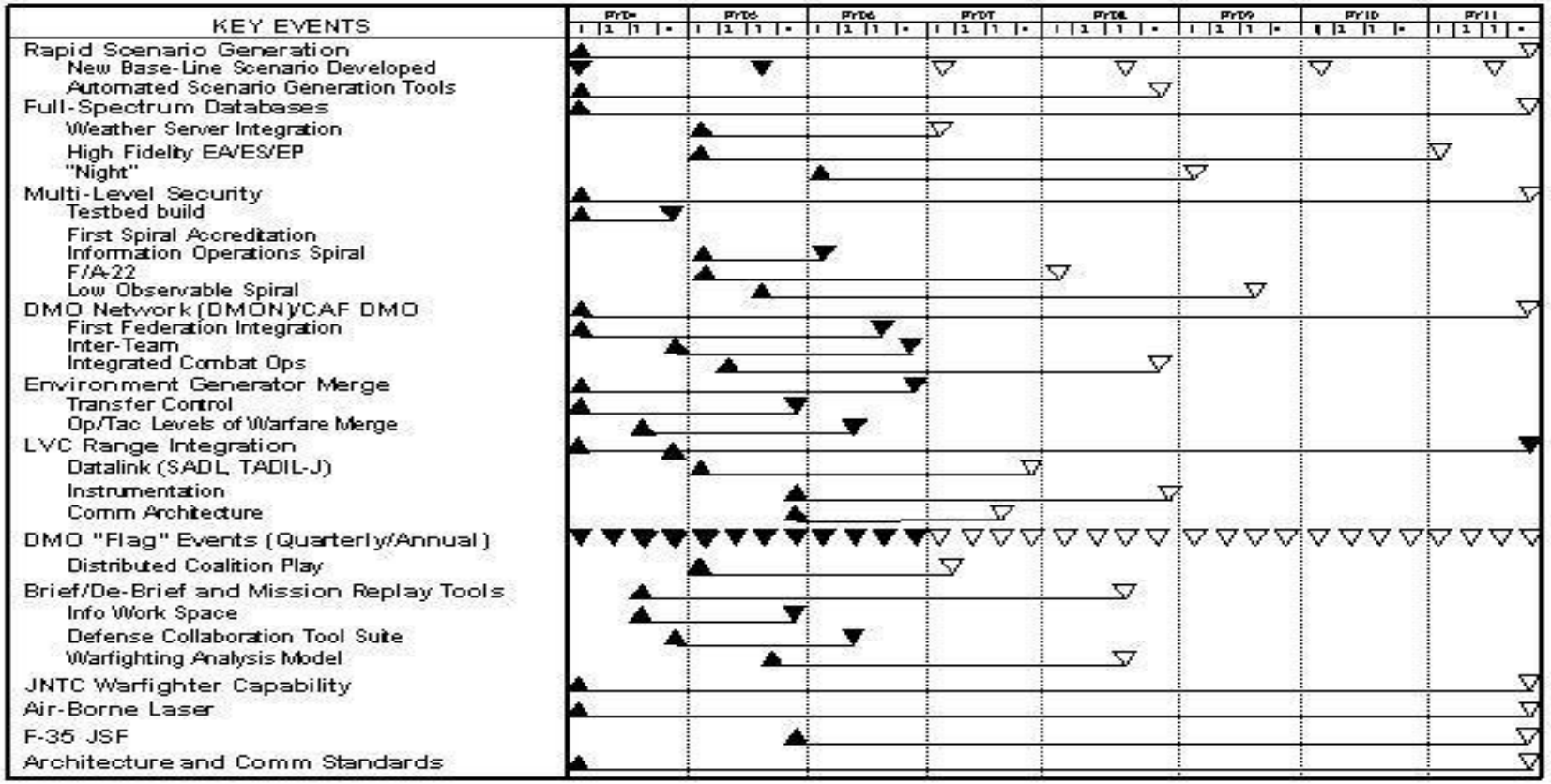

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0207605F Wargaming and Simulation Centers**	PROJECT NUMBER AND TITLE: **2888 Distributed Mission Operations Center (DMOC)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Distributed Mission Operations (DMO)/Integration of Virtual and Blue Flags	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0207697F
PE TITLE: Distributed Training and Exercises

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	4.162	6.138	7.441	7.468	7.490	7.469	0.000	0.000
5190 JFCOM Wargaming	0.000	4.162	6.138	7.441	7.468	7.490	7.469	0.000	0.000

(U) A. Mission Description and Budget Item Justification

In September 03 the AF/CV directed the establishment of an 11-person AF Liaison Office (LNO) at USJFCOM with representatives from across the AF to increase participation in joint transformation activities including joint concept development and experimentation and joint Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTMLPF) recommendations. The LNO is chartered to ensure accurate representation of air and space capabilities in joint activities.

This program is categorized in Budget Activity (BA) 7 because it supports an operational system.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget		4.162	6.138
(U)	Current PBR/President's Budget	0.000	4.162	6.138
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0207697F Distributed Training and Exercises**	**5190 JFCOM Wargaming**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5190 JFCOM Wargaming	0.000	4.162	6.138	7.441	7.468	7.490	7.469	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

In September 03 the AF/CV directed the establishment of an 11-person AF Liaison Office (LNO) at USJFCOM with representatives from across the AF to increase participation in joint transformation activities including joint concept development and experimentation and joint Doctrine, Organization, Training, Material, Leadership & Education, Personnel & Facilities (DOTMLPF) recommendations. The LNO is chartered to ensure accurate representation of air and space capabilities in joint activities.

This program is categorized in Budget Activity (BA) 7 because it supports an operational system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Develops air and space wargaming specific functionality in existing simulation and analysis tools (e.g., JWARS, THUNDER/STORM)		1.440	1.585
(U) Provides for capabilities, Requirements, and Risk Assessment (CRRA)		1.380	1.580
(U) Enables entity-level simulation tools and effects-based modeling for Joint Concept Development and Experimentation		0.542	1.230
(U) Supplies platforms for software in operational environments and for programmed replacement costs		0.800	1.743
(U) Total Cost	0.000	4.162	6.138

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

All contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0207697F Distributed Training and Exercises**

PROJECT NUMBER AND TITLE: **5190 JFCOM Wargaming**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	TBD	TBD				4.162		6.138		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		4.162		6.138		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		4.162		6.138		Continuing	TBD	TBD

Note: Funding is for a continuous series of updates and modifications. There is no contract award associated with this funding.

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0207697F Distributed Training and Exercises**	PROJECT NUMBER AND TITLE **5190 JFCOM Wargaming**

AF Liaison Office (LNO) to USJFCOM

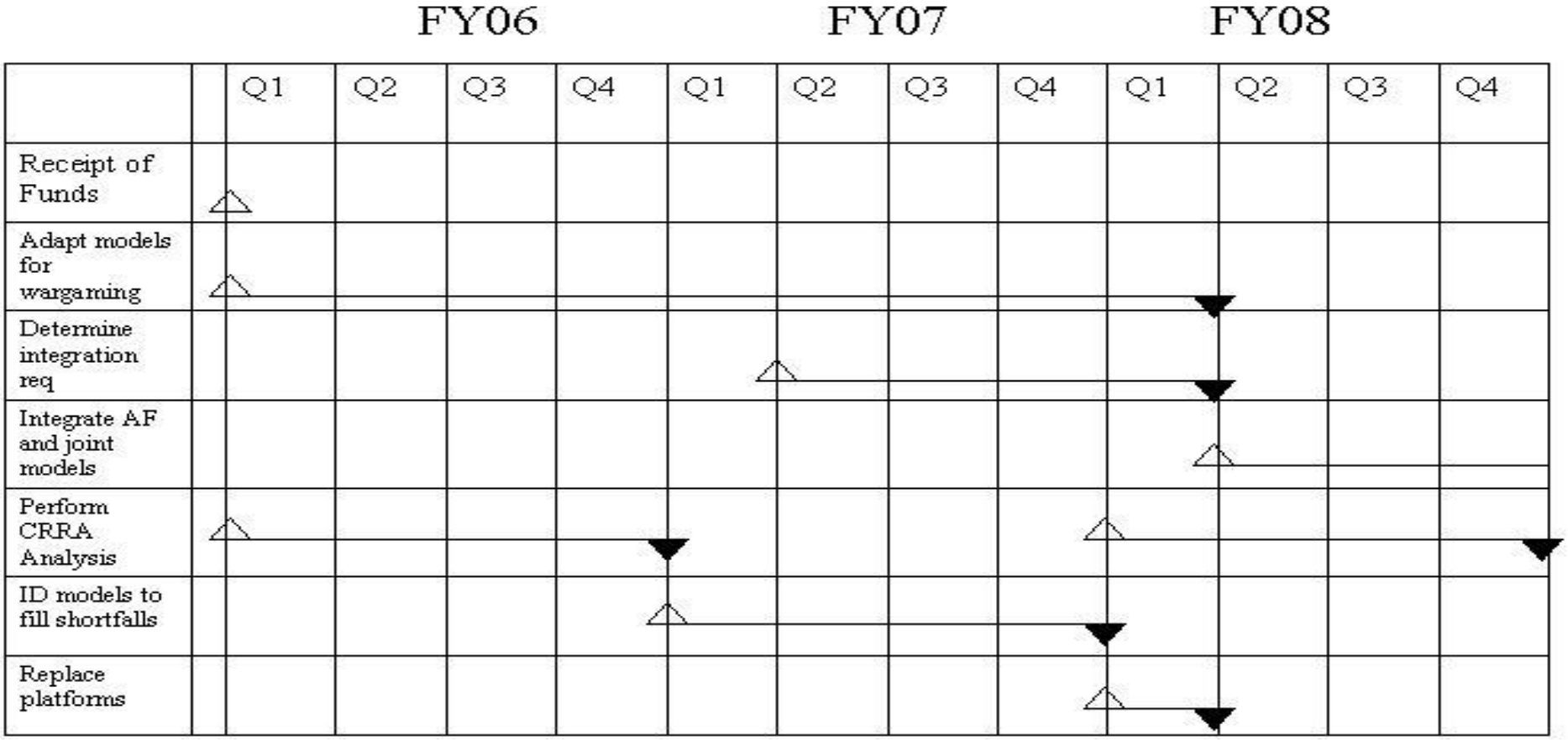

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0207697F Distributed Training and Exercises	PROJECT NUMBER AND TITLE: 5190 JFCOM Wargaming

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Adapt STORM/THUNDER and JWARS for wargaming	2-4Q	1-4Q	1-4Q
(U) Determine other model integration/adaptation requirements			2-4Q
(U) Perform CRRA analysis biannually		1-4Q	

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PE NUMBER: 0208006F
PE TITLE: Mission Planning Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD
3858	Mission Planning Systems (MPS)	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Mission Planning Systems (formally Air Force Mission Support Systems (AFMSS)) program was established in 1990 to consolidate the many mission planning system development efforts into a single-unit level mission planning system. In FY04, the Mission Planning Systems System Program Office at Hanscom AFB, MA was directed to execute all mission planning development activities and funding was added to accomplish this directive. Today there are two legacy AF mission planning systems migrating to a single, multi-service system, called the Joint Mission Planning System (JMPS). Until all aircraft and weapons are migrated to JMPS, Mission Planning Systems maintains current combat capabilities on the two existing legacy planning systems. Mission Planning Systems is considered a family of products program consisting of the UNIX-based Mission Planning System (Unix-MPS), the PC-based Portable Flight Planning Software (PFPS) and JMPS.

Mission Planning Systems encompasses evolutionary software and hardware development by integrating military and commercial software on Commercial-Off-The-Shelf (COTS) hardware in an open systems architecture. This allows the program to take advantage of the latest PC technology to meet user demands for the most capable systems.

Mission Planning provides comprehensive mission planning tools to aid the warfighter in planning a variety of worldwide missions ranging from homeland security and the global war on terrorism to operations supporting conventional and nuclear armed conflicts. These tools also support peacetime exercises as well as day-to-day training. The UNIX-based MPS operates in combination with the PC-based PFPS to deliver planning capability uploads for aircraft and missile systems, and routing data for platforms utilizing low observable (LO) technology.

Mission Planning Systems supports/will support a variety of aircraft and weapons including (but not limited to) the following: A-10, B-1, B-2, B-52, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-117, F/A-22, KC-10, KC-135, RC-135, U-2, Joint Strike Fighter (JSF), Air to Ground Munitions (AGM) -130, AGM-142, Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Stand off Munitions (JASSM), Miniature Air Launched Decoy (MALD), Predator, and Global Hawk. Mission Planning Systems software is used in the Cockpit Auxiliary Targeting System (CATS) portion of the Integrated Air Ground Imaging (IAGI) capability for the A-10.

Mission Planning Systems uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (Increment content is described below) to provide capabilities to individual platforms. Additionally, the JMPS architecture ensures common components are utilized among all service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Further spirals of JMPS will eliminate stovepipe systems. The JMPS framework and common components will require continuous upgrades to: reduce timelines for route planning, transmit near real-time intelligence data to the platforms, increase the accuracy of the mapping products, and provide a Windows-based, COTS-based, user friendly product. JMPS has inter-service leadership and requirements.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems

a. Increment I was the initial development effort, which provided the framework for basic flight planning for all platforms.

b. Increment II provides for the initial migration of legacy mission planning capability to JMPS for the F-15 and RC-135 aircraft.

c. Increment III continues the migration of additional aircraft platforms (F/A-22, F-16, B-1B, etc) and weapons (JASSM, etc) to JMPS, upgrades the framework, and develops new common components (e.g. weather, electronic warfare) and unique platform capabilities. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

d. Increment IV continues the JMPS migration for additional platforms (Tanker Airlift Special Mission (TASM), Intelligence, Surveillance & Reconnaissance (ISR) aircraft, etc..) to JMPS while upgrading the framework and Common Components Capabilities.

e. Increment V completes the migration to JMPS for additional platforms (e.g. B-2, B-52, etc.) while developing new and improved JMPS capabilities for all platforms. It also conducts studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades.

f. Net centric capabilities are/will be developed to provide web based JMPS mission planning to stay in concert with current C2 strategies.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities in support of the currently fielded PFPS and Unix-MPS systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	105.003	138.475	130.626
(U)	Current PBR/President's Budget	87.659	119.860	146.396
(U)	Total Adjustments	-17.344	-18.615	
(U)	Congressional Program Reductions		-16.881	
	Congressional Rescissions	-0.081	-1.734	
	Congressional Increases	2.100		
	Reprogrammings	-16.500		
	SBIR/STTR Transfer	-2.863		

(U) Significant Program Changes:

- FY05 reduction is for higher AF priorities [defers/delays some efforts (e.g. Airdrop Planning, Sensor Predictions, PGMPS Small Diameter Bomb, Common ISR, Joint Air-to-Surface Stand Off Munitions (JASSM), Predator) until FY07]. Additionally, Congress provided $2.1M in FY05 for CATS (Cockpit Auxillary Targeting System) development.
- Congress reduced FY06 by $16.7M for a previous milestone decision delay. Delays development of initial capability for Global Hawk and defers development of mission planning capability for U-2.
- FY07 additions restores funding for deferred FY05 efforts

Exhibit R-2a, RDT&E Project Justification			DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE 3858 Mission Planning Systems (MPS)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3858	Mission Planning Systems (MPS)	87.659	119.860	146.396	103.021	96.405	98.371	99.378	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Mission Planning Systems (formally Air Force Mission Support Systems (AFMSS)) program was established in 1990 to consolidate the many mission planning system development efforts into a single-unit level mission planning system. In FY04, the Mission Planning Systems System Program Office at Hanscom AFB, MA was directed to execute all mission planning development activities and funding was added to accomplish this directive. Today there are two legacy AF mission planning systems migrating to a single, multi-service system, called the Joint Mission Planning System (JMPS). Until all aircraft and weapons are migrated to JMPS, Mission Planning Systems maintains current combat capabilities on the two existing legacy planning systems. Mission Planning Systems is considered a family of products program consisting of the UNIX-based Mission Planning System (Unix-MPS), the PC-based Portable Flight Planning Software (PFPS) and JMPS.

Mission Planning Systems encompasses evolutionary software and hardware development by integrating military and commercial software on Commercial-Off-The-Shelf (COTS) hardware in an open systems architecture. This allows the program to take advantage of the latest PC technology to meet user demands for the most capable systems.

Mission Planning provides comprehensive mission planning tools to aid the warfighter in planning a variety of worldwide missions ranging from homeland security and the global war on terrorism to operations supporting conventional and nuclear armed conflicts. These tools also support peacetime exercises as well as day-to-day training. The UNIX-based MPS operates in combination with the PC-based PFPS to deliver planning capability uploads for aircraft and missile systems, and routing data for platforms utilizing low observable (LO) technology.

Mission Planning Systems supports/will support a variety of aircraft and weapons including (but not limited to) the following: A-10, B-1, B-2, B-52, C-5, C-17, C-130, E-3, E-8, F-15, F-16, F-117, F/A-22, KC-10, KC-135, RC-135, U-2, Joint Strike Fighter (JSF), Air to Ground Munitions (AGM) -130, AGM-142, Joint Direct Attack Munitions (JDAM), Joint Stand Off Weapon (JSOW), Wind Corrected Munitions Dispenser (WCMD), Joint Air-to-Surface, Stand off Munitions (JASSM), Miniature Air Launched Decoy (MALD), Predator, and Global Hawk. Mission Planning Systems software is used in the Cockpit Auxiliary Targeting System (CATS) portion of the Integrated Air Ground Imaging (IAGI) capability for the A-10.

Mission Planning Systems uses an evolutionary acquisition approach, which emphasizes spiral development and the use of Increments (Increment content is described below) to provide capabilities to individual platforms. Additionally, the JMPS architecture ensures common components are utilized among all service platforms and weapons systems where appropriate, thereby reducing duplicative software development efforts and increasing interoperability between services. Further spirals of JMPS will eliminate stovepipe systems. The JMPS framework and common components will require continuous upgrades to: reduce timelines for route planning, transmit near real-time intelligence data to the platforms, increase the accuracy of the mapping products, and provide a Windows-based, COTS-based, user friendly product. JMPS has inter-service leadership and requirements.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208006F Mission Planning Systems**	PROJECT NUMBER AND TITLE **3858 Mission Planning Systems (MPS)**

a. Increment I was the initial development effort, which provided the framework for basic flight planning for all platforms.

b. Increment II provides for the initial migration of legacy mission planning capability to JMPS for the F-15 and RC-135 aircraft.

c. Increment III continues the migration of additional aircraft platforms (F/A-22, F-16, B-1B, etc) and weapons (JASSM, etc) to JMPS, upgrades the framework, and develops new common components (e.g. weather, electronic warfare) and unique platform capabilities. Additionally, engineering studies will be conducted to plan and support the migration of future platforms to JMPS.

d. Increment IV continues the JMPS migration for additional platforms (Tanker Airlift Special Mission (TASM), Intelligence, Surveillance & Reconnaissance (ISR) aircraft, etc..) to JMPS while upgrading the framework and Common Components Capabilities.

e. Increment V completes the migration to JMPS for additional platforms (e.g. B-2, B-52, etc.) while developing new and improved JMPS capabilities for all platforms. It also conducts studies and analyses, including evaluating new Information Technology (IT) infrastructure technologies, in support of future system upgrades.

f. Net centric capabilities are/will be developed to provide web based JMPS mission planning to stay in concert with current C2 strategies.

The Mission Planning Systems program is in Budget Activity 7 because it provides for development of technologies and capabilities in support of the currently fielded PFPS and Unix-MPS systems.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Increment II - Migration of mission planning capability to JMPS	6.720	5.509	0.000
(U)	Increment III - continues the migration of additional platforms as well as adding upgrades to JMPS	53.501	61.432	54.663
(U)	Increment IV - continues to add enhancements and/or upgrades to JMPS framework and common components	3.318	26.061	59.942
(U)	Increment V - continues the migration JMPS into additional aircraft platforms	0.000	0.000	3.386
(U)	NetCentric Capability - continuing the development and design of web-based tools to provide information to JMPS	0.011	1.332	1.269
(U)	Test, Training, and Certification	5.073	10.038	10.764
(U)	FFRDC (Mitre)	5.811	5.606	5.941
(U)	Program Office Support	13.225	9.882	10.431
(U)	Total Cost	87.659	119.860	146.396

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Appn									
(U)	OPAF PE 0208006F (Other	15.613	15.035	16.337	13.896	14.309	15.338	13.686	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208006F Mission Planning Systems**	PROJECT NUMBER AND TITLE **3858 Mission Planning Systems (MPS)**

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

Procurement Air Force, WSC
833040, Theater Air Control
System Improvement)

(U) D. Acquisition Strategy

Mission Planning Systems utilizes an evolutionary acquisition approach to develop and deliver an interoperable, network centric, mission planning system tailored for multiple Air Force platforms using open competition and a variety of contract vehicles.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208006F Mission Planning Systems**

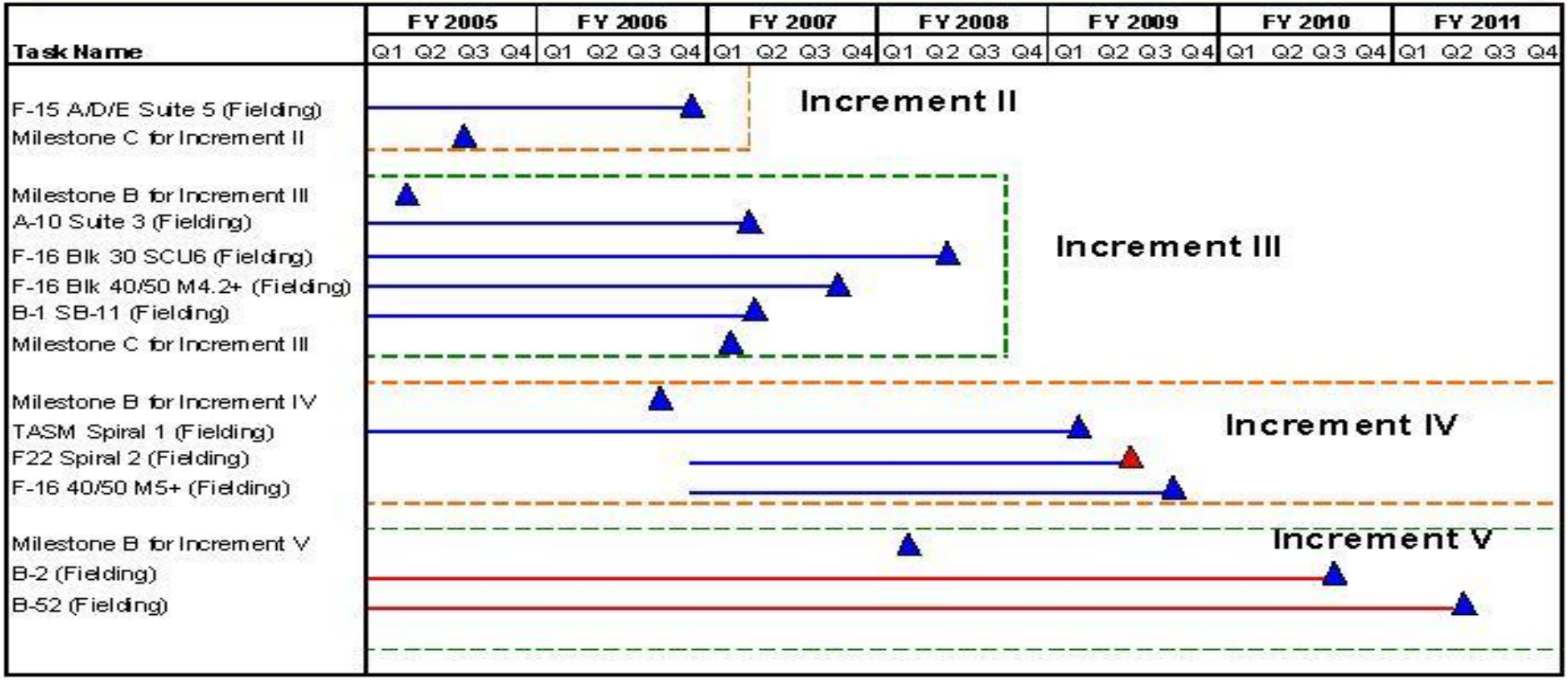
PROJECT NUMBER AND TITLE: **3858 Mission Planning Systems (MPS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Mission Planning Enterprise Contract	C/Various	Various		54.050	Feb-05	77.042	Nov-05	100.112	Nov-06	Continuing	TBD	TBD
Systems Engineering and Integration	C/Various	Various		8.593	Jun-05	16.402	Nov-05	18.251	Nov-06	Continuing	TBD	TBD
N/A											0.000	
Subtotal Product Development			0.000	62.643		93.444		118.363		Continuing	TBD	TBD
Remarks:												
(U) Support												
Software Engineering Institute (SEI)	C/T&M	Pittsburgh, PA		0.197	Feb-05	0.462	Dec-05	0.444	Nov-06	Continuing	TBD	TBD
Tecolote	C/T&M	Bedford, MA		0.710	Nov-04	0.428	Nov-05	0.453	Nov-06	Continuing	TBD	TBD
Subtotal Support			0.000	0.907		0.890		0.897		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
46TW	PO	Eglin AFB, FL		5.073	Oct-04	10.038	Nov-05	10.764	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	5.073		10.038		10.764		Continuing	TBD	TBD
Remarks:												
(U) Management												
FFRDC (MITRE)	SS/T&M	Bedford, MA		5.811	Oct-04	5.606	Nov-05	5.941	Nov-06	Continuing	TBD	TBD
Program Office Support	C/T&M	Various		13.225	Oct-04	9.882	Nov-05	10.431	Nov-06	Continuing	TBD	TBD
Subtotal Management			0.000	19.036		15.488		16.372		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	87.659		119.860		146.396		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE 3858 Mission Planning Systems (MPS)

U.S. AIR FORCE

Mission Planning Systems Schedule



Acronyms:
TASM - Tanker Airlift Special Mission

As of: 20 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208006F Mission Planning Systems	PROJECT NUMBER AND TITLE: 3858 Mission Planning Systems (MPS)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) F-15A-E Suite 5 Fielding		4Q	
(U) Milestone C for Increment II	3Q		
(U) Milestone B for Increment III	1Q		
(U) A-10 Suite 3 Fielding			2Q
(U) F-16 Block 30, SCU6 Fielding			2Q
(U) F-16 (Block 40, M4.2+ and Block 50, M4.2+) Fielding			3Q
(U) B-1 SB-11 Fielding			1Q
(U) Milestone C for Increment III			1Q
(U) Milestone B for Increment IV		3Q	

PE NUMBER: 0208021F
PE TITLE: Information Warfare Support

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	10.066	14.973	24.758	26.498	26.944	27.909	28.426	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	10.066	7.142	16.542	18.089	18.428	18.960	19.312	Continuing	TBD
4871	Information Operations Technology	0.000	7.831	8.216	8.409	8.516	8.949	9.114	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Program Element funds research and development of information operations (IO), electronic support, and intelligence capabilities required to execute counterspace and information operations in support of combatant commanders. As directed by SECAF and approved by OSD, programs that are supported include the Information Operations Planning Capability-Joint (IOPC-J), the Information Warfare Planning Capability (IWPC), the Counter Communications System (CCS) and the Rapid Attack Identification Detection and Reporting System (RAIDRS), and Counter Space Electronic Support.

IWPC is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic and kinetic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL). In FY08, IWPC will spiral into IOPC-J to begin the development of a Joint IO planning system. AF specific AOC planning functions may continue under requirements being explored by the C2ISR center during JEFX-06 that will include kinetic and IO effects.

IOPC-J, is a follow on capability to IWPC that is scoped to develop IO courses of action for the Joint and National IO community. The AF is about to assume the joint requirements definitions and procurement for this capability following JROC approval. The on-going development provided by the Air Force's IWPC tool provides commonality with a joint program's planning requirement. Studies and software interface documentation has already been completed that will accommodate joint IO applications in subsequent software versions of IWPC. These IO planning tools are scheduled to become baseline capabilities in the Air Operations Center (AOC) Weapon System and National Intel fusion centers. As part of the AOC, IWPC will participate in each Joint Expeditionary Force Experiment (JEFX) as part of the overall IWPC software development and integration.

CCS provides ground-based deployable capabilities for denying satellite communications to our adversaries.

RAIDRS provides a family of ground-based systems that rapidly detect, locate, characterize, identify and report attacks against DoD-used space assets.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and

vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This PE funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.147	15.204	15.191
(U)	Current PBR/President's Budget	10.066	14.973	24.758
(U)	Total Adjustments	2.919	-0.231	
(U)	Congressional Program Reductions	-0.023	-0.015	
	Congressional Rescissions	-0.069	-0.216	
	Congressional Increases			
	Reprogrammings	3.188		
	SBIR/STTR Transfer	-0.177		

(U) Significant Program Changes:

In FY05, the Air Force reprogrammed $3.2M into this Program Element for information operations capability demonstrations. An additional $2.0M was also reprogrammed in early FY06, but is not reflected in FY05 current PBR/President's Budget top line number shown above.

In FY-06, this program also received funding from OSD to begin the requirements definition and program acquisition of the Joint IO planning tools IOPC-J and the Joint Inter Agency Planning Capability (JIAPC). These joint capabilities are pre-planned program improvements to the baseline IWPC program to be activated following the Air Forces decision to become the executive agent for IO planning.

In FY07 the program received additional funding as a SECAF directed, effort to provide required electronic support and intelligence capabilities in support of counterspace operations.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	10.066	7.142	16.542	18.089	18.428	18.960	19.312	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Information Warfare Planning Capability (IWPC) is a full-spectrum, offensive and defensive, planning capability. IWPC is an Air and Space Operations Center (AOC) weapon system component which will enable operators to develop IO strategic and kinetic courses of action for the Joint Forces Air Component Commander (JFACC) and nominate IO "targets" for inclusion into the Master Air Attack Plan and the Joint Integrated Prioritized Target List (JIPTL).

This project funds the development of an evolving suite of interoperable IO planning and decision support capabilities comprised of, software, hardware, and communications products. This project will identify and implement an open, scalable system architecture that will accommodate the expansive growth in the IO mission area. The project builds functional software modules that are designed to be interoperable with baseline C2 systems such as the Theater Battle Management Control System (TBMCS) and other AOC tools. IWPC will participate in the Joint Expeditionary Force Experiment (JEFX) as part of the overall IWPC software development and integration effort into the AOC. An IWPC increment will be released approximately every 12 - 18 months. The IWPC Spiral Development Integrated Process Team (IWPC SD IPT), chaired by ACC will define requirements for each incremental release. Integration efforts will capitalize on the synergy between evolving technologies and on-going system program modifications to maximize the return on investment.

The Counterspace effort will provide Electronic Support (ES) for key find, fix, track, target, engage, and assess (F2T2EA) requirements supporting counterspace activities and also performs developmental intelligence collection to support new capability acquisition and development. This project funds transportable intelligence collection and analysis capabilities that are modular (plug-and-play), and can keep pace with technological advances and emerging threats. It also supports phased threat system analysis and studies (A&S), test support, lab equipment, and Material Acquisition and Exploitation (MAE) for system development and vulnerability/susceptibility assessments to support tactics, techniques and procedures (TTP) development, and future threat technology studies necessary for mission area success and achievement of space superiority.

This project is in Budget Activity 7, Operational System Development, because it studies, develops, and demonstrates IO prototypes. It identifies existing military and commercial research and development efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	IWPC Software Development and Integration	6.252	2.291	0.178
(U)	AOC Integration	1.464	2.275	4.198
(U)	IWPC Software Testing and Evaluation	0.680	0.541	0.560
(U)	JEFX System integration	1.670	2.035	2.080

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE: 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

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

		FY 2005	FY 2006	FY 2007
(U)	Counterspace Electronic Support/Intelligence	0.000	0.000	9.526
(U)	Total Cost	10.066	7.142	16.542

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	IWPC Operations & Maintenance, AF (3400) PE 35193F	1.061	1.210	1.154	1.176	1.198			Continuing	TBD
(U)	Counterspace Electronic Support and Intelligence Operations and Maintenance (3400) PE 28021F	0.000	0.000	12.330	12.603	12.739	12.954	13.173	Continuing	TBD

(U) D. Acquisition Strategy

These efforts will use an evolutionary acquisition strategy using contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

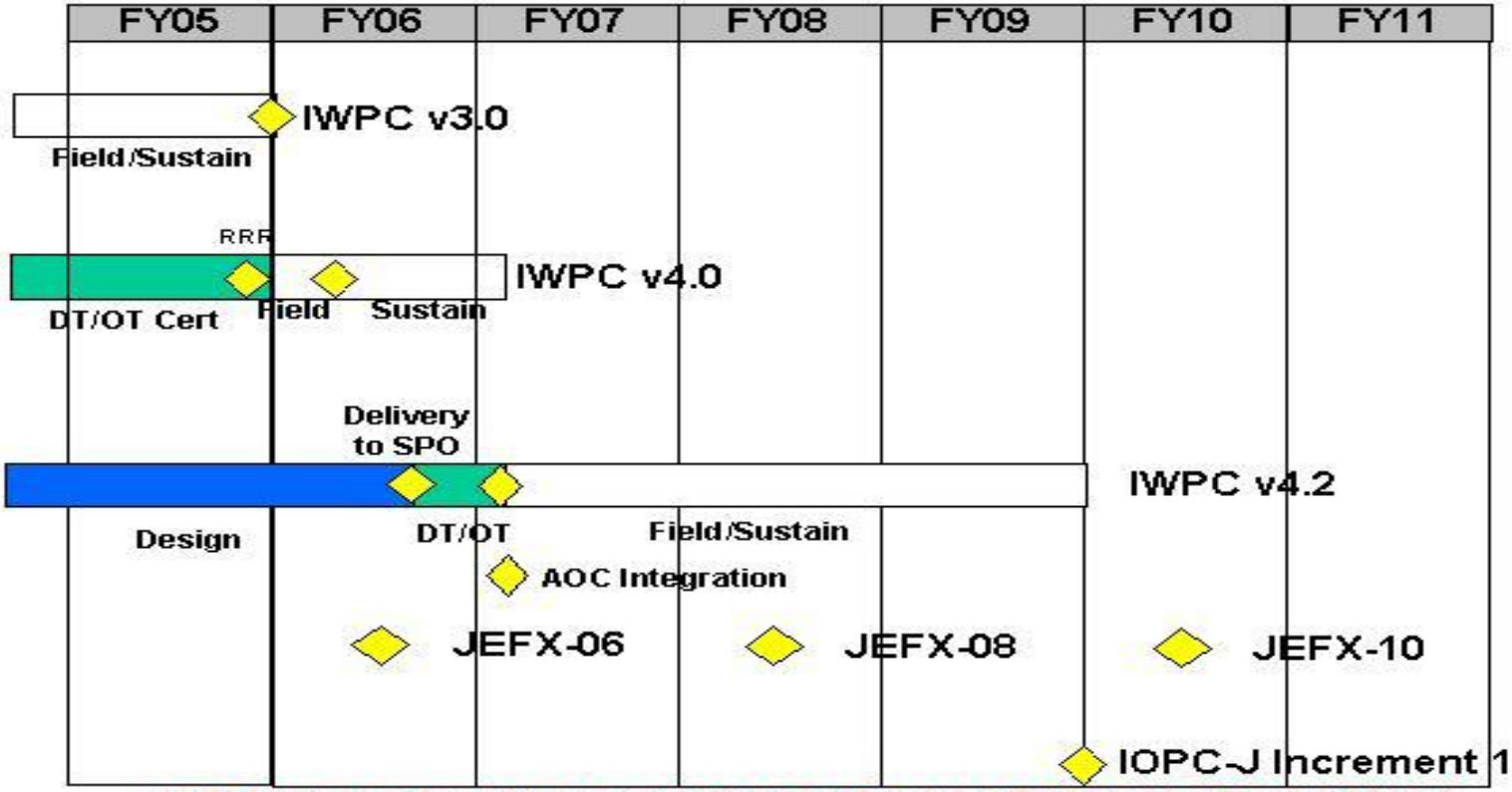
PE NUMBER AND TITLE: **0208021F Information Warfare Support**

PROJECT NUMBER AND TITLE: **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JEFX - Various	Various	Lackland AFB TX/Moutain View CA		1.990	Oct-04	0.000	Oct-05	0.000	Oct-06	Continuing	TBD	TBD
Information Technologies Support Program II (ITSP II)	Various	Lackland AFB TX		0.740	Oct-04	0.679	Oct-05	0.679	Oct-06	Continuing	TBD	TBD
IWPC	Various	General Dynamics, Lackland AFB TX/Moutain View CA		6.289	Oct-04	5.199	Oct-05	4.909	Oct-06	Continuing	TBD	TBD
IWPC	T&M	MITRE, Lackland AFB TX		0.380	Oct-04	0.395	Oct-05	0.415	Oct-06	Continuing	TBD	TBD
Counterspace Electronic Support Intel R&D	TBD	TBD	0.000	0.000	N/A	0.000	N/A	9.526	Nov-06	Continuing	TBD	TBD
System Program Office Costs	Various	Lackland AFB TX		0.137	Oct-04	0.328	Oct-05	0.453	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	9.536		6.601		15.982		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test	T&M	46th Test Squadron, Eglin AFB FL		0.530	Nov-04	0.541	Nov-05	0.560	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.530		0.541		0.560		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	10.066		7.142		16.542		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0208021F Information Warfare Support	PROJECT NUMBER AND TITLE 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

IWPC Program Schedule



** Schedule information regarding the Counter Electronics Support/Intel R&D program is protected under a Special Access Classification

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) JEFX 06 Main Exercise		3Q	
(U) IWPC v3.0 Field/Sustainment ends	4Q		
(U) IWPC v4.0 DT/OT ends	4Q		
(U) IWPC v4.2 Delivery to the SPO		3Q	
(U) IWPC v4.2 DT/OT begins		4Q	
(U) IWPC v4.2 AOC Integration			1Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0208021F Information Warfare Support**	**4871 Information Operations Technology**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4871 Information Operations Technology	0.000	7.831	8.216	8.409	8.516	8.949	9.114	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Information Operations Planning Capability (IOPC-J) will be a suite of tools developed to a joint integrated baseline. It will leverage existing capabilities but will also require system and software development activities. The suite will be comprised of Joint IO planning capabilities and Service-unique applications based on shared access to Service/Agency/joint-provided data sources in support of the Joint Forces Commander's (JFC) overall campaign plan and across the spectrum of military and peacekeeping operations. Studies and software interface documentation has already been completed that will accommodate joint IO applications in subsequent version 4.2 of the AF Information Warfare Planning Capability (IWPC) IO planning tool. The IWPC v4.2 will serve as a joint users' initial capability, pathfinder for the first developmental version and as IOPC-J's baseline capabilities.

This project funds development of and continued research to identify existing military and commercial efforts which can satisfy unfulfilled operational requirements for an IO planning and integration tool.

This program is in Budget Activity 7, Operational System Development, because it studies, develops, and fields IO tools.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) IOPC-J Software Development and Integration	0.000	4.996	4.940
(U) (U) Site Integration	0.000	2.275	2.576
(U) (U) IOPC-J Software Testing and Evaluation	0.000	0.560	0.700
(U) Total Cost	0.000	7.831	8.216

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) IWPC Operations and maintenance, AF 3400 and PE 35193F	1.061	1.210	1.154	1.176	1.198	1.200	1.200	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts will be awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0208021F Information Warfare Support**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
IOPC-J development	TBD	TBD				7.831	Apr-06	8.216	Apr-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		7.831		8.216		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Support												
TBD										Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Test & Evaluation												
TBD										Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Management												
TBD										Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.000		0.000		Continuing	TBD	TBD
Remarks: Specific WBS information will be available following JROC actions allowing the SPO to initiate programmatic detail												
(U) Total Cost			0.000	0.000		7.831		8.216		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

IOPC/J Program Schedule

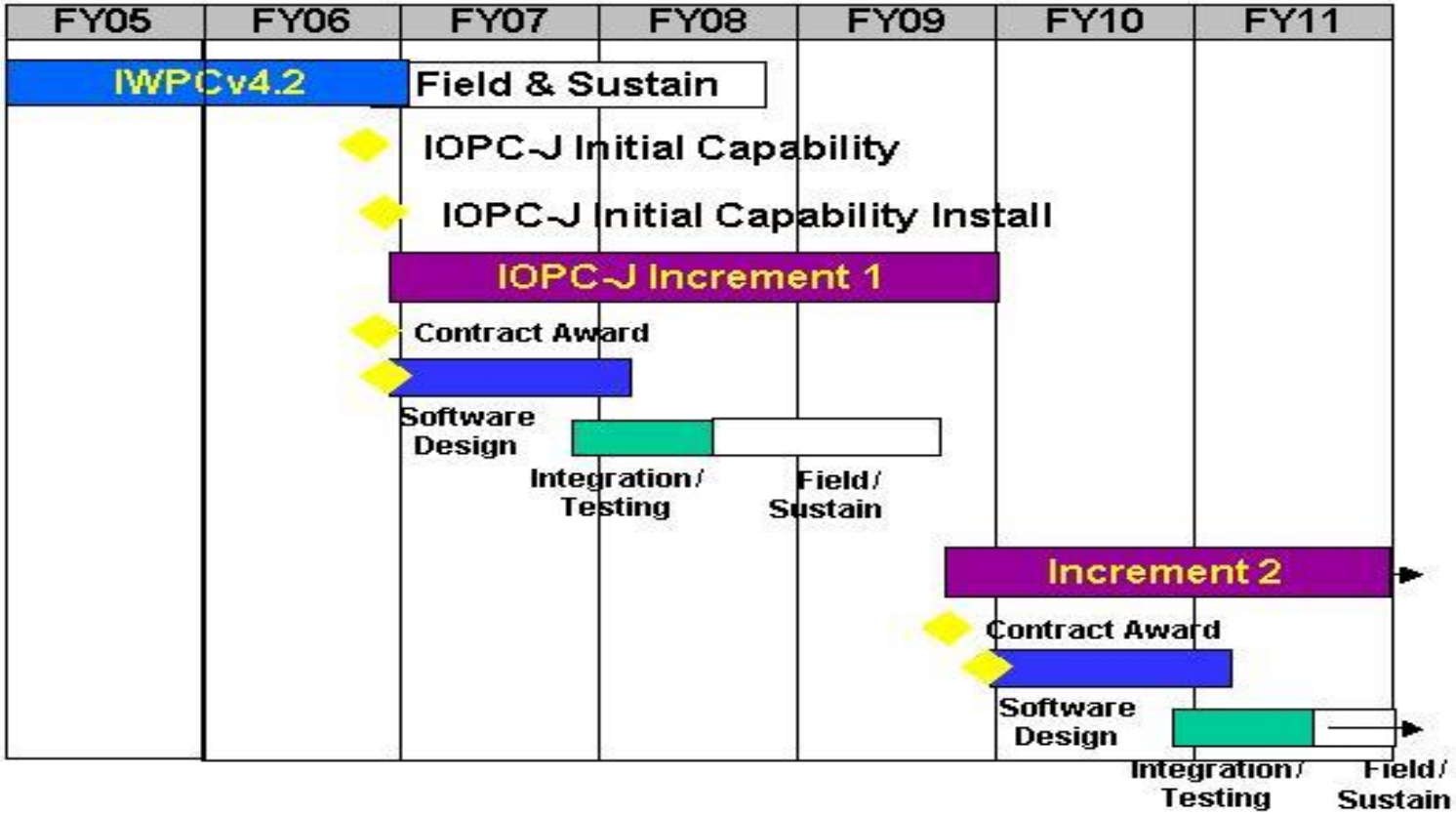

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0208021F Information Warfare Support**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) IOPC-J Initial Capability (IWPC 4.2 + ION)		3-4Q	
(U) IOPC-J Initial Capability Install		4Q	
(U) (U) IOPC/J Increment 1 Contract Award		4Q	
(U) (U) IOPC/J Increment 1 Software Development		4Q	1-4Q
(U) (U) IOPC/J Increment 1 Software IntegrationTesting			4Q

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PE NUMBER: 0302015F
PE TITLE: E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	13.801	18.639	0.283	0.000	0.000	0.000	0.000	0.000	210.293
4777 E-4B Aircraft Modernization	13.801	18.639	0.283	0.000	0.000	0.000	0.000	0.000	210.293

(U) A. Mission Description and Budget Item Justification

The E-4B National Airborne Operations Center (NAOC) modernization program upgrades the fleet of four highly modified Boeing 747-200 aircraft to add new capability and improve reliability for its two primary missions (nuclear command and control and senior national leader support). The E-4B NAOC fleet satisfies the military requirement to provide a survivable operations center as an alternate to the National Military Command Center (NMCC) located in the Pentagon. The E-4B NAOC fleet also satisfies the military need for an airborne operations center with communications capabilities that will permit senior national leadership to monitor and control military and civil national assets during all phases of national conflict or disaster. Developmental modifications include, but are not limited to, upgrades and enhancements to aircraft structures, propulsion system, fuel system, environmental control system, electrical generation and distribution systems, flight safety and navigation systems (with their associated communications equipment), and the related aircraft operations center facilities, equipment, and communications necessary for the E-4B fleet to execute its primary mission as an alternate NMCC.

Modifications currently underway or planned for accomplishment under this program include:
- Modification Block 1 (Mod Blk 1): A group designator for modifications being started and completed together on the same aircraft. The RDT&E elements of Mod Blk 1 include Audio Infrastructure Update (AIU) (formerly Block 5A) and Global Air Traffic Management (GATM) II. The Senior Leaders Communication System (SLCS) is also included in the Mod Blk 1 work, but is not considered R&D work. The SLCS modification is entirely funded with Aircraft Procurement (Aircraft Modification) funds.

-- Audio Infrastructure Update (AIU) affects the primary mission internal audio distribution and recording system. It replaces obsolete 1960s era analog equipment with digital technology that corrects a major sustainment issue associated with out-dated analog voice, data distribution, and recording equipment. The planning for the internal noise reduction modification of the senior leadership conference room (Area 4) was completed during FY03 as part of the "Block 5B - Data Concept Exploration." The exploration revealed installation of the Area 4 noise reduction would be most efficiently performed if done in conjunction with the AIU modification. Consequently, the internal noise reduction modification for Area 4 is being performed as part of the AIU modification. Design deficiencies recognized when the prototype AIU modified aircraft was delivered have delayed this aircraft from assuming a mission capable status. However, these AIU technical problems are scheduled to be corrected and the prototype AIU aircraft, and the follow-on AIU aircraft, assuming mission capable status during FY06.

-- Global Air Traffic Management (GATM) II is the second part of a 3-phased implementation of Global Access, Navigation, and Safety/Global Air Traffic Management modifications to permit unencumbered access to international airspace and to maintain the level of E-4B flight safety consistent with civil standards that become effective in CY05.

-- Senior Leader Communication System (SLCS): The FY02 Defense Emergency Response Funds (DERF) funded a SLCS study which concluded that the technical solution would not require research and development. Consequently, the SLCS modification is funded with Aircraft Procurement modification funds. SLCS will

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER

provide an 'office in the sky' capability for senior leaders that includes commercial Direct Broadcast Service (DBS), International Maritime Satellite (INMARSAT) access, and video teleconferencing capability, plus access to Defense Information System Network (DISN) and Public Switch Network (PSN) for secure/non-secure voice, video and data exchange on and off the airplane (external e-mail and Internet access).

- Super High Frequency (SHF) Multiplexor (MUX) Upgrade: This modification combines secure and non-secure digital signals into one data stream for transmission over the Frequency Division Multiple Access (FDMA) modem or USC-28. The multiplexor replacement is a dual V-100 MUX. The technical risk of integrating the new multiplexor into the E-4B communication suite is sufficiently high to justify the use of RDT&E funding on the prototype aircraft. This modification may be installed either during depot level maintenance or during field maintenance.

The E-4B program is categorized as a Budget Activity 7 - Operational System Development, because it develops modifications for a fielded system.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	11.074	18.909	6.489
(U)	Current PBR/President's Budget	13.801	18.639	0.283
(U)	Total Adjustments	2.727	-0.270	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.098	-0.270	
	Congressional Increases			
	Reprogrammings	2.825		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

DoD decided to retire the E-4B fleet at the rate of one per year beginning during FY09 and completing during FY12. Additionally, the last two (2 of 4) Mod Blk 1 installations will be terminated as well as future programmed but non-essential modifications, such as C3 UHF Digitization and CNS/ATM I (fka GATM Phase III). The DoD is committed to keeping the E-4B fleet mission capable until it is removed from service. Accordingly, additional modifications, including but not limited to SHF MUX, will be required before FY12 to ensure the aircraft remain mission capable until retirement. These additional modifications will be considered during future budget submissions. All future non-safety related modifications that are not expected to see at least five years of in-service use will be the subject of the "Sunset Law" waiver and the Congressional notification process.

Technical problems related to the AIU portion of the first Mod Blk 1 installation have prevented this aircraft from being declared mission capable. The Air Force is implementing design changes to the AIU modification and will have two mission capable Mod Blk 1 capable aircraft during FY06. The FY06 Appropriation Act contained funds for the Data LAN Infrastructure (DLI) modification. The DLI modification has been cancelled and all of its FY06 funds applied to the correction of AIU technical problems. The Air Force will not be requesting funds for resumption of the DLI project as long as the last E-4B is planned to be removed from service during FY12.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER	PROJECT NUMBER AND TITLE: 4777 E-4B Aircraft Modernization

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4777 E-4B Aircraft Modernization	13.801	18.639	0.283	0.000	0.000	0.000	0.000	0.000	210.293
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The E-4B National Airborne Operations Center (NAOC) modernization program upgrades the fleet of four highly modified Boeing 747-200 aircraft to add new capability and improve reliability for its two primary missions (nuclear command and control and senior national leader support). The E-4B NAOC fleet satisfies the military requirement to provide a survivable operations center as an alternate to the National Military Command Center (NMCC) located in the Pentagon. The E-4B NAOC fleet also satisfies the military need for an airborne operations center with communications capabilities that will permit senior national leadership to monitor and control military and civil national assets during all phases of national conflict or disaster. Developmental modifications include, but are not limited to, upgrades and enhancements to aircraft structures, propulsion system, fuel system, environmental control system, electrical generation and distribution systems, flight safety and navigation systems (with their associated communications equipment), and the related aircraft operations center facilities, equipment, and communications necessary for the E-4B fleet to execute its primary mission as an alternate NMCC.

Modifications currently underway or planned for accomplishment under this program include:
- Modification Block 1 (Mod Blk 1): A group designator for modifications being started and completed together on the same aircraft. The RDT&E elements of Mod Blk 1 include Audio Infrastructure Update (AIU) (formerly Block 5A) and Global Air Traffic Management (GATM) II. The Senior Leaders Communication System (SLCS) is also included in the Mod Blk 1 work, but is not considered R&D work. The SLCS modification is entirely funded with Aircraft Procurement (Aircraft Modification) funds.

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-- Global Air Traffic Management (GATM) II is the second part of a 3-phased implementation of Global Access, Navigation, and Safety/Global Air Traffic Management modifications to permit unencumbered access to international airspace and to maintain the level of E-4B flight safety consistent with civil standards that become effective in CY05.

-- Senior Leader Communication System (SLCS): The FY02 Defense Emergency Response Funds (DERF) funded a SLCS study which concluded that the technical solution would not require research and development. Consequently, the SLCS modification is funded with Aircraft Procurement modification funds. SLCS will

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

provide an 'office in the sky' capability for senior leaders that includes commercial Direct Broadcast Service (DBS), International Maritime Satellite (INMARSAT) access, and video teleconferencing capability, plus access to Defense Information System Network (DISN) and Public Switch Network (PSN) for secure/non-secure voice, video and data exchange on and off the airplane (external e-mail and Internet access).

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The E-4B program is categorized as a Budget Activity 7 - Operational System Development, because it develops modifications for a fielded system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Mod Blk 1 - AIU prototype installation (formerly called Block 5A)	12.701	17.569	
(U)	Mod Blk 1 - GATM II prototype installation	1.000		
(U)	Began Data LAN Infrastructure (formerly part of Blk 5B) - Data Concept Exploration (MN-4381B)	0.100		
(U)	Engineering Development of SHF MUX Upgrade (MN-4391)		0.895	0.276
(U)	Hardware Purchase for SHF MUX Prototype		0.175	
(U)	Install of SHF MUX Prototype			0.007
(U)	Total Cost	13.801	18.639	0.283

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4381 (AIU--formerly Blk 5A); Mod 9709 (GATM Phase II)	68.940	60.134						0.000	129.074
(U)	Aircraft Procurement AF, Budget Activity 5, Weapon System Code E00400, PE 0302015F; Mod 4391 SHF MUX Upgrade			0.188	0.121					0.309

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

(U) D. Acquisition Strategy

In light of the planned retirement of the E-4B fleet by the end of FY12, the Air Force will be implementing only those modifications that are either safety of flight related or are essential for the aircraft to remain mission capable until it is removed from service. E-4B modernization to include system engineering, design, and prototype installations will be obtained using either Cost Plus Incentive Fee (CPIF) or Cost Plus Fixed Fee (CPFF) contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**

PROJECT NUMBER AND TITLE: **4777 E-4B Aircraft Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing - Wichita	Sole Source CPIF	Wichita Development & Modification Center, Wichita, KS	61.747	12.473	Nov-04	18.335	Mar-06	0.283	Dec-06	0.000	92.838	TBD
Subtotal Product Development			61.747	12.473		18.335		0.283		0.000	92.838	TBD
Remarks:												
(U) Support												
Communications interoperability engineering and requirements development	Various MIPRs	DISA and other DoD Activities at Arlington, VA	2.415	0.168	May-05					0.000	2.583	TBD
Requirements development and programming support	MIPR	Air Combat Command (ACC) at Hampton, VA	0.549	0.202	Jan-06					0.000	0.751	TBD
DLI MLS Testing	MIPR	Naval Space and Warfare Systems Command (NAVSPAWAR) at San Diego, CA	0.240	0.025	May-05					0.000	0.265	TBD
Subtotal Support			3.204	0.395		0.000		0.000		0.000	3.599	TBD
Remarks:												
(U) Test & Evaluation												
Mod Blk 1 test plan development and test execution	Project Order	605th Flight Test Squadron at Eglin AFB, FL	0.731	0.299	Feb-05	0.180	Feb-06			0.000	1.210	TBD
Subtotal Test & Evaluation			0.731	0.299		0.180		0.000		0.000	1.210	TBD
Remarks:												
(U) Management												
E-4B Program Office contractor support	Sole Source T&M	Northrop Grumman at Oklahoma City, OK	3.990	0.634	Jan-05					0.000	4.624	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	**4777 E-4B Aircraft Modernization**

	E-4B Program Office contractor support	Small Business T&M	Efficiency Managment and Engineering Company at Oklahoma City, OK	0.000	0.000	N/A	0.124	Jan-06		0.000	0.124	TBD
	Subtotal Management			3.990	0.634		0.124		0.000	0.000	4.748	TBD
	Remarks:											
(U)	Total Cost			69.672	13.801		18.639		0.283	0.000	102.395	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER	PROJECT NUMBER AND TITLE: 4777 E-4B Aircraft Modernization

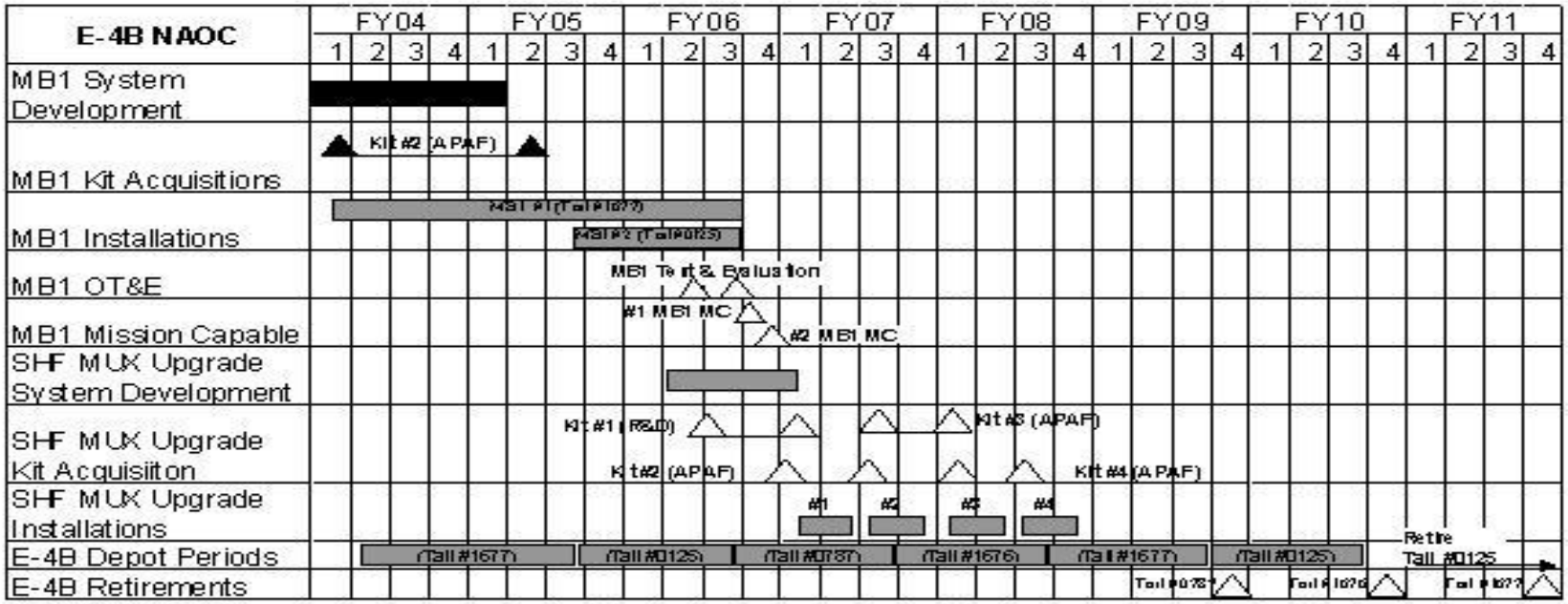

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0302015F E-4B NATIONAL AIRBORNE OPERATIONS CENTER**	PROJECT NUMBER AND TITLE **4777 E-4B Aircraft Modernization**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Modification Block I (Mod Blk 1)	2-3Q	2-4Q	
(U) -- Mod Blk 1 - System engineering Complete	2Q		
(U) -- Prototype Delivers	3Q		
(U) -- Prototype OT&E		3Q	
(U) -- Production Kit #1 Delivers	2Q		
(U) -- Production #1 Input	3Q		
(U) -- Production #1 Delivers		4Q	
(U) -- Production Kit #2 Ordered	2Q		
(U) -- Production Kit #2 Delivers		2Q	
(U) Data LAN Infrastructure (DLI)	2Q		
(U) -- Multi-Level Security Testbed Study	2Q		
(U) Super High Frequency (SHF) Multiplexer Upgrade		2-3Q	1-4Q
(U) -- Development Begins		2Q	
(U) -- System Engineering Complete			1Q
(U) -- Prototype Kit Ordered		3Q	
(U) -- Prototype Kit Delivers			1Q
(U) -- Prototype Install Begins			1Q
(U) -- Prototype Install Delivers			2Q
(U) -- Production Kit #1 Ordered			1Q
(U) -- Production Kit #1 Delivers			3Q
(U) -- Production #1 Install Begins			3Q
(U) -- Production #1 Delivers			4Q
(U) -- Production Kit #2 Ordered			3Q

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PE NUMBER: 0303131F
PE TITLE: Minimum Essential Emergency Communications Network (MEECN)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	17.973	48.327	64.109	44.232	13.227	2.978	2.508	Continuing	TBD
2832	MEECN System Improvements	2.093	3.394	3.114	3.297	3.252	2.978	2.508	Continuing	TBD
4521	DIRECT	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
4610	Minuteman MEECN Program (MMP)	1.198	2.581	22.633	36.175	5.139	0.000	0.000	0.000	TBD
5047	Ground Element MEECN System (GEMS)	14.454	42.352	38.362	4.760	4.836	0.000	0.000	0.000	TBD

(U) A. Mission Description and Budget Item Justification

Minimum Essential Emergency Communications Network (MEECN) systems provide assured communications connectivity between the President and the strategic deterrent forces in stressed environments. Modernization efforts upgrade network ground, airborne, and missile communications elements.

Currently these systems include:

- MEECN System Improvements (MSI) is a long range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC) and Navy) to develop positions for current and future requirements/issues based on available technology
- Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT). Upgrades hardware and software to ensure the capability for the President to transmit nuclear and non-nuclear EAMs and other time-critical messages to strategic and non-strategic forces
- Minuteman MEECN Program (MMP) - is the combination of Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) upgrade efforts along with a new Minuteman ICBM Extremely High Frequency (EHF) communications capability
- Ground Element MEECN System (GEMS) - provides a secure, survivable inter-site, intra-site and mobile VLF and EHF communications to bomber, tanker and other communication facilities with strategic responsibilities. Replaces existing mission-deficient, unsustainable systems

Future capability will include Advanced EHF (AEHF) on MMP and GEMS.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	32.539	57.344	47.622
(U)	Current PBR/President's Budget	17.973	48.327	64.109
(U)	Total Adjustments	-14.566	-9.017	
(U)	Congressional Program Reductions		-8.317	
	Congressional Rescissions	-0.050	-0.700	
	Congressional Increases			
	Reprogrammings	-13.685		
	SBIR/STTR Transfer	-0.831		

(U) Significant Program Changes:

FY07: GEMS program restructured and production start slipped from FY06 to FY08.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE: 2832 MEECN System Improvements

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2832 MEECN System Improvements	2.093	3.394	3.114	3.297	3.252	2.978	2.508	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

- MEECN System Improvements (MSI) is a long range planning process with Users (Air Combat Command (ACC), Air Force Space Command (AFSPC) and Navy) to develop positions for current and future requirements/issues based on available technology.
- This project funds the Continuing Evaluation Program (CEP) for technical analysis of the currently fielded Nuclear Command, Control, and Communication (NC3) systems. CEP is a key factor in determining Assured MEECN Interoperability (AMI). The program implements a detailed test program for Emergency Action Message (EAM) injection and reception. It conducts multiple evaluations on a continuing year-round basis. Following test data collection, analysis is performed to ensure the strategic communication systems meet JCS-directed platform connectivity requirements. The purpose of the program is to test the strategic C3 system to establish a quantitative system-wide performance baseline, conduct trend analysis, integrate new systems into the strategic C3 system, identify system deficiencies, recommend solutions and verify the effectiveness of corrective actions, and recommend and develop procedures in order to improve overall system performance and network interoperability.
- Trade-off analysis is also performed to identify benefits and drawbacks of maintaining current systems. Studies are conducted to monitor communications system technology and potential integration complexities into current and future capabilities. The MEECN architecture is currently evaluating/planning modernization of the VLF/LF cryptographic capability, application of using Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) in mobile configurations (E-4, E-6 and Mobile Consolidated Command Center (MCCC)) and application of High Data Rate (HIDAR/HIDAR+) VLF/LF in other strategic communications platforms.
- This project also funded a study to assess various approaches of replacing the Airborne Launch Control System (ALCS) (an alternate capability of launching Minuteman ICBMs) on the Navy E-6.
- Johns Hopkins University/Applied Physics Lab (JHU/APL) will conduct a study of Air Force survivable nuclear command and control MEECN Network. Allows to test futuristic communications equipment; e.g. MMP Upgrade AEHF testing prior to fielding of AEHF satellites.
- This program is in Budget Activity 07, Operational System Development, because it supports work on currently fielded weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continuing Evaluation Program (CEP) Studies	0.275	0.265	0.250
(U) Study of alternative ICBM launch capability should the E-6 be removed from the Navy inventory	0.560		
(U) Nuclear command and control performance study and equipment for simulation/ modeling and testing for future communication systems/architectures	0.190	1.772	1.877
(U) Analytical Support	1.068	1.357	0.987
(U) Total Cost	2.093	3.394	3.114

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) None

(U) D. Acquisition Strategy

Johns Hopkins University is on contract to provide CEP Analysis and a nuclear C2 performance study.
Test equipment will be acquired through Lincoln Laboratories

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **2832 MEECN System Improvements**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MMRT System Design & Development	SS/CPAF	Rockwell Collins, Dallas, TX	62.838								62.838	
MMRT System Design & Development	SS/CPAF	TRW, Layton, UT	16.788								16.788	
CEP Analysis	MIPR	Johns Hopkins Univ, MD	5.476	0.275	Oct-04	0.265	Dec-05	0.250	Oct-06	Continuing	TBD	
Simulation/Modeling Equipment	MIPR	Lincoln Labs, Bedford, MA				1.287		1.477			2.764	
Various (Trade studies and analysis)	Open Competition	Various		0.765	Dec-04	0.925	Mar-06	0.582	Mar-07		2.272	
Subtotal Product Development			85.102	1.040		2.477		2.309		Continuing	TBD	0.000
Remarks: Effort prior to FY05 performed on MMRT Program under this project number												
(U) Support												
SE/TA Integrated Technical Support Program (ITSP)	Various	Various	4.748	0.843	Oct-04	0.771	Jan-06	0.670	Oct-06	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.277	0.210	Oct-04	0.146	Jan-06	0.135	Oct-06	Continuing	TBD	
Subtotal Support			5.025	1.053		0.917		0.805		Continuing	TBD	0.000
Remarks: Effort prior to FY05 performed on MMRT Program under this project number												
(U) Test & Evaluation												
E-6 Integration Testing	MIPR	NavAir Warfare Cntr, San Diego, CA	5.554	0.000		0.000		0.000			5.554	
IOT&E	MIPR	AFOTEC, Kirtland AFB, NM	0.204	0.000		0.000		0.000			0.204	
Subtotal Test & Evaluation			5.758	0.000		0.000		0.000		0.000	5.758	0.000
Remarks: Effort prior to FY05 performed on MMRT Program under this project number												
(U) Management												
								0.000			0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			95.885	2.093		3.394		3.114		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

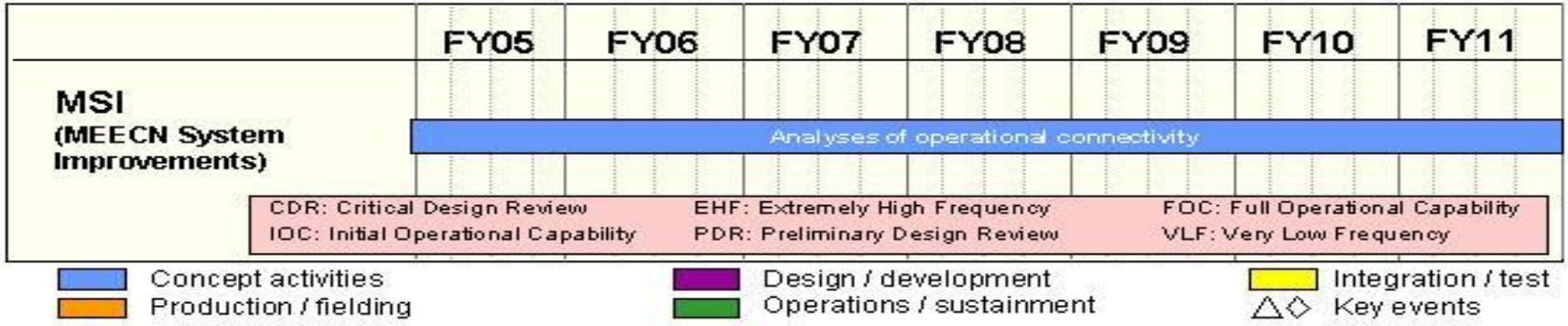


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **2832 MEECN System Improvements**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) CEP Study and Analysis - Quarterly Report(s)	1-4Q	1-4Q	1-4Q
(U) Trade studies and analyses		4Q	4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303131F Minimum Essential Emergency Communications Network (MEECN)**	**4521 DIRECT**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4521 DIRECT	0.228	0.000	0.000	0.000	0.000	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Injection Reception Emergency Action Message (EAM) Command and Control (C2) Terminal (DIRECT) is a Strategic Nuclear Command and Control (C2) system directly supporting the President, Secretary of Defense, and the Chairman of the Joint Chiefs of Staff (CJCS). DIRECT enforces all Emergency Action Message (EAM) processing requirements, including the build and release of EAMs, to allow the warfighter to remain responsive to the directives of the President and Secretary of Defense. DIRECT is certified to Top Secret and supports OPLAN 8044 (formally SIOP) messaging systems. DIRECT reached Full Operational Capability (FOC) on 15 Feb 02. In addition, DIRECT must implement interfaces to new EAM dissimination systems when required by updates to Vol VII of JCS emergency action procedures.

Continued System Development and Demonstration (SDD) to develop interfaces between DIRECT and other communication interfaces will be accomplished in BPAC 672832 - MEECN System Improvement.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Develop interface between DIRECT and Strategic Automated Command and Control System (SACCS) in accordance with Vol VII of JCS emergency action procedures.	0.228		
(U) Total Cost	0.228	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

An SS/CPAF contract was awarded to General Dynamics C4 Systems, Needham, MA on 12 Jul 1996.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **4521 DIRECT**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
DIRECT Development	SS/CPAF	General Dynamice C4 Systems, MA	33.374								33.374	
Security Interfaces	MIPR	National Security Agency	2.300								2.300	
SACCS Interface	FPIF	General Dynamice C4 Systems, MA	0.000	0.158	Oct-04						0.158	
Subtotal Product Development			35.674	0.158		0.000		0.000		0.000	35.832	0.000
Remarks:												
(U) Support												
SETA	LOE	SPO	3.072	0.070	Oct-04						3.142	
MITRE	LOE	SPO	2.671								2.671	
JHU/APL	LOE	Laurel, MD	0.579								0.579	
PMA	Various	SPO	1.604								1.604	
Subtotal Support			7.926	0.070		0.000		0.000		0.000	7.996	0.000
Remarks:												
(U) Test & Evaluation												
Various		Various	0.471								0.471	
Subtotal Test & Evaluation			0.471	0.000		0.000		0.000		0.000	0.471	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			44.071	0.228		0.000		0.000		0.000	44.299	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4521 DIRECT**

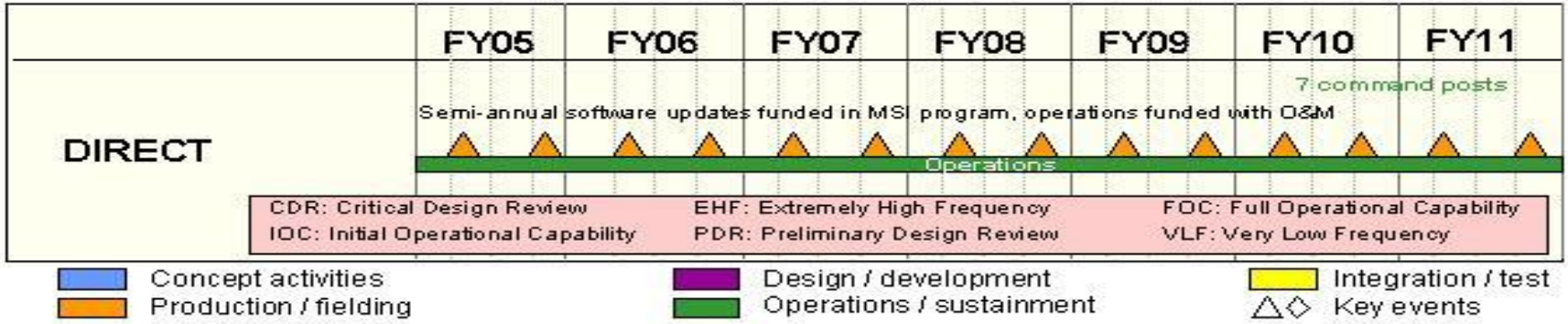


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4521 DIRECT**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Hybrid Solution Support	1-2Q		

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303131F Minimum Essential Emergency Communications Network (MEECN)**	**4610 Minuteman MEECN Program (MMP)**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4610 Minuteman MEECN Program (MMP)	1.198	2.581	22.633	36.175	5.139	0.000	0.000	0.000	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project implements a Minuteman ICBM Launch Control Center (LCC) Very Low Frequency/Low Frequency (VLF/LF) capability and a Minuteman ICBM Extremely High Frequency (EHF) communications capability. The Extremely High Frequency (EHF) terminal provides both receive and report-back capability. Specifically, the EHF effort replaces the Ultra High Frequency (UHF) satellite link with a MILSTAR EHF link.

The MMP system will be upgraded to provide a capability for the Combat Crew Members to have operator control in the Launch Control Center to switch among various EHF/AEHF satellite constallations and be compatible with Advanced EHF (AEHF). AEHF is an Extended Data Rate (XDR) waveform that provides more secure transmit/receive at frequencies above 20 GHz.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MMP Upgrade Concept Development Studies	1.198		
(U) MMP Upgrade Technology Development		1.498	10.566
(U) System Development and Demonstration (SDD) to include: AEHF terminal integration, AEHF modem design, cryptographic upgrade, weapon system hardness analysis, hardware development and software development for AEHF and improved operator control, analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA).			10.567
(U) Analytical Support		1.083	1.500
(U) Total Cost	1.198	2.581	22.633

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) MPAF, Missile Modifications (MEECN, PE 0303131F, BA 03, P-012)	15.666	2.886		6.467	24.793	6.935	0.000	0.000	56.747

(U) D. Acquisition Strategy

The ICBM Prime Integrating Contract (through OO-ALC, Hill AFB, UT) is being used as a contracting vehicle for the Minuteman MEECN Program (MMP).

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

The MMP Upgrade program will be a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **4610 Minuteman MEECN Program (MMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MMP Development	SS/CPAF	Northrup Grumman	46.069								46.069	
MMP Upgrade Concept Development	Open Competition	TBD		0.898	Dec-04						0.898	
MMP Upgrade Technology Development						1.492	Jul-06	10.566			12.058	
MMP Upgrade System Development and Demonstration (SDD)	Open Competition	TBD						10.567	Jun-07	Continuing	TBD	
Subtotal Product Development			46.069	0.898		1.492		21.133		Continuing	TBD	0.000
Remarks:												
(U) Support												
SETA	LOE	Various	0.900	0.200	Apr-05	0.900	Apr-06	1.000	Apr-07	Continuing	TBD	
MITRE	LOE	Bedford, MA	0.695	0.100	Oct-04	0.189	Jan-06	0.500	Oct-06	Continuing	TBD	
Subtotal Support			1.595	0.300		1.089		1.500		Continuing	TBD	0.000
Remarks: Various Award Dates												
(U) Test & Evaluation												
Various	Various	Various	0.000	0.000							0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			47.664	1.198		2.581		22.633		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

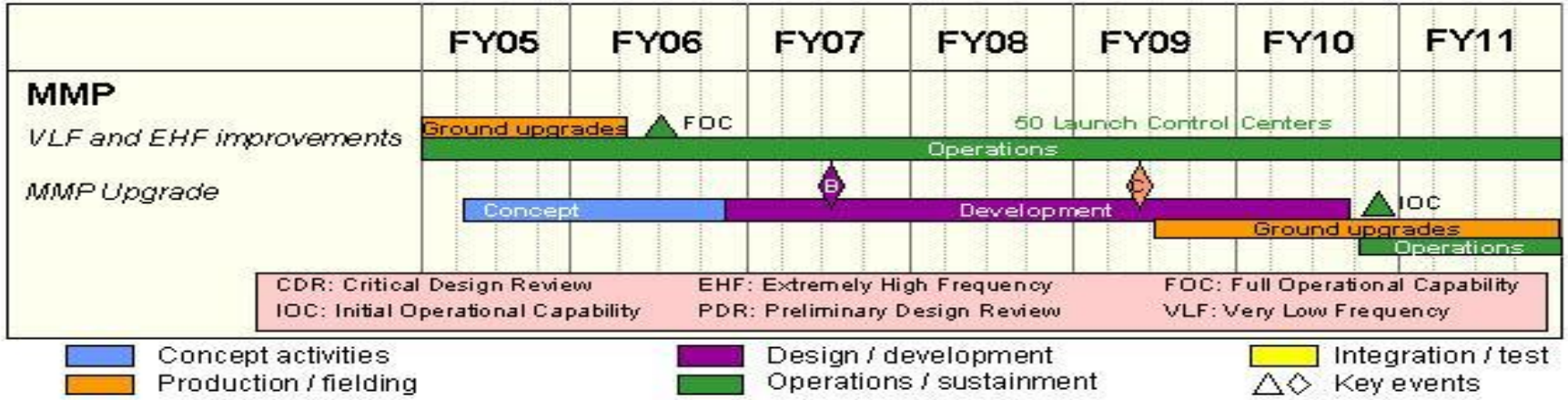


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **4610 Minuteman MEECN Program (MMP)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Exercise MMP Production Option	1Q		
(U) MMP Operational Deployment Complete		1Q	
(U) Award MMP Upgrade Technology Development		4Q	
(U) Award MMP Upgrade Program System Design & Development			3Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303131F Minimum Essential Emergency Communications Network (MEECN)**	**5047 Ground Element MEECN System (GEMS)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5047	Ground Element MEECN System (GEMS)	14.454	42.352	38.362	4.760	4.836	0.000	0.000	0.000	TBD
	Quantity of RDT&E Articles	0	0	8	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Ground Element MEECN Systems (GEMS) will be comprised of EHF/AEHF, VLF/LF, HFs, UHF and Aircrew Alerting components and will provide secure, survivable inter-site, intra-site and mobile communications to bomber, tanker, reconnaissance and other communications facilities with strategic responsibilities. GEMS terminals will be developed and fielded to replace strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals. GEMS will also replace the Aircraft Alerting Communications Electromagnetic Pulse System/Electromagnetic Pulse Hardened Dispersal Communications (AACE/EHDC) systems.

This program is in Budget Activity 07, Operational System Development, because it supports work on fielded operating weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) System Development and Demonstration (SDD) contract to include: EHF, VLF, HFs and UHF terminal integration; EHF, VLF, HFs and UHF modem design; cryptographic upgrade; weapon system hardness analysis; EHF, VLF, HFs and UHF hardware development; EHF, VLF, HFs and UHF software development; analysis of power and cooling requirements, antenna integration, analysis of Software Compliant Architecture (SCA); and pager/klaxon system development.	11.436	39.393	35.600
(U) Analytical Support	3.018	2.959	2.762
(U) Total Cost	14.454	42.352	38.362

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement - AF, (MEECN, PE0303131F, BA-03, P-053)		0.000	3.413	93.740	87.216	72.388	21.471	0.000	278.228

(U) D. Acquisition Strategy

Two Concept and Technology Demonstration (C&TD) contracts awarded to separate vendors following full and open competition. Rockwell Collins of Rapid City, IA was awarded research, development, and production contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303131F Minimum Essential Emergency Communications Network (MEECN)**

PROJECT NUMBER AND TITLE: **5047 Ground Element MEECN System (GEMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
C&TD Contracts	Full and open competition	General Dynamics C4 System, MA Rockwell Collins, IA	6.557							Continuing	TBD	
SDD Contract		Rockwell Collins, IA	0.000	11.436	Jun-05	39.393	Jan-06	35.600	Dec-06		86.429	
Subtotal Product Development			6.557	11.436		39.393		35.600		Continuing	TBD	0.000
Remarks:												
(U) Support												
ITSP	SETA Contract	Various	0.670	1.750	Apr-05	1.451	Apr-06	1.550	Apr-07	Continuing	TBD	
MITRE	MIPR	Bedford, MA	1.164	1.010	Oct-04	1.208	Oct-05	1.112	Oct-06	Continuing	TBD	
PMA			0.250	0.258	Oct-04	0.300	Jan-06	0.100			0.908	
Subtotal Support			2.084	3.018		2.959		2.762		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			8.641	14.454		42.352		38.362		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303131F Minimum Essential Emergency Communications Network (MEECN)	PROJECT NUMBER AND TITLE 5047 Ground Element MEECN System (GEMS)

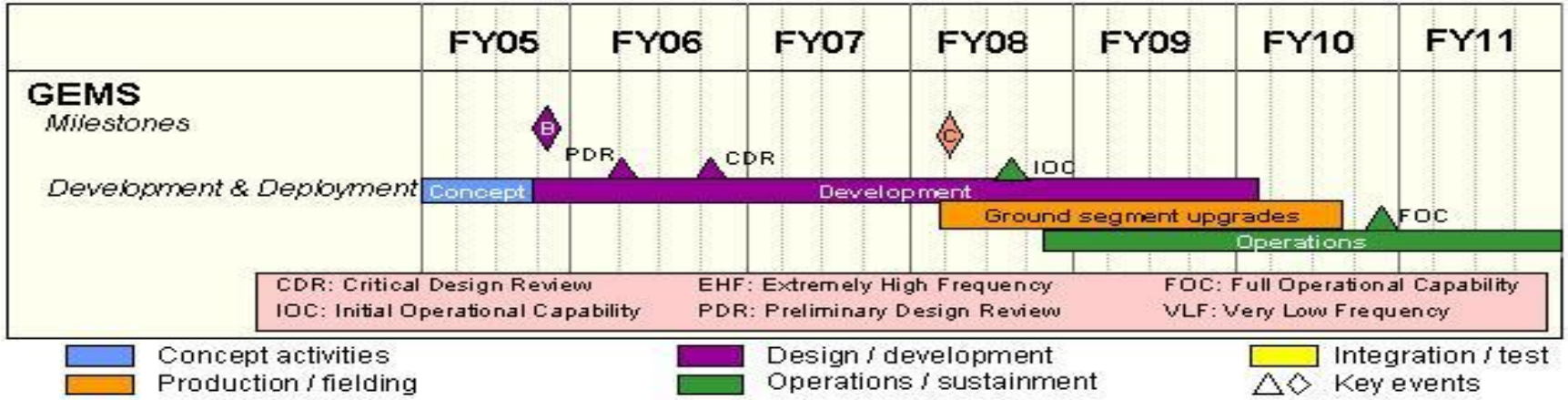


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303131F Minimum Essential Emergency Communications Network (MEECN)**	PROJECT NUMBER AND TITLE **5047 Ground Element MEECN System (GEMS)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) MS B	4Q		
(U) SDD	3Q		
(U) Preliminary Design Review		2Q	
(U) Critical Design Review		4Q	
(U) Development Testing			1-4Q

PE NUMBER: 0303140F
PE TITLE: Information Systems Security Program

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	65.702	116.532	183.523	319.016	201.193	299.924	207.712	Continuing	TBD
4579	Adv Security Solutions & Technologies (ASST)	4.336	4.100	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4861	AF Electronic Key Management System (AF EKMS)	5.450	3.273	2.361	3.166	1.036	0.936	0.849	Continuing	TBD
5100	Cryptographic Modernization	49.633	100.115	174.689	305.877	188.178	286.973	194.786	Continuing	TBD
5231	AF Key Management Infrastructure (AF KMI)	0.000	0.000	0.721	3.849	4.514	4.385	4.317	0.000	0.000
7820	Computer Security RDT&E: Firestarter	6.283	9.044	5.752	6.124	7.465	7.630	7.760	Continuing	TBD

NOTES:

1. In FY05, the Air Force funding for Project 674579, ASST, was terminated. However, it has continued to receive multiple Congressional adds in both FY05 and FY06. Its Mission Statement has been revised annually to reflect the work of the current Congressional adds under the Project.

2. Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), is being split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stays in BPAC 674861; the AF KMI moves to the new BPAC 675231.

(U) A. Mission Description and Budget Item Justification

The overall focus of the RDT&E efforts within this program is two-fold. Focus one is to provide the capability to protect and defend USAF Command, Control, Communications, Computers, and Intelligence, Surveillance, and Reconnaissance (C4ISR) and Weapon Systems from Information Warfare (IW) attacks and to ensure their recovery from such attacks. To this end, the project does research and development of information protection tools and transitions them to operational systems. Focus two is moving toward a "man-out-of-the-loop" crypto key distribution system and a reduced inventory of cryptographic devices that are more robust, stronger, able to communicate extremely large amounts of data at greatly increased data rates, be upgraded more easily and less expensively, and are net-centric and global-information-grid compatible.

Project 674579, Advanced Security Solutions and Technologies, was originally established to develop defensive information warfare solutions for AF Command and Control (C2), Intelligence, Surveillance, and Reconnaissance (ISR) systems. The AF funding for the Project was terminated in FY05. It continued in FY05 with two Congressional adds: Cyber Lighthouse, and the Center for Infrastructure Assurance and Security (CIAS). In FY06 it received three Congressional adds: the Center for Infrastructure Assurance and Security (CIAS), Cybersecurity Defend and Attack Exercises, and Homeland Defense and Civil Support Threat Information Collection. All three of these will be AIA-managed under the CIAS umbrella. They will bring a multi-disciplinary (AF, academic, and civil) approach to technical and policy issues, civil threat information collection and reporting, as well as conducting joint military base/local civil agency Cybersecurity Defend and Attack Exercises.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

Project 674861, AFEKMS, is part of an NSA-led EKMS program that has allowed DoD to migrate from the previous legacy manual system of generation, distribution, accounting, training, and material management of cryptographic keying materials to the current DoD EKMS. EKMS equipment procurement and fielding is well underway. The R&D portion of the AFEKMS Program will support EKMS software maintenance, repair, and sustainment throughout the life of the fielded KMI Capability Increment (CI-2) KMI . The warfighter will continue to use EKMS for the next four to five years -- having access to it through the old EKMS hierarchy or through the new KMI hierarchy and its interfaces back to EKMS until the fielding of Capability Increment CI-3 KMI. CI-3 KMI will replace all of the EKMS functions.

Project 675100, AF Crypto Modernization, is part of a Joint Program led by NSA to modernize and transform the Type 1 Cryptographic Inventory throughout DoD. Not only will algorithms be upgraded, but reprogrammable chips will be used in the Crypto Devices. Thus, the next generation of algorithm upgrades will incur only the cost to reprogram those chips. The total inventory will be greatly reduced by doing a box-for-family of systems/functions replacement rather than the current box-for-box replacement, and the logistics requirements will be greatly simplified and reduced. The total inventory and logistics requirements are also reduced by going to multi-purpose, joint solution crypto devices instead of the current service-unique inventories.

Project 675231, AF KMI, is part of another Joint Program led by NSA to provide a broad-scale replacement of the current EKMS. It will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and DoD, other Service, and AF Enterprise objectives. KMI will improve protection of security-related information by greatly enhancing confidentiality, integrity, and non-repudiation beyond that provided by the legacy EKMS. It will take the man "out-of-the-loop" in the distribution of crypto key materials.

Project 677820, Computer Security RDT&E: Firestarter, encompasses the R&D of information protection technology and tools to defend C4ISR systems, with emphasis on computer and network systems security, damage assessment and recovery, and secure distributed computing capabilities. It provides access control, integrity, assured services that continue to meet the warfighters' requirements. In FY06 this project received a Congressional add of $5M to support its on-going development of secure interoperable distributed agent computing (aka Worldwide Infrastructure Security Environment [WISE]).

This program is in budget activity 7, Operational System Development, because it addresses the development and transition of information security, protection and defensive capabilities and technologies.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	79.625	109.292	175.012
(U)	Current PBR/President's Budget	65.702	116.532	183.523
(U)	Total Adjustments	-13.923	7.240	
(U)	Congressional Program Reductions		-0.173	
	Congressional Rescissions	-1.731	-1.687	
	Congressional Increases	7.500	9.100	
	Reprogrammings	-17.938		
	SBIR/STTR Transfer	-1.754		

(U) Significant Program Changes:

BPAC 674579, ASST, will support three Congressional adds in FY06 Execution: the Center for Infrastructure Assurance and Security (CIAS), Cybersecurity Defend and Attack Exercises, and Homeland Defense and Civil Support Threat Information Collection. The old BPAC 674861 AF EKMS-KMI has been broken out into separate BPACS: 674861 for AFEKMS; 675231 (new) for AF KMI. BPAC 677820, Firestarter, will execute the Congressional add for Worldwide Infrastructure Security Environment [WISE] within its on-going development of secure interoperable distributed agent computing. BPAC 675100, CM, is a large umbrella AF program to support NSA in modernizing and transforming the current Type 1 Cryptographic Inventory throughout DoD. As such, it is composed of a large number of individual cryptographic projects that are staggered throughout the life of the program. These programs are centrally-managed, but decentrally-executed. The number of scheduled on-going projects varies from year-to-year leading to an unusual, wiggled-line funding profile across the FYDP. However, detailed analysis of the requirements for the on-going projects for any given year fully justifies the funding profile.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4579	Adv Security Solutions & Technologies (ASST)	4.336	4.100	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Project 674579, Advanced Security Solutions and Technologies, was originally established to develop defensive information warfare solutions for AF Command and Control (C2), Intelligence, Surveillance, and Reconnaissance (ISR) systems. The AF funding for Project 674579 was terminated in FY05. However, the Project remains active because of multiple Congressional adds in FY05 and FY06. In FY06 the project line received three Congressional adds: Center for Infrastructure Assurance and Security (CIAS), Cybersecurity Defend and Attack Exercises, and Homeland Defense and Civil Support Threat Information Collection. All three FY06 plus-ups will be managed by Air Intelligence Agency (AIA) under the CIAS umbrella.

The Center for Infrastructure Assurance and Security (CIAS) at the University of Texas at San Antonio (UTSA) has multiple funding sources, and is a multidisciplinary information assurance research and development, academic, and operationally-based program. It brings AF, academic, and civilian expertise to create a joint approach to technical and policy issues, civil threat information collection and reporting, as well as conducting joint military base/local civil agency Cybersecurity Defend and Attack Exercises. The aim of the work is to determine the degree of reliance of military establishments on locally-operated services, how military bases and posts currently participate in testing the local critical infrastructures, and how they would participate and respond to attacks to local critical infrastructure.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Managed Cyber Lighthouse Security Technology Development Program (Congressional Add)	2.459	0.000	0.000
(U) Manage the Center for Infrastructure Assurance and Security (CIAS) (Congressional Add)	1.877	1.000	0.000
(U) Manage the Homeland Defense and Civil Support Threat Information Collection (Congressional Add)	0.000	1.000	0.000
(U) Manage the Cybersecurity Defend and Attack Exercises (Congressional Add)	0.000	2.100	0.000
(U) Total Cost	4.336	4.100	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
N/A									

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

(U) D. Acquisition Strategy

Congressional adds are for specific efforts to be done for AIA under the Center for Infrastructure Assurance and Security Program (CIAS) at either University of Texas at San Antonio or St. Mary's University in San Antonio.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

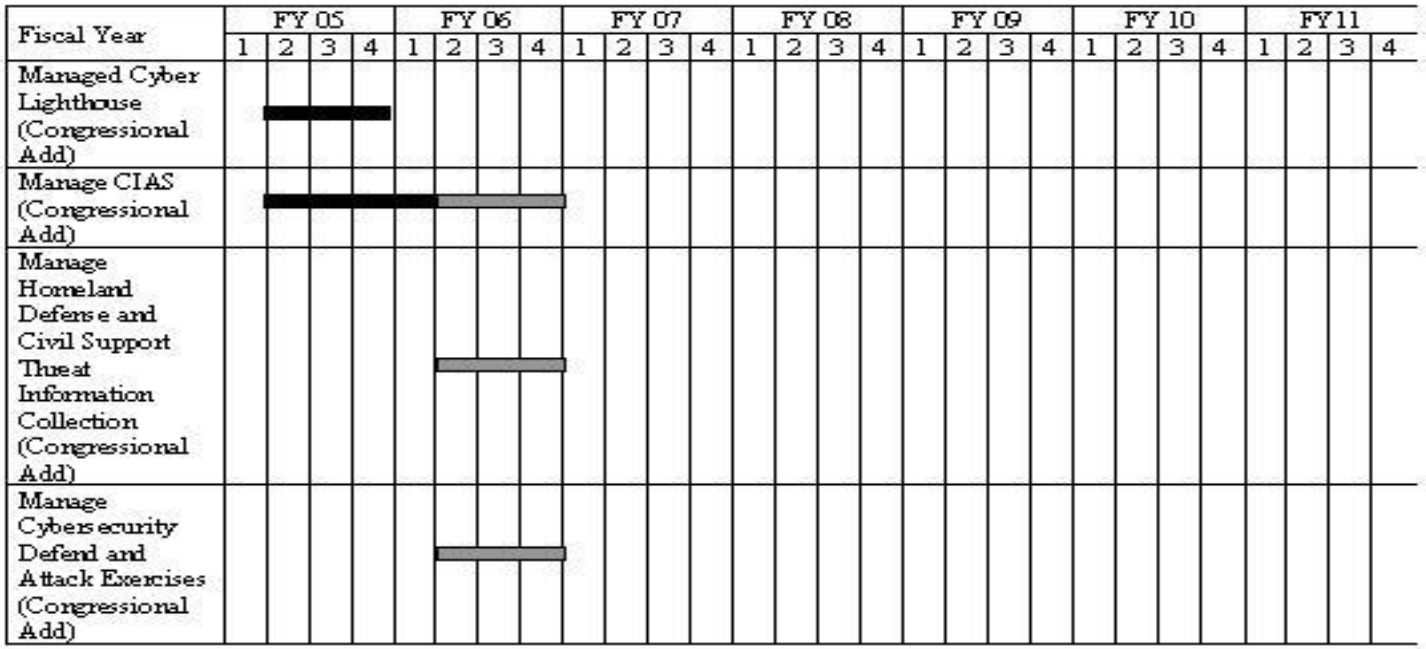
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **4579 Adv Security Solutions & Technologies (ASST)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Cyber Lighthouse Security Technology Development Program (Congressional Add)	CPFF	MITRE, San Antonio, TX	32.025	1.476	Mar-05	0.000		0.000		0.000	33.501	
Cyber Lighthouse Security Technology Development Program (Congressional Add)	CRNF	MIT, Lincoln Labs, Boston, MA	3.805	0.368	Mar-05	0.000		0.000		0.000	4.173	
Cyber Lighthouse Security Technology Development Program (Congressional Add)	CRNF	Carnegie-Mellon Software Engineering Institute (SEI), Pittsburgh	1.735	0.615	Mar-05	0.000		0.000		0.000	2.350	
Center for Infrastructure Assurance and Security (CIAS) Projects (Congressional Add)	RL Grant /CRADA	University of TX San Antonio, San Antonio, TX	5.600	1.877	Mar-05	1.000		0.000		0.000	8.477	TBD
Homeland Defense and Civil Support Threat Information Collection (Congressional Add)	TBD	St. Mary's University, San Antonio, TX	0.000	0.000		1.000		0.000		0.000	1.000	TBD
Cybersecurity Defend and Attack Exercises (Congressional Add)	TBD	University of TX San Antonio, San Antonio, TX	0.000	0.000		2.100		0.000		0.000	2.100	TBD
Subtotal Product Development			43.165	4.336		4.100		0.000		0.000	51.601	TBD
Remarks:												
(U) Total Cost			43.165	4.336		4.100		0.000		0.000	51.601	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

Exhibit R-4: BPAC 4579, ASST



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4579 Adv Security Solutions & Technologies (ASST)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Managed Cyber Lighthouse Program (Congressional Add)	2-4Q		
(U) Manage the Center for Infrastructure Assurance and Security (CIAS)	2-4Q	1-4Q	
(U) Manage the Homeland Defense and Civl Support Threat Information Collection		2-4Q	
(U) Manage the Cybersecurity Defend and Attack Exercises		2-4Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4861	AF Electronic Key Management System (AF EKMS)	5.450	3.273	2.361	3.166	1.036	0.936	0.849	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

NOTES:

1. A FY05 Congressional Plus-up for Enabling Technologies for Information Assurance (IA) was placed in this Project. In previous years it had been placed and executed in Project 674861, ASST.

2. Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), is being split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stays in BPAC 674861; the AF KMI moves to the new BPAC 675231.

(U) A. Mission Description and Budget Item Justification

The AFEKMS Program consists of multiple developments supporting the Air Force requirements/portion of the DoD EKMS Program. (The National Security Agency [NSA] acts as the Executive Agency for the DoD EKMS Program.) AFEKMS, in concert with the overarching DoD EKMS Program , provides a secure and flexible capability for the electronic generation, distribution, accounting, and management of key material, voice callwords, and communications security (COMSEC) publications for the current generation of DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for current generation of weapon systems. EKMS replaced the previous manual distribution and management system providing cryptographic keying material for US DoD Information Assurance. Information Assurance emphasizes confidentiality, access control, multi-level secure databases, trusted computing and information integrity. AFEKMS has a three-tier hierarchical structure. This tiered structure provides 'wholesale' to 'retail' to 'consumer' capability to distribute, manage and account for COMSEC keying material. Tier 1 installations comprise the wholesale generation and control capability. Tier 2 installations comprise the local distribution network and Tier 3 comprises the retail where keying material leaves the AFEKMS and enters the consumer End Cryptographic Units (ECUs).

EKMS improved protection of national security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy manual key management systems. EKMS has and continues to greatly accelerate availability of crypto key materials through electronic transmission versus the manual handling and shipping of materials. While the current EKMS level-of-effort is directed at enhancing current and developing systems, the ultimate goal is for it to provide a temporary bridge to the DoD Key Management Infrastructure (KMI) Capability Increment (CI)-2, and then a migration path to the "full-up" KMI CI-3. Once KMI CI-3, with its advanced key generation/key distribution capability is fielded and operational, KMI interfaces to EKMS will be severed. Beginning KMI CI-2 functionality is expected in 2009.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **4861 AF Electronic Key Management System (AF EKMS)**

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue program office contract support to the AFEKMS Program for planning: upgrades/improvements to the EKMS necessary to support bridge to the Key Management Infrastructure (KMI); and EKMS continued deployment (Phase 5) and tech refresh	1.104	1.286	0.875
(U)	Continue End User Application Software Development: Common User Application Software (UAS), Local Management Device (LMD), Data Management Device (DMD), and computer-based training	3.386	1.987	1.486
(U)	Managed Enabling Technologies for Information Assurance (IA) (Congressional Add) (Previously placed in Project 67459, ASST)	0.960	0.000	0.000
(U)	Total Cost	5.450	3.273	2.361

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF Other Procurement PE 0303140F	3.038	19.341	7.677	10.562	7.931	20.974	21.093	Continuing	TBD

Note: This line includes both AFEKMS and AF KMI Other Procurement (3080) funding.

(U) D. Acquisition Strategy

All major contracts within this Project are open to full and open competition. However, there are limited numbers of companies that can do this state-of-the-art work. All employees must also have high-level security clearances. Also, because it has been an on-going 15-year effort, technology knowledge, expertise, and prior experience on similar projects are weighted heavily in the evaluation process.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

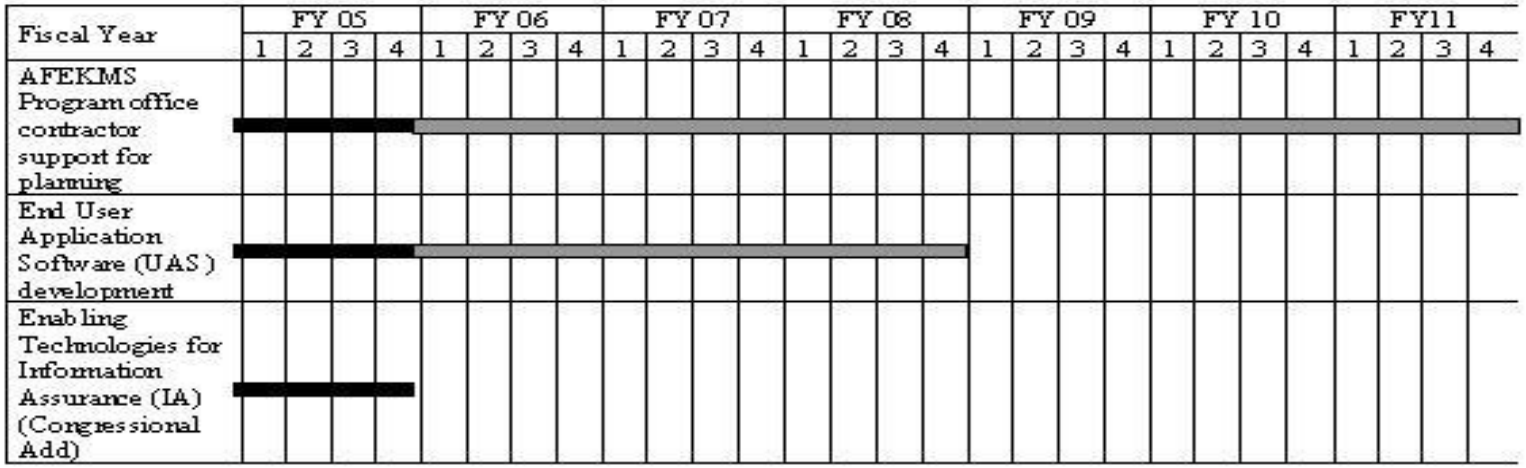
PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **4861 AF Electronic Key Management System (AF EKMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFEKMS Program office contractor support for planning	CPFF	Mitre, San Antonio, TX	1.414	1.104	Oct-04	1.286	Oct-05	0.875	Oct-06	Continuing	TBD	TBD
End User Application Software (UAS) development	T&M	SAIC, San Diego, CA	6.296	3.386	Oct-04	1.987	Oct-05	1.486	Oct-06	Continuing	TBD	TBD
Enabling Technologies for Information assurance (Congressional Add)	T&M	DSD Labs, Fairmont, WV	0.000	0.960	Sep-05	0.000		0.000		0.000	0.960	0.960
Subtotal Product Development			7.710	5.450		3.273		2.361		Continuing	TBD	TBD
Remarks:												
(U) N/A												
(U) Total Cost			7.710	5.450		3.273		2.361		Continuing	TBD	TBD
Remarks: N/A												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **4861 AF Electronic Key Management System (AF EKMS)**

Exhibit R-4: BPAC 4861, AFEKMS



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 4861 AF Electronic Key Management System (AF EKMS)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AFEKMS Program office contractor support for planning	1-4Q	1-4Q	1-4Q
(U) End User Application Software (UAS) development	1-4Q	1-4Q	1-4Q
(U) Enabling Technologies for Information Assurance (Congressional Add)	1-4Q		

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5100 Cryptographic Modernization

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5100	Cryptographic Modernization	49.633	100.115	174.689	305.877	188.178	286.973	194.786	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Cryptographic Modernization program modernizes vulnerable cryptographic devices protecting critical information vital to successful mission operations and national security. In September 2000, the Defense Review Board (DRB) tasked NSA to evaluate the security posture of the cryptographic inventory. Systems with aging algorithms, those approaching non-sustainability, and those generally incompatible with modern key management systems were identified. Priority systems that required immediate replacement were also identified. In addition, NSA documented the need to modernize the cryptographic inventory with capabilities designed to enable network-centric operations. Replacement/Modernization of the near term vulnerable systems must occur within the timeframe specified in Chairman Joint Chiefs of Staff Notice (CJCSN) 6510. The DoD Cryptographic Modernization Program was established to develop a modern cryptographic base that provides assured security robustness, interoperability, advanced algorithms, releasability, programmability, and compatibility with the future Key Management Infrastructure (KMI). The program supports the transformation to next generation cryptographic capabilities providing U.S. forces and multinational and interagency partners the security needed to protect the flow and exchange of operational decision making information IAW national and international policy/standards, the validated operational requirements of the warfighters, and the Intelligence Communities.

(U) The Cryptographic Modernization Program is a collection of projects accomplished in three phases: replacement, modernization, and transformation. The replacement phase of the program focused on updating and/or replacing out-of-date algorithms along with unsustainable cryptographic products. The modernization phase provides a single solution to existing multiple cryptographic end items as well as updating aging/unsupportable crypto equipment. Manpower and logistics requirements begin to be reduced, while incremental capability enhancements and footprint reduction are provided. The third phase of the Cryptographic Modernization Program, transformation, provides common solutions which enable network-centric capabilities and seamless crypto that is transparent to the user.

This project is in Budget Activity 07, Operation System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue KI-22 (KS-60) Cryptographic Modernization analysis and development of replacement	15.943	24.300	12.886
(U)	Continue KG-3X Cryptographic Modernization analysis and development of replacement	1.827	21.500	7.914
(U)	Continue IFF Cryptographic Modernization analysis and development of replacement	11.782	8.833	10.248
(U)	Continue Remote Rekey (CI-13) Cryptographic Modernization analysis and development of replacement	0.000	2.050	19.483
(U)	Continue Studies and Analyses	9.252	5.550	5.073
(U)	Continue Space Cryptographic Modernization analyses and development of replacements	9.829	34.573	58.208
(U)	Continue KEESEE Cryptographic Modernization analysis and development to various Crypto Mod initiatives such as KOK-13-13A, Follow-on Algorithm Implementation, Secure Crypto Enterprise Management (SCEM), and Interim	0.000	3.309	5.073

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5100 Cryptographic Modernization**

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
	Crypto Solutions			
(U)	Transferred to National Security Agency (NSA) for OSD-directed Trusted Foundry Program	1.000	0.000	0.000
(U)	Initiate FA-22 Multi-Function Crypto (KOV-20) Cryptographic Modernization analysis and development	0.000	0.000	4.058
(U)	Initiate KM Crypto Interface Modernization analyses and development	0.000	0.000	3.063
(U)	Initiate KM Network Equipment Modernization analyses and development	0.000	0.000	6.126
(U)	Initiate Wireless Cryptographic Modernization analysis and development	0.000	0.000	11.374
(U)	Initiate Advanced Cryptographic Modernization analysis and development	0.000	0.000	17.731
(U)	Initiate High Speed Optical Crypto analysis and development	0.000	0.000	13.452
(U)	Total Cost	49.633	100.115	174.689

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF Other Procurement PE 0303140F	9.000	20.800	80.100	113.818	155.766	197.080	257.829	Continuing	TBD

(U) D. Acquisition Strategy

The Crypto Modernization portfolio of component and system acquisition projects are executing using a variety of approaches that vary from an evolutionary acquisition strategy using spiral development (for new system development) to incremental improvement leveraging leading-edge, certified non-developmental items (for modernization). Contract type is selected for each of the individual projects based upon its acquisition approach and its unique technology risks. A mixture of fixed-price and cost-reimbursement contracts have been selected which maximize the best value for the Government.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5100 Cryptographic Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
KI-22 (KS-60)	MIPR	OO-ALC/526 GSSG/GMGV, Hill AFB, UT	8.990	15.943	Jun-05	24.300	Dec-05	12.886	Dec-06	0.000	62.119	76.458
KG-3X	MIPR	ESC/GIGSG/KM, Hanscom AFB, MA	0.000	1.827	Jan-05	21.500		7.914		0.000	31.241	25.300
IFF	MIPR	CPSG/ZC, Lackland AFB, TX	4.970	11.782	Apr-05	8.833	Nov-05	10.248	Nov-06	Continuing	TBD	TBD
Remote Rekey (CI-13)	MIPR	CPSG/ZC, Lackland AFB, TX	0.000	0.000		2.050	Nov-05	19.483	Nov-06	Continuing	TBD	19.000
Studies and Analyses	TBD	CPSG/ZC, Lackland AFB, TX	5.028	9.252	Apr-05	5.550	Nov-05	5.073	Nov-06	Continuing	TBD	TBD
Space Crypto Mod	MIPR	CPSG/ZC, Lackland AFB, TX	0.986	9.829	Feb-05	34.573	Nov-05	58.208	Nov-06	Continuing	TBD	TBD
KEESEE Cryptographic Modernization analysis and development to various Crypto Mod initiatives	TBD	TBD	0.000	0.000		3.309	Feb-06	5.073	Feb-07	Continuing	TBD	TBD
Trusted Foundry	MIPR	NSA, Fort Meade, MD	9.000	1.000		0.000		0.000		0.000	10.000	10.000
F/A-22, Multi Function Crypto (KOV -20)	TBD	TBD		0.000		0.000		4.058	Feb-07	Continuing	TBD	TBD
KM Network Equipment Mod -- Network Interface Development	TBD	TBD	0.000	0.000		0.000		3.063	Feb-07	Continuing	TBD	TBD
KM Network Equipment Modernization analyses and development	TBD	TBD	0.000	0.000		0.000		6.126	Feb-07	Continuing	TBD	TBD
Wireless Crypto	TBD	TBD	0.000	0.000		0.000		11.374	Feb-07	Continuing	TBD	TBD
Advanced Crypto	TBD	TBD		0.000		0.000		17.731	Feb-07	Continuing	TBD	TBD
High Speed Optical Crypto	TBD	TBD	0.000	0.000		0.000		13.452	Feb-07	Continuing	TBD	TBD
Subtotal Product Development			28.974	49.633		100.115		174.689		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			28.974	49.633		100.115		174.689		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2006**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5100 Cryptographic Modernization**

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 1 of 2)

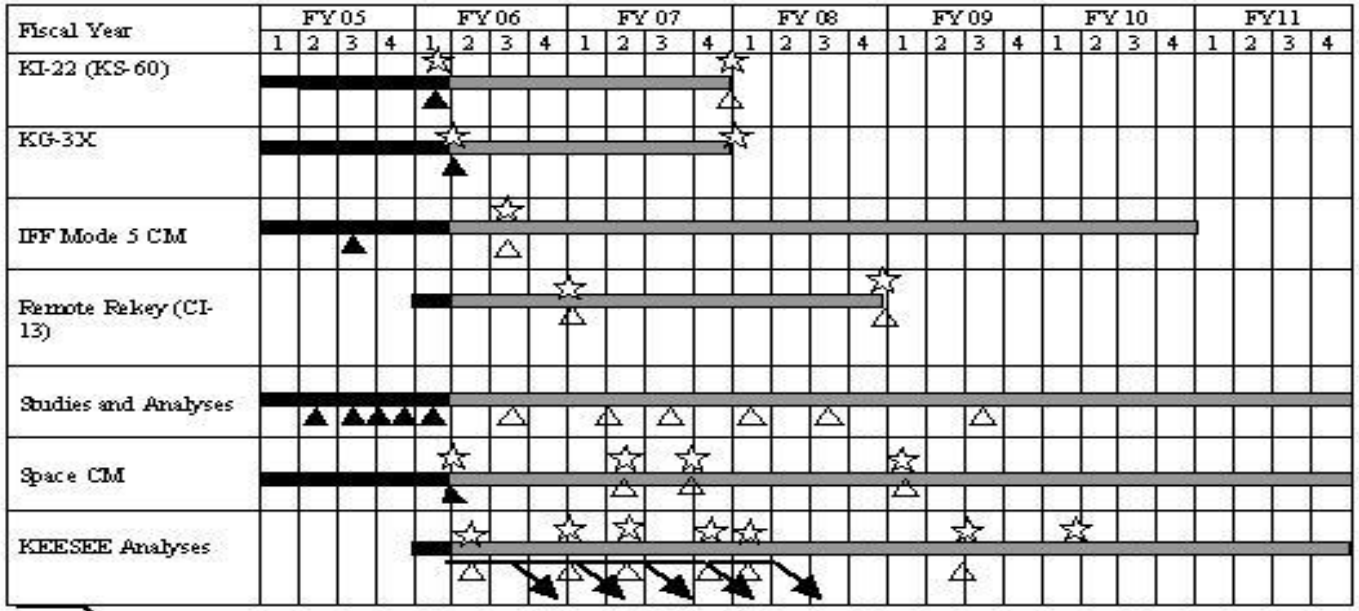


Exhibit R-4, RDT&E Schedule Profile		DATE **February 2006**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5100 Cryptographic Modernization**

Exhibit R-4: BPAC 5100 Cryptographic Modernization (p 2 of 2)

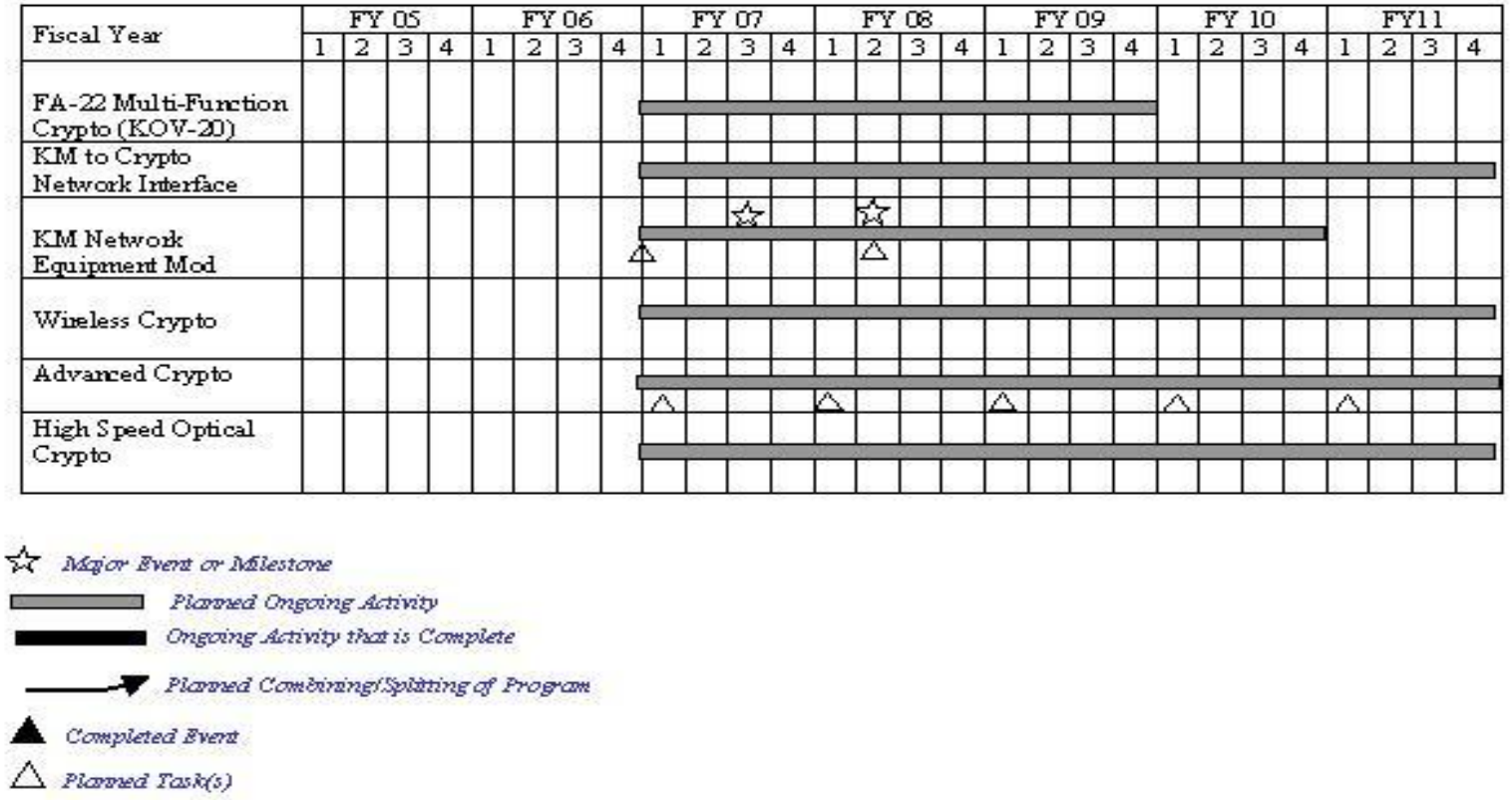


Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303140F Information Systems Security Program**	**5100 Cryptographic Modernization**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Continue KI-22 (KS-60) Cryptographic Modernization	1-4Q	1-4Q	1-4Q
(U)	Continue KG-3X Cryptographic Modernization	1-4Q	1-4Q	1-4Q
(U)	Continue IFF Mode 5 Cryptographic Modernization	1-4Q	1-4Q	1-4Q
(U)	Continue Remote Rekey (CI-13) Cryptographic Modernization		1-4Q	1-4Q
(U)	Continue Studies and Analyses	1-4Q	1-4Q	1-4Q
(U)	Continue Space Cryptographic Modernization	1-4Q	1-4Q	1-4Q
(U)	Continue KEESEE Cryptographic Modernization		1-4Q	1-4Q
(U)	Initiate F/A-22 Multi Function Crypto (Cryptographic Modernization of KOV-20 Box)			1-4Q
(U)	Initiate KM to Crypto Network Interface			1-4Q
(U)	Initiate KM Network Equipment Modernization			1-4Q
(U)	Initiate Wireless Crypto			1-4Q
(U)	Initiate Advanced Crypto			1-4Q
(U)	Initiate High Speed Optical Crypto			1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5231	AF Key Management Infrastructure (AF KMI)	0.000	0.000	0.721	3.849	4.514	4.385	4.317	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

NOTES:

1. Former Project 674861, AF Electronic Key Management System - Key Management Infrastructure (AFEKMS-KMI), is being split in FY07 to properly reflect the Joint KMI Program as a next-generation system rather than an upgrade to the current EKMS. The AFEKMS stays in BPAC 674861; the AF KMI moves to the new BPAC 675231. However, since the transformational key generation/key provisioning capability will not be built into KMI until Capability Increment (CI)-3, EKMS will continue to provide this capability via a number of temporary interfaces created for that purpose.

(U) A. Mission Description and Budget Item Justification

The Air Force Key Management Infrastructure (AF KMI) Program consists of multiple developments supporting the AF requirements/portion of the DoD Key Management Infrastructure (KMI). (The National Security Agency [NSA] acts as the Executive Agency for the DoD KMI Program.) AF KMI, in concert with this overarching DoD KMI Program, will provide a secure and flexible capability for the electronic generation, distribution, accounting, and management of: key material; voice callwords; and communications security (COMSEC) publications for all DoD Command, Control, Communications, Computers, and Intelligence (C4I) and for the Services' weapon systems. KMI represents a broad-scale replacement of the current Electronic Key Management System (EKMS). The new KMI will provide capabilities that will allow networked operation in consonance with the Global Information Grid (GIG) and other DoD, fellow Service, and AF enterprise objectives. It thereby will assure a viable support infrastructure for future weapons and C4I programs to incorportate key management into their system designs.

The AF Key Management Infrastructure (KMI) Program's R&D efforts will include: building the AF KMI architecture; defining all of its linkages; building the linkage interfaces that will allow them to communicate; and other "last mile" development. (See NOTE below for detailed explanation of the "last mile" work.)

The DoD KMI will greatly improve protection of National, Security-related information by substantially enhancing confidentiality, integrity, and non-repudiation characteristics over the legacy EKMS key management system. KMI will greatly accelerate the availability of crypto key materials through electronic transmission versus shipping of materials, will enhance mission responsiveness and flexibility, and will take the man "out-of-the-loop" in the distribution of crypto key materials.

This project is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

NOTE: In parallel, DoD and the Services are developing a new generation of End Crypto Units (ECUs) under the Joint Crypto Modernization Initiative that will be capable of direct interaction with the KMI. (See BPAC 675100, this PE, for the AF CM Program supporting this Initiative). In some cases these new ECUs, although needing to be supported by KMI, will not be KMI network-connected. "Last mile" transport of black (aka benign, or encrypted) keying material from a KMI client to a new generation ECU will need to be handled in the early years by one of two data transfer devices. In KMI CI-3 a new distribution method called "over-the-air-keying (OTAK)" will be developed to replace the data transfer devices.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **5231 AF Key Management Infrastructure (AF KMI)**

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

		FY 2005	FY 2006	FY 2007
(U)	Provide program office contract support for Air Force Key Management planning and systems integration, and migration to the Key Management Infrastructure	0.000	0.000	0.261
(U)	Develop the following items: End User key delivery operations systems; Next Generation Fill Device; Service node application software; and related computer-based training	0.000	0.000	0.460
(U)	Total Cost	0.000	0.000	0.721

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) See AF Other Procurement PE 33140F	3.038	19.341	7.677	10.562	7.931	20.974	21.093	Continuing	TBD

Note: this line includes both AFEKMS and AF KMI Other Procurement (3080) money.

(U) D. Acquisition Strategy

All major contracts within this Project are awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **5231 AF Key Management Infrastructure (AF KMI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Architectural Planning & Migration (to) the KMI Infrastructure	CPFF	MITRE, San Antonio, TX	0.000	0.000		0.000		0.261		Continuing	TBD	TBD
Last Mile Development	T&M	Science Applications International Corporation (SAIC), San Antonio, TX	0.000	0.000		0.000		0.460		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		0.721		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		0.721		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)

Exhibit R-4: BPAC 5321 , AF KMI

Fiscal Year	FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY11			
	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
Architectural Planning & Migration (to) the KMI Infrastructure																												
Last Mile Development																												

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 5231 AF Key Management Infrastructure (AF KMI)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Architectural Planning & Migration (to) the KMI Infrastructure			1-4Q
(U) Last Mile Development			1-4Q

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
7820	Computer Security RDT&E: Firestarter	6.283	9.044	5.752	6.124	7.465	7.630	7.760	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Firestarter program provides research and development (R&D) of Information Assurance (IA) technologies and tools needed to protect and defend Air Force Command, Control, Communications, Computer, and Intelligence (C4I) systems from Computer Network Attacks, and ensure recovery from those attacks. As one of the Air Force managers for IA R&D, the PMO ensures that the emphasis of the program is directed toward information/computer/network security; damage assessment and recovery; dynamic security policy enforcement; and active response. These areas of emphasis are realized through cyberspace surveillance; cyber indications and warning (CI&W); high-speed and host-based intrusion detection; fusion and correlation of attack indicators; decision support; recovery; cyber forensics; and active response. Current Air Force systems, such as the Combat Information Transport System/Base Information Protection (CITS/BIP) and Information Warfare Planning Capability (IWPC), leverage this technology to meet their information protection needs/requirements. Additionally, this program utilizes IA technology investments by the Defense Advanced Research Projects Agency (DARPA), the National Security Agency (NSA) Advance Research Development Activity (ARDA), and the Department of Homeland Security (DHS) Advanced Research Project Activity (ARPA) to jump-start its development of solutions to existing Air Force IA requirements. This program coordinates and cooperates with the JTF-GNO, STRATCOM, DISA, NSA and other services to ensure Global Information Grid (GIG) IA requirements are being met.

This program is in Budget Activity 7, Operational System Development, because it addresses the development and transition of information security, protection, and defensive capabilities and technologies.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue development of technology for self-healing network systems (to include automated system recovery)	0.290	0.458	0.626
(U)	Continue development of information attack correlation methodologies	0.757	0.602	0.664
(U)	Continue development of methodologies for commercial software evaluation and steganography detection	0.071	0.122	0.191
(U)	Continue development of secure agent frameworks for Enterprise Defense to support protection of the warfighter C4ISR systems	0.279	0.310	0.546
(U)	Continue effort to transition DARPA information assurance (IA) technology into AF Information Protection, Detection, & Response architecture	0.296	0.254	0.452
(U)	Continue effort to develop metrics for reliable information assurance (IA) measurement and testing	0.143	0.136	0.162
(U)	Continue development of secure interoperable distributed agent computing (including FY06 Congressional Add for Worldwide Infrastructure Security Environment)	2.747	5.510	0.504
(U)	Continue development of cyber forensic tools and methodologies	0.310	0.278	0.411
(U)	Continue effort to provide active response and dynamic policy enforcement to computer/network attack	0.395	0.324	0.490

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **7820 Computer Security RDT&E: Firestarter**

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue effort to provide dynamic, cost effective, risk mitigation information assurance techniques for wireless terminals and networks	0.307	0.266	0.350
(U)	Continue effort to provide IA/Cyber modeling and simulation for mission impact assessment and dynamic planning	0.258	0.210	0.274
(U)	Continue effort to provide secure coalition IA data management, collaboration, and visualization	0.330	0.327	0.394
(U)	Continue effort to provide Internet Protocol (IP) Telephony (Voice Over IP) security tools	0.100	0.052	0.275
(U)	Continue IP v6 Risk Mitigation		0.195	0.207
(U)	Initiate Cyber Security Bots			0.206
(U)	Total Cost	6.283	9.044	5.752

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
N/A									

(U) D. Acquisition Strategy

All major contracts within this project are awarded after full and open competition utilizing evolutionary capability and incremental development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303140F Information Systems Security Program**

PROJECT NUMBER AND TITLE: **7820 Computer Security RDT&E: Firestarter**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
FFRDC (MITRE)	CPFF	Multiple Locations	5.926	0.264	Oct-04	0.304	Oct-05	0.337	Oct-06	Continuing	TBD	TBD
Multiple Contractors	CPFF	Multiple Locations	14.780	5.459	Oct-04	8.184	Oct-05	4.688	Oct-06	Continuing	TBD	TBD
Multiple Universities	CPFF	Multiple Locations	1.177	0.560	Oct-04	0.556	Oct-05	0.727	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			21.883	6.283		9.044		5.752		Continuing	TBD	TBD
Remarks: Multiple contractors & multiple universities reflect on-going efforts with over a dozen contractors & universities. Each has a different contract date depending on when that particular contract was awarded.												
(U) Total Cost			21.883	6.283		9.044		5.752		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE: 7820 Computer Security RDT&E: Firestarter

Exhibit R-4: BPAC 7820, Firestarter (p 1 of 2)

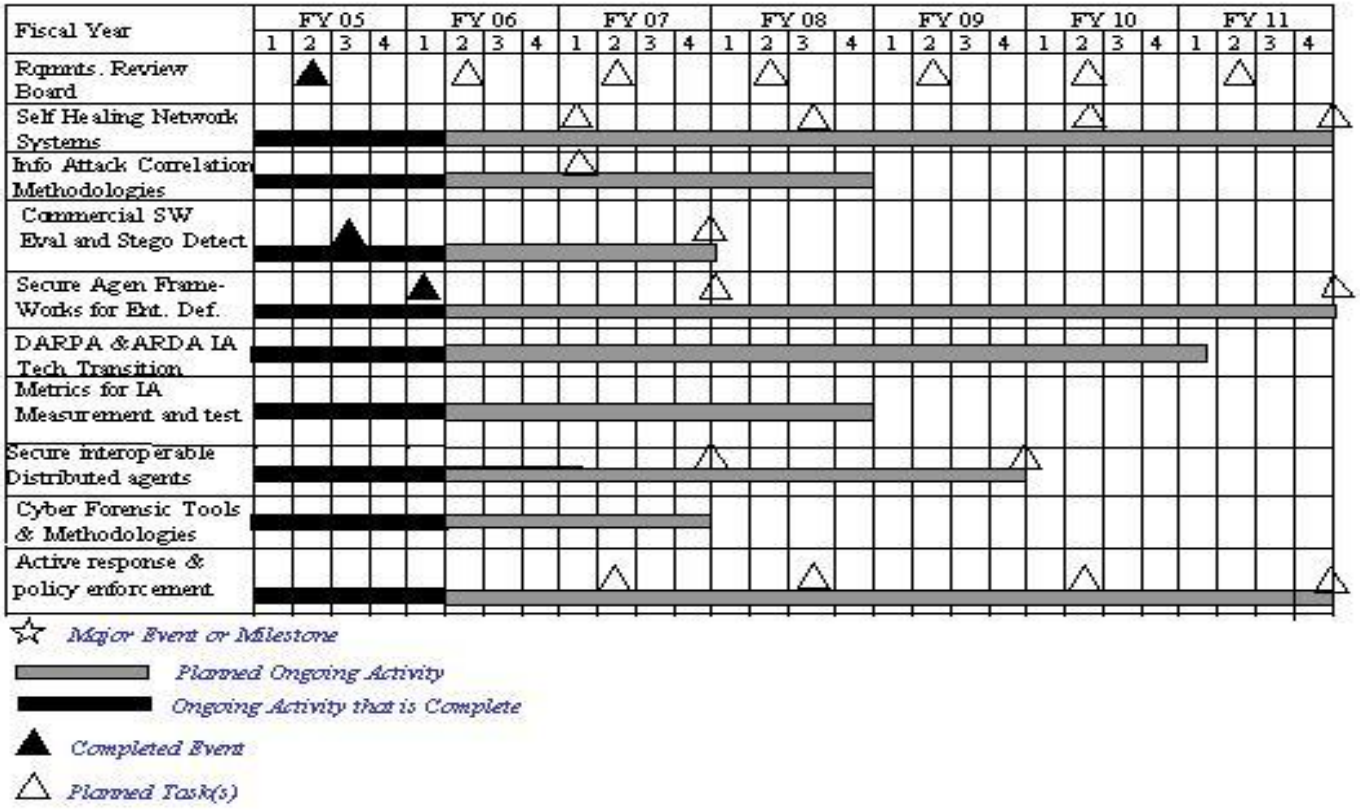
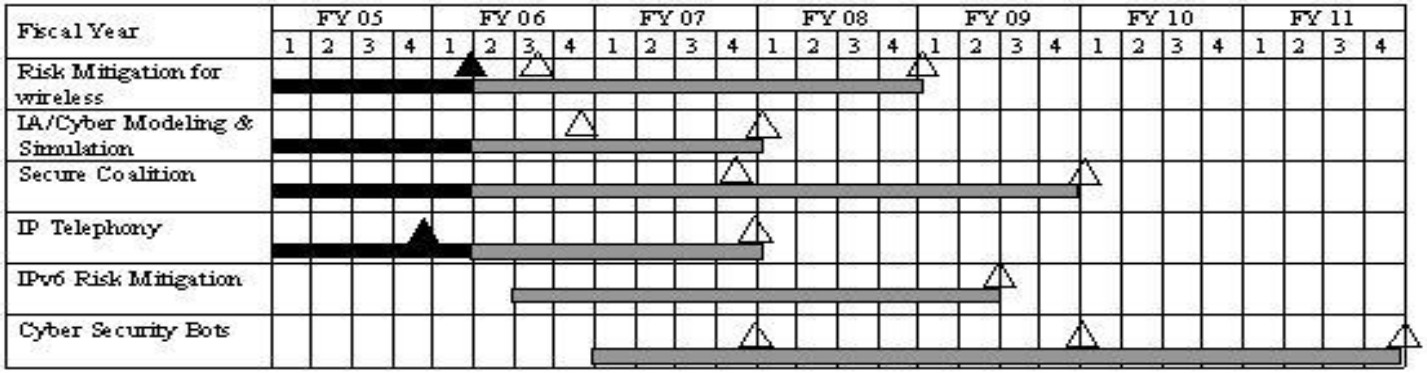


Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303140F Information Systems Security Program	PROJECT NUMBER AND TITLE 7820 Computer Security RDT&E: Firestarter

Exhibit R-4: BPAC 7820, Firestarter (p 2 of 2)



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303140F Information Systems Security Program**	PROJECT NUMBER AND TITLE **7820 Computer Security RDT&E: Firestarter**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Requirements Review Boards	2Q	2Q	2Q
(U)	Continue development of self-healing network systems	1-4Q	1-4Q	1-4Q
(U)	Continue information attack correlation methodologies	1-4Q	1-4Q	1-4Q
(U)	Continue development of methodologies for commercial software evaluation and steganography	1-4Q	1-4Q	1-4Q
(U)	Continue development of secure agent frameworks for Enterprise Defense	1-4Q	1-4Q	1-4Q
(U)	Continue DARPA and ARDA information assurance transition	1-4Q	1-4Q	1-4Q
(U)	Continue to develop metrics for reliable IA measurement and testing	1-4Q	1-4Q	1-4Q
(U)	Continue secure interoperable distributed agent computing (partial Congressional add)	1-4Q	1-4Q	1-4Q
(U)	Continue to develop cyber forensic tools and methodologies	1-4Q	1-4Q	1-4Q
(U)	Continue to develop active response and dynamic policy enforcement to computer/network attack	1-4Q	1-4Q	1-4Q
(U)	Continue risk mitigation IA technology for wireless terminals and networks	1-4Q	1-4Q	1-4Q
(U)	Continue IA/Cyber modeling and simulation	1-4Q	1-4Q	1-4Q
(U)	Continue secure coalition IA data management collaboration and visualization	1-4Q	1-4Q	1-4Q
(U)	Continue Internet Protocol (IP) Telephony (Voice Over IP) security tools	1-4Q	1-4Q	1-4Q
(U)	Continue IPv6 Risk Mitigation		1-4Q	1-4Q
(U)	Initiate Cyber Security Bots			1-4Q

PE NUMBER: 0303141F
PE TITLE: Global Combat Support System (GCSS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	20.645	20.262	19.895	20.767	20.856	21.204	21.061	Continuing	TBD
5046 Systems Engineering & Integration	20.645	20.262	19.895	20.767	20.856	21.204	21.061	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

GCSS-AF will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF will achieve cost avoidance, remove business processing inefficiencies, enable reduced deployment footprint, and improve the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	18.637	20.555	18.956
(U)	Current PBR/President's Budget	20.645	20.262	19.895
(U)	Total Adjustments	2.008	-0.293	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.204	-0.293	
	Congressional Increases	2.800		
	Reprogrammings			
	SBIR/STTR Transfer	-0.588		

(U) Significant Program Changes:

The Congress added $2.8M, in FY05, for Air Force Knowledge Service (AFKS), a project that benefits GCSS-AF by providing for the mass storage of data. This is also known as and was called Enterprise Data Warehouse (EDW).

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303141F Global Combat Support System (GCSS)	PROJECT NUMBER AND TITLE: 5046 Systems Engineering & Integration

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5046	Systems Engineering & Integration	20.645	20.262	19.895	20.767	20.856	21.204	21.061	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

GCSS-AF will provide the warfighter and supporting elements with timely, accurate, and trusted Agile Combat Support (ACS) information. This information will have the appropriate level of security needed for the Air Expeditionary Forces (AEF) to execute the Air Force mission throughout the full spectrum of military operations.

The GCSS-AF program modernizes, consolidates, develops, and integrates Air Force and Department of Defense combat support information systems. The modernized systems are being developed in compliance with and hosted on the Network Centric Enterprise Systems, replacing the Defense Information Infrastructure (DII) Common Operating Environment (COE). The modernized systems will be implemented and sustained worldwide and support both wartime and peacetime requirements using hardware, software, and communications capabilities available from standard open systems government contracts and communications infrastructure programs. In this manner, GCSS-AF will achieve cost avoidance, remove business processing inefficiencies, enable reduced deployment footprint, and improve the speed with which information flows.

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Integration Framework (IF) Development	10.609	12.334	10.498
(U) Multi-Site Engineering	1.700	1.873	3.149
(U) Portal Development	4.450	4.633	4.550
(U) Test and Evaluation	0.590	0.702	0.860
(U) ESC/NI Program Management and Operations	0.120	0.227	0.314
(U) Integrated Requirements Support System (IRSS) Integration	0.479	0.493	0.524
(U) Air Force Knowledge Service -- Congressional add	2.697		
(U) Total Cost	20.645	20.262	19.895

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Operation & Maintenance, AF; PE 0303141F	44.589	25.740	26.446	28.344	31.298	32.362	32.674	Continuing	TBD
(U) Other Procurement, AF; PE	8.550	14.440	11.761	12.287	10.573	10.813	10.969	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303141F Global Combat Support System (GCSS)**	PROJECT NUMBER AND TITLE **5046 Systems Engineering & Integration**

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

0303141F

(U) D. Acquisition Strategy

The preponderance of GCSS-AF development, that is system engineering, design, and installation, was provided for in the Indefinite Delivery/Indefinite Quantity (ID/IQ) contract with Firm-Fixed-Price (FFP), Cost Reimbursable (CR), Cost-Plus-Fixed-Fee (CPFF), Cost-Plus-Award-Fee (CPAW), and Labor-Hour (LH) Contract Line Item Numbers (CLINs), awarded after full and open competition in 1996. Currently, the program is pursuing a directed award (sole source), 18-month contract extension to extend to FOC. During the contract extension, there will be a competition for an Operations and Maintenance contract for the fielded capability.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303141F Global Combat Support System (GCSS)**

PROJECT NUMBER AND TITLE: **5046 Systems Engineering & Integration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Presentation Services (Air Force Portal)	Level of Effort	Lockheed Martin IT, Owego, NY	7.302	4.450	Oct-04	4.633	Oct-05	4.550	Oct-06	Continuing	TBD	TBD
Lockheed Martin Systems IF Development	Level of Effort	Lockheed Martin IT, Owego, NY	12.198	10.609	Oct-04	12.334	Oct-05	10.497	Oct-06	Continuing	TBD	TBD
Multi-Site Enginnering	Level of Effort	Lockheed Martin IT, Owego, NY	3.956	1.700	Oct-04	1.873	Oct-05	3.149	Oct-06	Continuing	TBD	TBD
IRSS Integration	C/T&M	DFSG/SS, Wright Patterson AFB	2.524	0.479	Oct-04	0.493	Oct-05	0.524	Oct-06	Continuing	TBD	TBD
Air Force Knowledge Service Development	Level of Effort	DFSG/SS, Wright Patterson AFB	10.600	2.697	Oct-04						13.297	
Subtotal Product Development			36.580	19.935		19.333		18.720		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Test and Evaluation	Statement of Commitment	46th CTF, WP AFB, OH; and JITC, Fort Huachuca, AZ	1.387	0.590	Oct-04	0.701	Oct-05	0.860	Oct-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			1.387	0.590		0.701		0.860		Continuing	TBD	TBD
Remarks:												
(U) Management												
ESC/NI Program Management and Operations	Various Contracts	Hanscom AFB, MA	0.884	0.120	Oct-04	0.228	Oct-05	0.315	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.884	0.120		0.228		0.315		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			38.851	20.645		20.262		19.895		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303141F Global Combat Support System (GCSS)**	PROJECT NUMBER AND TITLE **5046 Systems Engineering & Integration**

Exhibit R-4: GCSS-AF

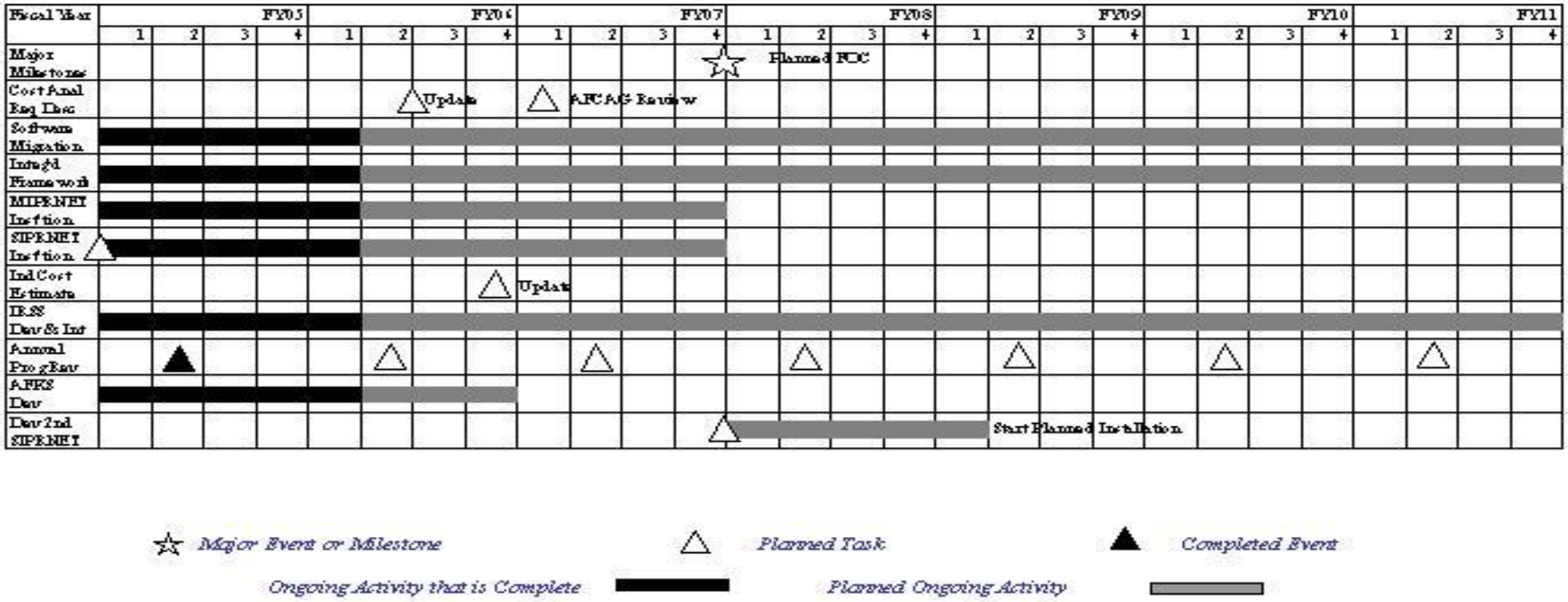


Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303141F Global Combat Support System (GCSS)**	**5046 Systems Engineering & Integration**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Planned Full Operational Capability			4Q
(U) Cost Analysis Requirement Description -- Update/AFCAIG Review		2Q	1Q
(U) NIPRNet Application Integration and Migration	1-4Q	1-4Q	1-4Q
(U) NIPRNet Integrated Frame Development	1-4Q	1-4Q	1-4Q
(U) Secret Internet Protocol Routing Network (SIPRNET) Installation, start to completion (Dayton)	1-2Q		
(U) Secret Internet Protocol Routing Network (SIPRNET) Application and Data Migration (Dayton)	3-4Q	1-4Q	1-4Q
(U) Independent Cost Estimate -- Update		4Q	
(U) Start and continue IRSS Integration	1-4Q	1-4Q	1-4Q
(U) Annual Program Review	2Q	2Q	2Q
(U) Develop Air Force Knowledge Service (Dayton)	1-4Q	1-4Q	

PE NUMBER: 0303150F
PE TITLE: WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	5.096	13.306	3.348	3.361	3.201	3.185	3.125	Continuing	TBD
4667	Global Command and Control System - AF	5.096	13.306	3.348	3.361	3.201	3.185	3.125	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DoD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The Global Command and Control System-Air Force program provides C2, intelligence, surveillance, reconnaissance and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering, and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that will make up the COE, and integration of Air Force unique applications with the COE. Integration efforts will be directed towards future aerospace C2 concepts supporting requirements for the AOC, including intelligence, surveillance, and reconnaissance and intended to automate operational systems with an end objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP) and Single Integrated Air Picture (SIAP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the Joint Command and Control (JC2) system riding on the Global Information Grid.

Note: The Budget Activity shown at the top of this document (644667) is incorrect. The proper Budget Activity is 674667 and will be corrected in a later update to this exhibit.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	3.611	3.541	3.649
(U)	Current PBR/President's Budget	5.096	13.306	3.348
(U)	Total Adjustments	1.485	9.765	
(U)	Congressional Program Reductions	-0.190	-0.042	
	Congressional Rescissions		-0.193	
	Congressional Increases	1.800	10.000	
	Reprogrammings			
	SBIR/STTR Transfer	-0.125		

(U) Significant Program Changes:

FY05 $1.8M Congressional add for Applided Research in Computing Enterprise Services (ARCES).

FY06 $3M Congressional add for ARCES and $7M Congressional add for Command and Control Service Level Management.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM	PROJECT NUMBER AND TITLE: 4667 Global Command and Control System - AF	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4667	Global Command and Control System - AF	5.096	13.306	3.348	3.361	3.201	3.185	3.125	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Global Command and Control System (GCCS) is the Joint Command and Control (C2) System of Record and the designated C2 migration system for the DoD. It is an integrated Command, Control, Communications, Computer, and Intelligence (C4I) system capable of supporting all echelons of the US military command structure. GCCS solves C4I interoperability problems between Service components by establishing a Common Operating Environment (COE), and has an end objective to eliminate stovepiped systems. The Global Command and Control System-Air Force program provides C2, intelligence, surveillance, reconnaissance and operational information for the Joint Force Air Component Commander (JFACC) and the Air and Space Operations Center-Weapon System (AOC-WS) for planning and execution, air space deconfliction, targeting, weaponeering, and many other applications supporting air operational command and control, and fully supports the Aerospace Expeditionary Force (AEF) concept. The Air Force is responsible for developing four of the modules that will make up the COE, and integration of Air Force unique applications with the COE. Integration efforts will be directed towards future aerospace C2 concepts supporting requirements for the AOC, including intelligence, surveillance, and reconnaissance and intended to automate operational systems with an end objective of providing the right people with the right information at the right time while reducing the overall foot print of the system. As they become available, GCCS-AF will integrate applications into the WINx environment satisfying warfighter requirements for the Common Operational Picture (COP) and Single Integrated Air Picture (SIAP), Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT), Air Tasking Order (ATO) Reader, and Deliberate Crisis Action Planning and Execution Segment (DCAPES) capabilities.

This effort is Budget Activity 7, Operational System Development, because the program develops and implements software upgrades for integrating existing operational systems and computer networks that will eventually evolve to the Joint Command and Control (JC2) system riding on the Global Information Grid.

Note: The Budget Activity shown at the top of this document (644667) is incorrect. The proper Budget Activity is 674667 and will be corrected in a later update to this exhibit.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue Integration of Air Force Capabilities into GCCS (COP, SIAP, DCAPES, ATO Reader, Joint Defensive Planner (JDP), Joint Targeting Toolbox (JTT)), Prototype Software Development, GCCS Migration Support	1.596	1.506	1.448
(U)	Congressional add for Applied Research in Computing Enterprise Services (ARCES)	1.800	3.000	0.000
(U)	Congressional add for Command and Control Service Level Management	0.000	7.000	0.000
(U)	GCCS-AF (I) Systems Engineering	1.700	1.800	1.900
(U)	Total Cost	5.096	13.306	3.348

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**	PROJECT NUMBER AND TITLE **4667 Global Command and Control System - AF**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, AF (3080)	16.155	11.686	13.877	13.782	13.635	13.739	13.722	Continuing	TBD

(U) D. Acquisition Strategy

Electronic Systems Center (ESC) Hanscom AFB, MA manages the integration and infrastructure of the Air Force Global Command and Control Systems developed/fielded using spiral acquisition approaches with Common Operating Environment (COE) and GCCS-Joint compliance performed by ESC to support Air Force contribution to the Joint Services and to support the separate Air Force mission applications that operate in the COE.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**

PROJECT NUMBER AND TITLE: **4667 Global Command and Control System - AF**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
WINxB	SS/FFP	Northrop Gruman ITS/Herndon, VA	2.200	0.711	Oct-04	0.800	Oct-05	0.810	Oct-06	Continuing	TBD	TBD
Test & Accreditation	MIPR	Multiple	0.833	0.377	Oct-04	0.376	Oct-05	0.363	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			3.033	1.088		1.176		1.173		Continuing	TBD	TBD
Remarks:												
(U) Support												
Information Technology Services Program (ITSP)	SS/FFP	Multiple	2.409	0.200	Oct-04	0.200	Oct-05	0.225	Oct-06	Continuing	TBD	TBD
FFRDC	SS/FFP	Mitre/ESC	10.516	1.700	Oct-04	1.730	Oct-05	1.750	Oct-06	Continuing	TBD	TBD
Miscellaneous SPO	SS/BOA	Multiple	1.398	0.308	Oct-04	0.200	Oct-05	0.200	Oct-06	Continuing	TBD	TBD
Subtotal Support			14.323	2.208		2.130		2.175		Continuing	TBD	TBD
Remarks:												
(U) Congressional Adds												
Applied Research in Computing Enterprise Services (ARCES)	SS/FFP	Villanova Univ./PA	0.000	1.800	Dec-05	3.000		0.000		0.000	4.800	4.800
Command and Control Service Level Management	TBD	TBD	0.000	0.000		7.000		0.000		0.000	7.000	7.000
Subtotal Congressional Adds			0.000	1.800		10.000		0.000		0.000	11.800	11.800
Remarks:												
(U) Total Cost			17.356	5.096		13.306		3.348		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**	**4667 Global Command and Control System - AF**

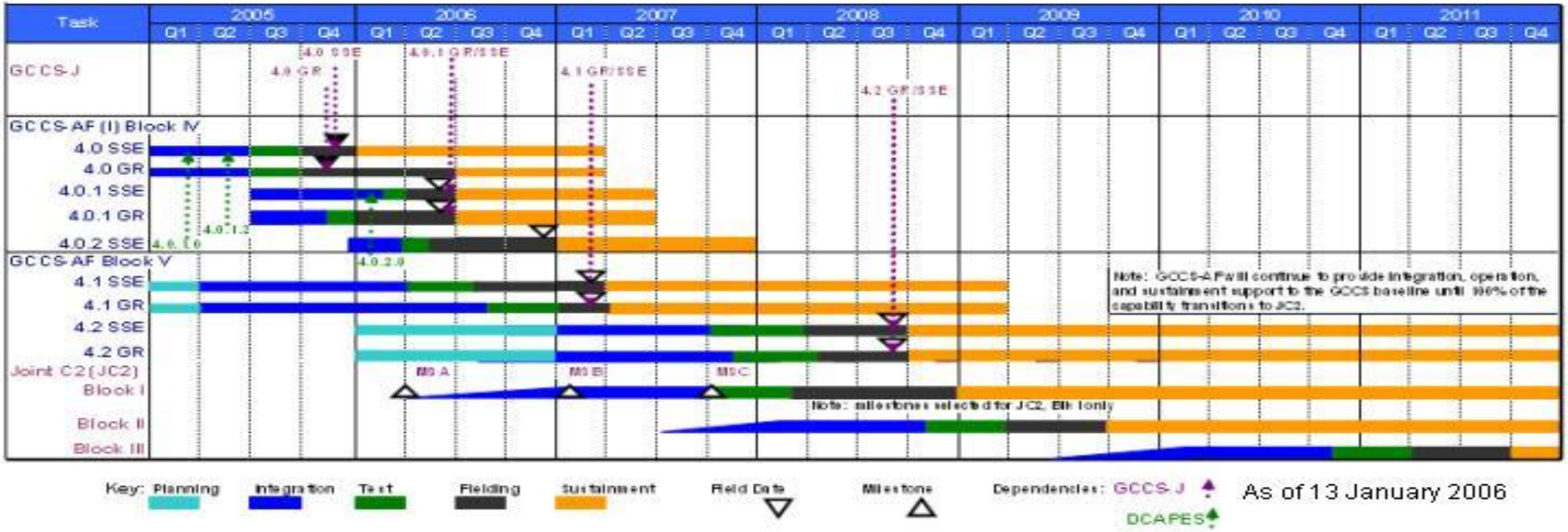


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303150F WWMCCS/GLOBAL COMMAND & CONTROL SYSTEM**	PROJECT NUMBER AND TITLE **4667 Global Command and Control System - AF**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	GGCS-AF v4.0 GR/SSE: Development/Integration/Testing/Fielding	1-4Q		
(U)	GCCS-AF v4.0.1: GR/SSE Development/Integration/Fielding/Testing	3-4Q	1-2Q	
(U)	GCCS-AF v4.0.2: SSE Development/Integration/Testing/Fielding	4Q	1-4Q	
(U)	GCCS-AF v4.1: SSE/GR Development/Integration/Testing/Fielding	2-4Q	1-4Q	1Q

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PE NUMBER: 0303601F
PE TITLE: MILSATCOM Terminals

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	245.582	269.218	271.562	187.419	215.910	192.994	188.437	Continuing	TBD
2487 MILSATCOM Terminals	245.582	269.218	271.562	187.419	215.910	192.994	188.437	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Gapfiller System (WGS), Defense Satellite Communication System (DSCS), Transformational Communications Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force (AEF) requirements and maintain essential connectivity for strategic forces. Program RDT&E currently supports the following efforts to include program operations and support:

1) Concept development work to identify commercial/military technology solutions to improve MILSATCOM terminal capabilities for the warfighters. Focus includes increasing throughput, facilitating sustainability, reducing footprint on user platform and supporting network.

2) Ground Multi-band Terminal (GMT) development. In addition to supporting the Air and Space Expeditionary Force requirement for increased information, GMT will replace Air Force Ground Mobile Forces (GMF) terminals with higher-capacity military communications to provide tactical ground forces with connectivity via the X- and Ka-bands on WGS, X-band on DSCS, and commercial C- and Ku-band on commercial satellites to significantly increase throughput for inter- and intra-theater tactical force information such as air tasking orders, battle damage assessments, and reconnaissance data. The RDT&E effort for GMT completed in FY05.

3) Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development. Increment 1 program will provide Extremely High Frequency (EHF) voice and data military satellite communications (MILSATCOM) for nuclear and conventional forces as well as airborne and ground command posts with connectivity to MILSTAR and Advanced EHF satellites. FAB-T Increment 2 will provide robust secure 2-way Ku/Ka band SATCOM capability on High Altitude Endurance (HAE) Intelligence, Surveillance and Reconnaissance (ISR) aircraft to operate with current and future Ku frequency band commercial satellites and Ka band on WGS. FAB-T Increment 3 will provide XDR+ capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka (311 Mbps) communications in support of TSAT. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) that provides a multi-beam, multi-band antenna that enables simultaneous connectivity to more than one satellite. This antenna addresses limited aircraft external surface area, historically high antenna integration costs and aerodynamic and low observability restrictions. It enables airborne weapon systems to support the warfighter's need for higher data rates for while providing a common solution for each platform.

4) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal Development. Develops terminals with transponded Ka-band HDR (274 Mbps) capabilities in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate (137 Mbps) provided by the first three WGS satellites.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals

5) Lasercom Development. Develops an Airborne Lasercom Terminal (ALT) to support optical communications for ISR and command and control aircraft; supports transformational communications initiatives which require laser transmission of sensor data at rates over 1 Gbps. The ALT will operate with TSAT.

6) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

7) Mobile User Objective System (MUOS) terminal upgrade development has been terminated. MUOS will be backwards compatible with existing narrowband terminals and these terminals will ultimately be replaced by JTRS radios at their end of life.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	264.795	273.974	273.782
(U)	Current PBR/President's Budget	245.582	269.218	271.562
(U)	Total Adjustments	-19.213	-4.756	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.207	-4.756	
	Congressional Increases			
	Reprogrammings	-11.645		
	SBIR/STTR Transfer	-7.361		

(U) Significant Program Changes:

In FY06, the Air Force merged the HDR-RF Airborne development and the Advanced Multi-band Communications Antenna System (AMCAS) with the FAB-T development program in support of evolving the family of terminals concept to merge related programs. HDR-RF Airborne became FAB-T Increment 2 as it reuses major components of Increment 1. The AMCAS antenna will be used on certain platforms in conjunction with FAB-T.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals

PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2487 MILSATCOM Terminals	245.582	269.218	271.562	187.419	215.910	192.994	188.437	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Military Satellite Communications (MILSATCOM) Terminals program develops equipment enabling users to communicate via Milstar, Advanced Extremely High Frequency (AEHF), Ultra High Frequency (UHF) Follow-On (UFO), Wideband Gapfiller System (WGS), Defense Satellite Communication System (DSCS), Transformational Communications Satellite (TSAT), and other military and commercial satellites, to support tactical Air and Space Expeditionary Force (AEF) requirements and maintain essential connectivity for strategic forces. Program RDT&E currently supports the following efforts to include program operations and support:

1) Concept development work to identify commercial/military technology solutions to improve MILSATCOM terminal capabilities for the warfighters. Focus includes increasing throughput, facilitating sustainability, reducing footprint on user platform and supporting network.

2) Ground Multi-band Terminal (GMT) development. In addition to supporting the Air and Space Expeditionary Force requirement for increased information, GMT will replace Air Force Ground Mobile Forces (GMF) terminals with higher-capacity military communications to provide tactical ground forces with connectivity via the X- and Ka-bands on WGS, X-band on DSCS, and commercial C- and Ku-band on commercial satellites to significantly increase throughput for inter- and intra-theater tactical force information such as air tasking orders, battle damage assessments, and reconnaissance data. The RDT&E effort for GMT completed in FY05.

3) Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development. Increment 1 program will provide Extremely High Frequency (EHF) voice and data military satellite communications (MILSATCOM) for nuclear and conventional forces as well as airborne and ground command posts with connectivity to MILSTAR and Advanced EHF satellites. FAB-T Increment 2 will provide robust secure 2-way Ku/Ka band SATCOM capability on High Altitude Endurance (HAE) Intelligence, Surveillance and Reconnaissance (ISR) aircraft to operate with current and future Ku frequency band commercial satellites and Ka band on WGS. FAB-T Increment 3 will provide XDR+ capabilities to platforms requiring High Data Rate EHF (45 Mbps) and Processed Ka (311 Mbps) communications in support of TSAT. Also included in the FAB-T program is the Advanced Multi-band Communications Antenna System (AMCAS) that provides a multi-beam, multi-band antenna that enables simultaneous connectivity to more than one satellite. This antenna addresses limited aircraft external surface area, historically high antenna integration costs and aerodynamic and low observability restrictions. It enables airborne weapon systems to support the warfighter's need for higher data rates for while providing a common solution for each platform.

4) High Data Rate (HDR) Radio Frequency (RF) Ground Terminal Development. Develops terminals with transponded Ka-band HDR (274 Mbps) capabilities in support of the Distributed Common Ground System (DCGS) receipt of data from the Airborne ISR (AISR) platforms using FAB-T Inc 2 terminals. This bandwidth will be provided via the fourth and fifth WGS satellites. This terminal will also support the lower data rate (137 Mbps) provided by the first three WGS satellites.

5) Lasercom Development. Develops an Airborne Lasercom Terminal (ALT) to support optical communications for ISR and command and control aircraft; supports transformational communications initiatives which require laser transmission of sensor data at rates over 1 Gbps. The ALT will operate with TSAT.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

6) Joint Terminal Engineering Office (JTEO) provides tri-service coordination of terminal development, acquisition and fielding activities.

7) Mobile User Objective System (MUOS) terminal upgrade development has been terminated. MUOS will be backwards compatible with existing narrowband terminals and these terminals will ultimately be replaced by JTRS radios at their end of life.

This effort is funded in Budget Activity 7, Operational System Development because some of its programs have completed Milestone C reviews and are in production.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Continue concept/prototype demo/MILSATCOM Terminals roadmap/SATCOM funding	3.790	3.823	3.925
(U)	Completed Ground Multi-band Terminal (GMT) development	3.401		
(U)	Continue Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) development	165.796	223.658	215.620
(U)	Continue High Data Rate (HDR) RF Air (merged with FAB-T in FY06 to become FAB-T Inc 2) development	21.302		
(U)	Continue Advanced Multi-band Communications Antenna System (AMCAS) development (merge with FAB-T in FY06)	8.343		
(U)	Continue High Data Rate (HDR) RF Ground Terminal development	4.503	6.437	9.721
(U)	Continue Lasercom Terminals concept development	31.298	27.410	34.203
(U)	Continue Joint Terminal Engineering Office (JTEO) Support	7.149	7.890	8.093
(U)	Total Cost	245.582	269.218	271.562

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Aircraft Procurement, Air Force, Project 119992 (Budget Activity 5, P-27 and P-61, PE 0303601F only) (1)	26.523	2.696	9.998	123.455	152.873	293.090	352.506	Continuing	TBD
(U)	Other Procurement, Air Force, 'MILSATCOM Space', Project 836780 (Budget Activity 3, P-66, PE 0303601F only) (1)	26.899	31.371	75.688	106.367	50.716	65.570	134.210	Continuing	TBD

(1) Spares Included

NOTE: Related RDT&E costs for MILSATCOM satellite systems to which terminal development is linked can be found in RDT&E Budget Item Justification Sheets for the following Program Elements (PEs):

PE 0303110F Defense Satellite Communication System (Space)

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE 2487 MILSATCOM Terminals

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

PE 0603430F Advanced EHF MILSATCOM (Space)
PE 0603845F Transformational SATCOM (TSAT)
PE 0603432F Polar MILSATCOM (Space)
PE 0603854F Wideband Gapfiller System (RDT&E) Space
PE 0604479F Milstar LDR/MDR SATCOM (Space)
PE 0604240F B-2 (RDT&E)
PE 0101113F B-52 (RDT&E)
PE 0305207F RC-135 (RDT&E)
PE 0207581F Joint STARS (RDT&E)

(U) D. Acquisition Strategy

In FY04, the AF began the development for the FAB-T Increment 2 Ka/Ku SATCOM capability. Increment 2 will be developed in 2 phases. In FY05, Phase 1 was awarded and encompasses requirements definition to develop the Contractor Technical Requirements Document (CTRD) through SRR. Phase 2 will be awarded in FY06 for continuation of SDD.

In FY04 the Air Force began the Advanced Multi-Band Communications Antenna System (AMCAS) concept development phase. This effort is known as the AMCAS Technology Development Plan, which involves multiple studies to define the system architecture to be completed in FY07. The results of the studies will be used as a basis for awarding a System Design and Development (SDD) contract based on full and open competition.

In FY04, the Airborne Lasercom Terminal (ALT) program initiated first phase, the Concept and Architecture Development Study Phase, of the program. Four technology demonstration contracts were awarded in June 04 and two architecture development contracts were awarded in August 04. The results of these efforts, in conjunction with the results of a FAB-T sponsored effort conducted by the FAB-T prime contractor, will be used to plan the Risk Reduction and Design Development Phase of the ALT program. A set of flight demonstration risk reduction contracts are planned for award in FY06 and will run through FY08. The second phase of the program will feature the design and development of Engineering Development Models of terminals and is planned for award in FY09 and will run through FY12.

In FY04 the HDR RF-Ground progran began concept activities. Phase 1 is an application demonstration for a High Bandwidth High Throughput (HBHT) modem. The next phase ports the FAB-T Inc 2 developed Ka waveform into an HBHT modem. At the conclusion of these efforts, the program will intergrate an HBHT modem with the Ka waveform into a Ground Multi-band Terminal (GMT) for certification and production.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

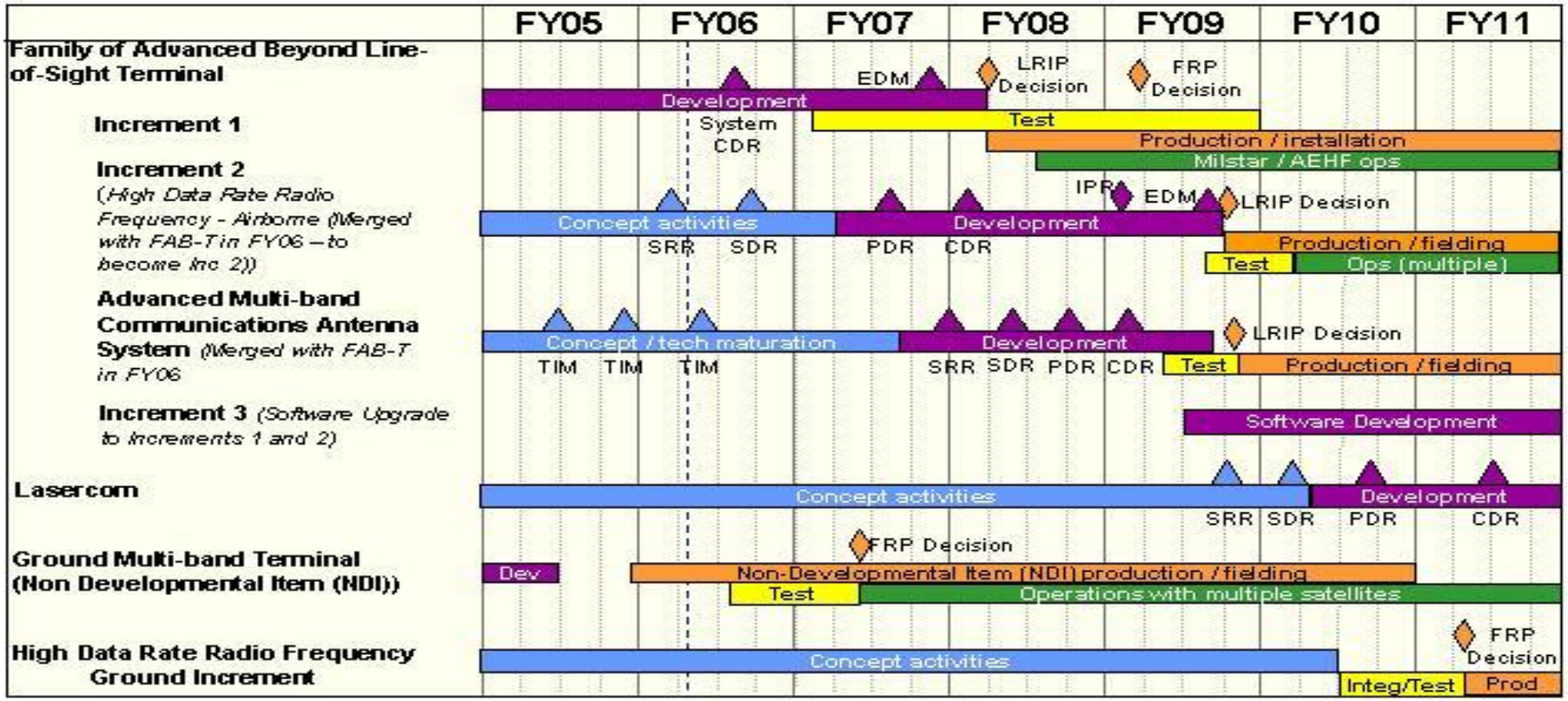
BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0303601F MILSATCOM Terminals**

PROJECT NUMBER AND TITLE: **2487 MILSATCOM Terminals**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
GMT Development	CPAF	Harris Corp., Melbourne, FL	37.267	0.978	Oct-04					0.000	38.245	55.939
FAB-T Development	CPAF	Boeing Corp., Anaheim, CA	141.395	146.990	Oct-04	208.199	Oct-05	205.190	Oct-06	Continuing	TBD	
High Data Rate (HDR) RF Ground Terminal Development	TBD	TBD				2.516	May-06	5.892	Oct-06	Continuing	TBD	
High Data Rate (HDR) RF Air Terminal Development (merged with FAB-T beginning in FY06)	CPAF	Boeing Corp., Anaheim, CA		13.787	Oct-04						13.787	
Lasercom Terminal Development Studies	FFP	Various	8.801	16.314	Oct-04	19.605	May-06	28.596	Oct-06	Continuing	TBD	
AMCAS Development (merged with FAB-T beginning in FY06)	TBD	TBD								Continuing	TBD	
										0.000	0.000	
Subtotal Product Development			187.463	178.069		230.320		239.678		Continuing	TBD	55.939
Remarks:												
(U) Support												
Systems Engineering Support	CPAF	MITRE, Bedford MA	154.267	22.532	Oct-04	22.157	Nov-05	16.650	Nov-06	Continuing	TBD	
Systems Engineering/Functional/Financial Support	Various	Various	177.992	23.855	Oct-04	11.677	Oct-05	11.542	Oct-06	Continuing	TBD	
Financial Support (Beginning in FY04 totals included in Systems Engineering/Functional/Financial Support)	Various	Tecolote, Bedford MA								Continuing	TBD	
Miscellaneous	Various	Various	23.970	4.830	Oct-04	4.281	Oct-05	3.085	Oct-06	Continuing	TBD	
											0.000	
Subtotal Support			356.229	51.217		38.115		31.277		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Various Programs	Various	AF Research Lab	24.603	0.415	Oct-04					Continuing	TBD	
Miscellaneous T&E	Various	Various	10.306	15.881	Oct-04	0.783	Oct-05	0.607	Oct-06	Continuing	TBD	
											0.000	
Subtotal Test & Evaluation			34.909	16.296		0.783		0.607		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			578.601	245.582		269.218		271.562		Continuing	TBD	55.939

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0303601F MILSATCOM Terminals	PROJECT NUMBER AND TITLE: 2487 MILSATCOM Terminals



CDR: Critical Design Review
DT&E: Development Test & Evaluation
EDM: Engineering Design Model
FRP: Full Rate Production
IPR: Integrated Program Review
LRIP: Low Rate Initial Production
OT&E Operational Test & Evaluation
PDR: Preliminary Design Review
SDR: System Design Review
SRR: System Requirements Review
TIM: Technical Interchange Meeting

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0303601F MILSATCOM Terminals**	PROJECT NUMBER AND TITLE **2487 MILSATCOM Terminals**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) FAB-T (Inc 1) Critical Design Review (CDR)		3Q	
(U) Began development of FAB-T Increment 2	1Q		
(U) FAB-T (Inc 2) Preliminary Design Review (PDR)			3Q

PE NUMBER: 0304260F
PE TITLE: Airborne SIGINT Enterprise (JMIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	77.798	117.834	123.304	142.563	145.779	148.346	Continuing	TBD
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	0.000	38.465	33.758	33.365	31.375	32.860	Continuing	TBD
5181	U-2 (Airborne SIGINT Development - U-2)	0.000	1.972	0.000	0.000	0.000	0.000	0.000	1.972	1.972
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	0.000	2.475	2.588	2.703	2.919	3.016	Continuing	TBD
5183	Common Development (Airborne SIGINT Development - Common Development)	0.000	70.481	53.896	63.347	82.277	86.572	86.993	Continuing	TBD
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	0.000	4.958	10.520	10.770	11.018	11.258	11.438	Continuing	TBD
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.000	0.387	8.250	8.492	8.730	8.964	9.151	Continuing	TBD
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	0.000	4.228	4.349	4.470	4.691	4.888	Continuing	TBD

(U) This PE began in FY06 and combines signals intelligence (SIGINT) development efforts previously being accomplished in multiple USAF PEs. The funds have been distributed among all seven Airborne SIGINT Enterprise (ASE) projects based on the development priorities established by the USAF SIGINT Capabilities Working Group in order to build a total SIGINT capability. This program element will participate in the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

(U) A. Mission Description and Budget Item Justification

(U) This Program Element (PE) funds efforts associated with the Airborne SIGINT (Signals Intelligence) Enterprise (ASE). ASE is the SIGINT modernization framework for all USAF airborne SIGINT collection platforms and their appropriate interfaces with the Air Force Distributed Common Ground System (AF DCGS). This PE will allow a synergistic development effort to be accomplished while developing a true Air Force-wide capability. This enterprise will use the Air Force Cryptologic Architecture (AFCA) for planning and decision-making and, in turn, employ the Joint Airborne SIGINT Architecture (JASA) open architecture standards to allow maximum ease of future upgrades and system interoperability. The primary goal of ASE is to produce an architecture-based, capability-focused SIGINT investment strategy for the USAF.

(U) This program is Budget Activity 7, Operational Systems Development, because it involves the development of SIGINT capabilities and integration with operational systems such as the RC-135, U-2, MQ-1/MQ-9, RQ-4, Special Programs (Senior Scout and others as required), their associated ground stations and data links, and Compass Bright programs.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	78.920	116.500
(U)	Current PBR/President's Budget	0.000	77.798	117.834
(U)	Total Adjustments	0.000	-1.122	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-1.122	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

(U) FY06 reduction was due to higher priorities. The growth in funds in FY07 reflects the completion of the baseline Airborne Signals Intelligence Payload (ASIP) program and the start of development work on the RC-135 fleet, MQ-1/9, Special Projects such as SENIOR SCOUT, and Compass Bright. In FY08, SIGINT development projects will add work in the ASIP Upgrade Program (Spiral development capabilities to enhance the ASIP baseline program through hardware and software modifications necessary to counter the evolving threat). U-2 Flight Test will be used for ASIP sensor risk eduction. BPAC 675181 funds were moved to BPAC 675184 to support higher department priorities.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5180 RC-135 (Airborne SIGINT Development - RC-135)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5180	RC-135 (Airborne SIGINT Development - RC-135)	0.000	0.000	38.465	33.758	33.365	31.375	32.860	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) These funds will be split between the RIVET JOINT, COMBAT SENT, and COBRA BALL programs.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 SIGINT sensors and their associated air and ground components. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) These efforts provide the requisite engineering for preliminary assessments of technical feasibility, operability, or military utility as well as specific engineering implementations integrated into the various baseline modifications.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) RC-135 Breakdown of funds (in millions):

	FY06	FY07	FY08	FY09	FY10	FY11
RIVET JOINT	0	32.065	26.958	26.465	24.475	25.860
COMBAT SENT	0	3.400	3.700	3.700	3.600	3.700
COBRA BALL	0	3.000	3.100	3.200	3.300	3.300

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	(U) Initiates Non-Recurring Engineering (NRE) for the RC-135 SIGINT Systems			38.465
	SEE Classified Budget Exhibits (PE 0305207F)			
(U)				
(U)	Total Cost	0.000	0.000	38.465

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5180 RC-135 (Airborne SIGINT Development - RC-135)**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	(U) PE 0305207F, APAF			89.093	104.026	106.275	109.044	111.302	Continuing	TBD

(U) These funds within the PE 0305207F procure all necessary aircraft modifications for the RC-135 program and include those funds necessary to field SIGINT capabilities developed under Project 675180 of this Airborne SIGINT Enterprise.

(U) D. Acquisition Strategy

(U) Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY11 include the procurement, fielding and logistical support for three distinct RIVET JOINT baseline configurations [baseline 8, 9, 10] and two distinct baselines [baselines 3 & 4] for COMBAT SENT and COBRA BALL. Development and integration managed by the Big Safari Systems Group; they employ evolutionary acquisition approaches to field incremental capability improvements.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

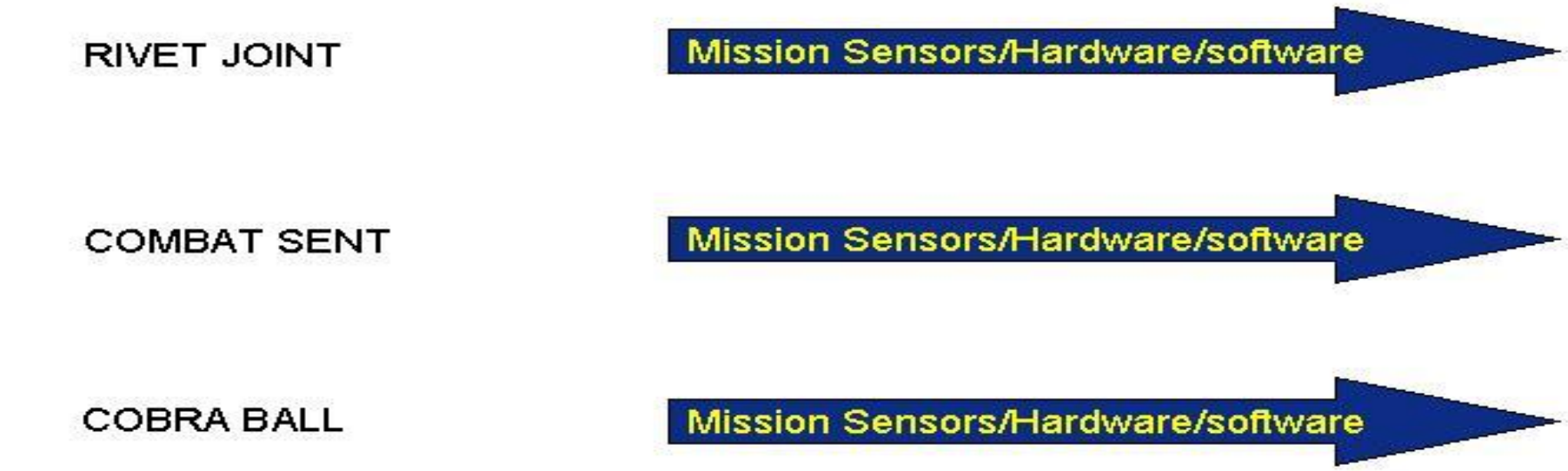
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5180 RC-135 (Airborne SIGINT Development - RC-135)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Development and Integration	TBD	TBD		0.000		0.000		38.465	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		38.465		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		38.465		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE 5180 RC-135 (Airborne SIGINT Development - RC-135)

U.S. AIR FORCE

RC-135



See PE 0305207 classified submission for breakout

As of: 10 Jan 06

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5180 RC-135 (Airborne SIGINT Development - RC-135)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Development of RIVET JOINT mission sensors			2-4Q
(U) Development of COMBAT SENT mission sensors			2-4Q
(U) Development of COBRA BALL mission sensors			2-4Q

Details are classified and are shown in the classified portion of PE 0305207F

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5181 U-2 (Airborne SIGINT Development - U-2)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5181	U-2 (Airborne SIGINT Development - U-2)	0.000	1.972	0.000	0.000	0.000	0.000	0.000	1.972	1.972
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

(U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the ASIP sensor.

(U) This project provides risk reduction for the RQ-4 Global Hawk and will provide the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Signals Intelligence (SIGINT) Sensor Integration on the U-2 aircraft		1.972	0.000
(U) Total Cost	0.000	1.972	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Airborne Signals Intelligence Program (ASIP) development in 0305202F	62.463								

(U) ASIP development for FY05 and before resides in the U-2 and Global Hawk PEs

(U) D. Acquisition Strategy

(U) SIGINT capabilities will be integrated on to this platform using an evolutionary acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5181 U-2 (Airborne SIGINT Development - U-2)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensors Integration	CPAF	Lockheed Martin Aero, Palmdale Ca.		0.000		1.972	Jan-06	0.000			1.972	TBD
Subtotal Product Development			0.000	0.000		1.972		0.000		0.000	1.972	TBD
Remarks:												
(U) Total Cost			0.000	0.000		1.972		0.000		0.000	1.972	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5181 U-2 (Airborne SIGINT Development - U-2)

ASIP U2 Integration

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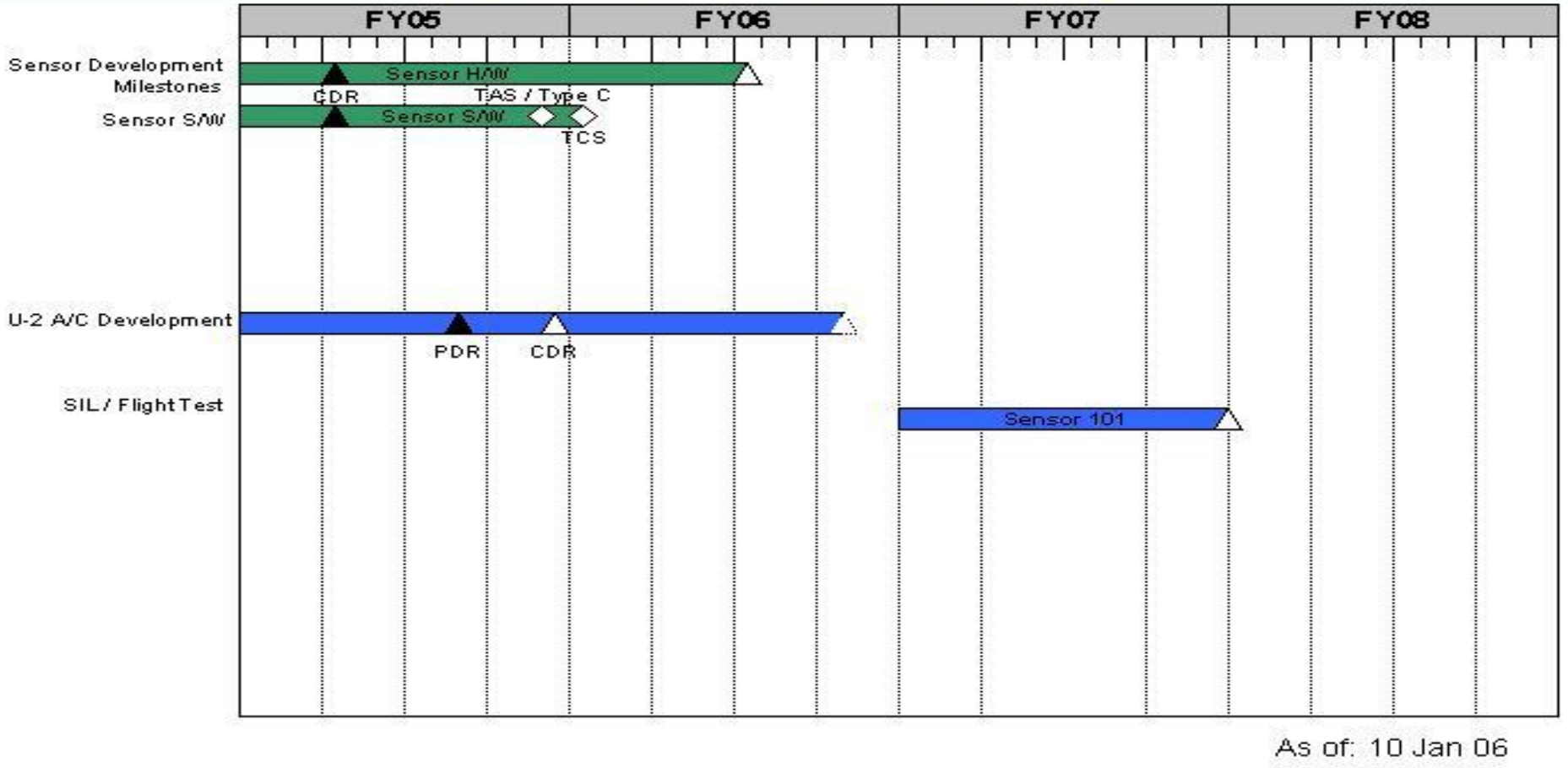


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5181 U-2 (Airborne SIGINT Development - U-2)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) U-2 flight test of baseline ASIP sensor (Commaon Dev)			1-4Q
(U) End-to-end flight test of ASIP sensor (Common Dev)			1-4Q
(U) Sensor integration efforts of capabilities developed under Project 675183 of this PE and of any quick reaction capabilities that are developed for the U-2		1-4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)

PROJECT NUMBER AND TITLE: 5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5182	MQ-1/MQ-9 (Airborne SIGINT Development - Predator)	0.000	0.000	2.475	2.588	2.703	2.919	3.016	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the MQ-1/9 SIGINT sensors and their associated air and ground components.

(U) Funding will begin efforts on antennas, receivers, processors, software development, aircraft integration and ground station upgrades to allow a persistent reconnaissance, surveillance, targeting, and acquisition capability against mission specific threats. Development of a networked capability to other SIGINT platforms will also be initiated.

(U) This project provides the warfighter with increased combat capability as soon as technology and risk achieve satisfactory levels.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Signals Intelligence (SIGINT) Sensor Development/Integration for MQ-1/9			2.475
(U) Total Cost	0.000	0.000	2.475

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) N/A									

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

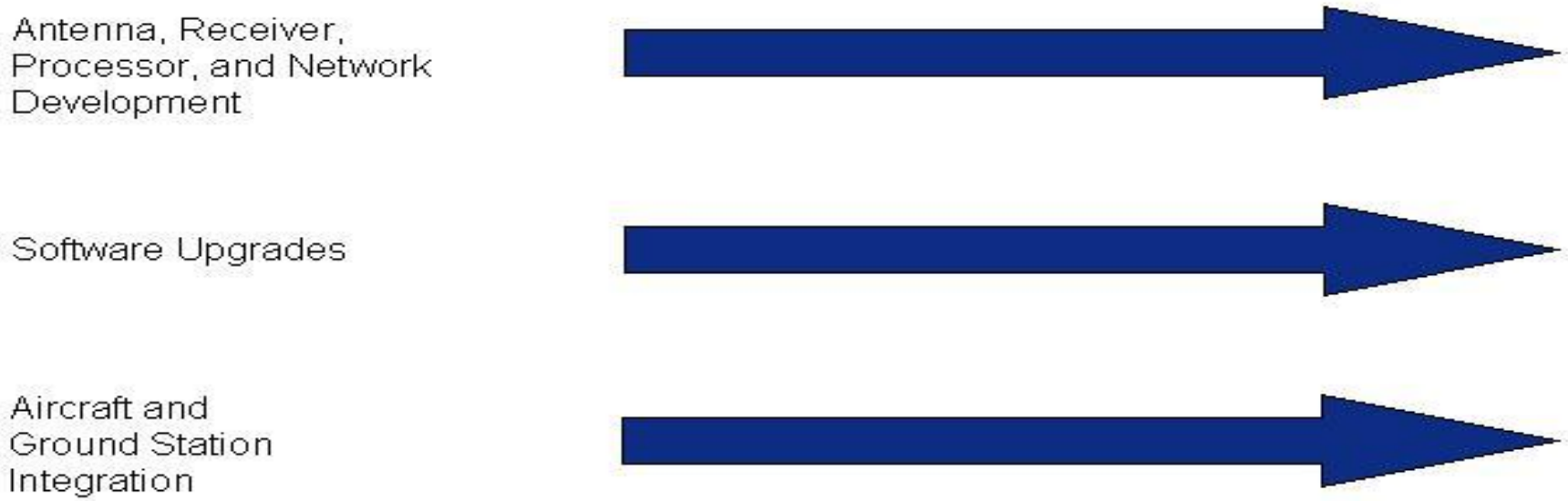
BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensors Integration	TBD	TBD		0.000		0.000		2.475	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		2.475		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		2.475		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)**

U.S. AIR FORCE

MQ-1/MQ-9 ASE Projects



As of: 10 Jan 06

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5182 MQ-1/MQ-9 (Airborne SIGINT Development - Predator)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Initiate SIGINT development for the MQ-1/MQ-9			2-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5183 Common Development (Airborne SIGINT Development - Common Development)**

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5183	Common Development (Airborne SIGINT Development - Common Development)	0.000	70.481	53.896	63.347	82.277	86.572	86.993	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

(U) This project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of sensors and their associated air and ground components that will be used on/by more than one platform. The common development SIGINT program develops new sensors and maintains present capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability via spiral development to exploit evolving signals of interest to meet emerging operational requirements. The current sensor being developed is the Airborne Signals Intelligence Payload (ASIP) Program, to be tested by both the Global Hawk (RQ-4B) and U-2.

(U) This program will design and build a common/scalable SIGINT system designed for maximum coverage of the electromagnetic spectrum through the use of an integrated high and low band system. ASIP will deliver developmental units for integration and test to both the Global Hawk and U-2. The Global Hawk article is scheduled to complete integration and test for the developmental article and begin flight test in 1Q FY08. In accordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08.

(U) This strategy provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on the various platforms as funding permits.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Signals Intelligence (SIGINT) Sensor Development/Integration		70.481	53.896
	(U) Complete Baseline ASIP development. Begin ASIP upgrades to meet the evolving threat			
(U)	Total Cost	0.000	70.481	53.896

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, 0305220F - ASIP Development	62.074								62.074
(U) RDT&E, 0305202F - ASIP Development	62.463								62.463
(U) APAF, 0305220F - ASIP Production BP10		0.000	0.000	15.000	53.300	55.800	45.600		169.700
(U) APAF, 0305220F - ASIP Production BP11				0.000	52.900	50.300	33.300	112.600	249.100

(U) D. Acquisition Strategy

Signals Intelligence (SIGINT) capabilities will be developed and integrated on to various platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5183 Common Development (Airborne SIGINT Development - Common Development)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Development and Integration	CPAF	Northrop Grumman San Jose CA		0.000		70.481	Jan-06	53.896	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		70.481		53.896		Continuing	TBD	TBD
Remarks: Other contractors are listed above												
(U) Total Cost			0.000	0.000		70.481		53.896		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

ASIP System of Systems RDT&E

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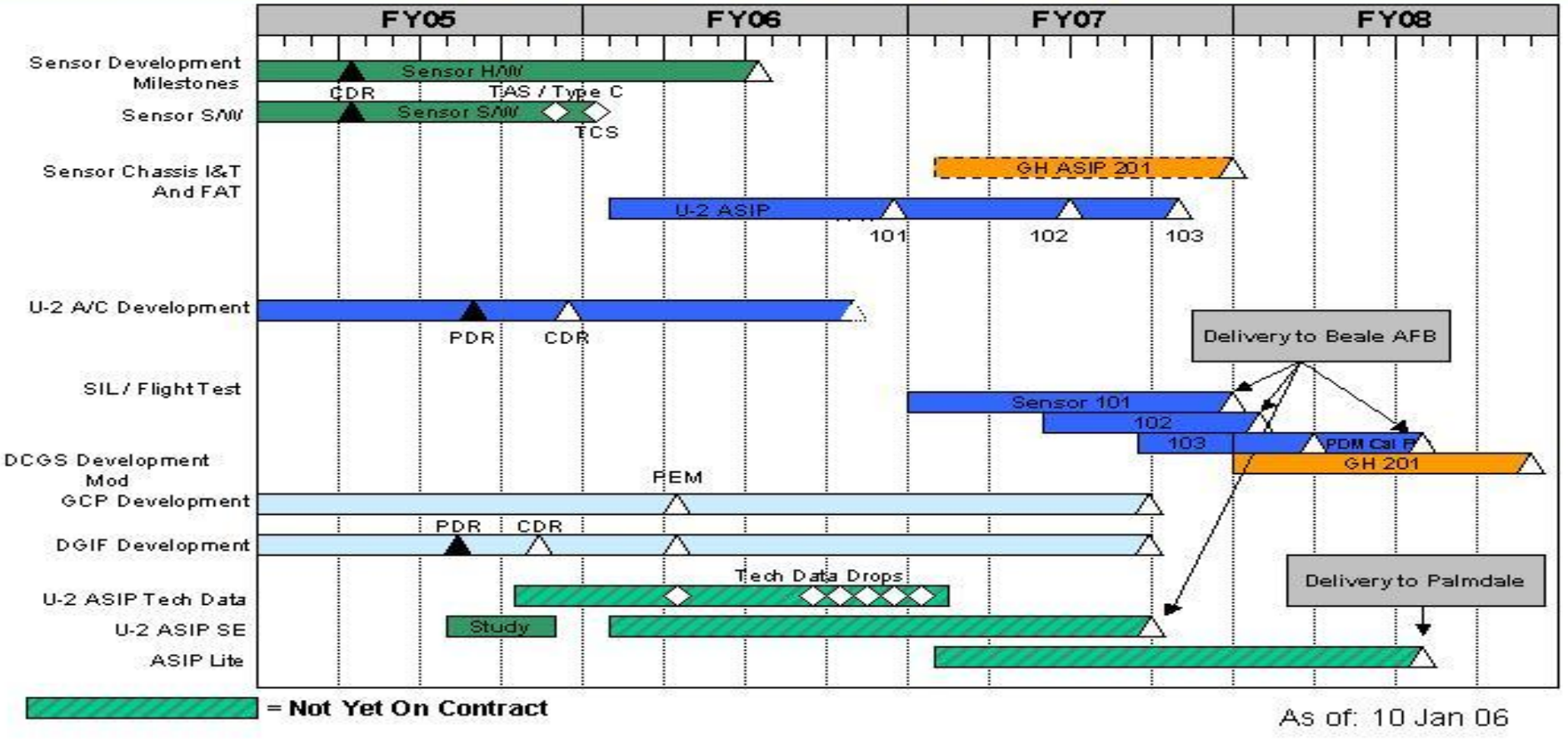

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5183 Common Development (Airborne SIGINT Development - Common Development)**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Sensor Development	1-4Q	1-4Q	1-4Q
(U)	- Critical Design Review (CDR)	2Q		
(U)	- Raytheon - ASIP Preliminary Design Review (R-APDR)	2Q		
(U)	- Raytheon - ASIP Critical Design Review (R-ACDR)	3Q		
(U)	Global Hawk Factory Acceptance Test (FAT)			3Q
(U)	U-2 FAT		4Q	
(U)	Distributed Common Ground Station (DCGS) ASIP Update		3Q	
(U)	U-2 Flight Test			1-4Q
(U)	End-to-End Flight Test			1-4Q

(U) Note: FY04 and 05 efforts were accomplished in the Global Hawk 0305220F and U-2 0305202F PEs.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5184 RQ-4 (Airborne SIGINT Development - Global Hawk**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5184	RQ-4 (Airborne SIGINT Development - Global Hawk	0.000	4.958	10.520	10.770	11.018	11.258	11.438	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

(U) This project supports sensor integration and test, flight test, design studies, engineering analysis and non-recurring engineering of the air and ground components for the Global Hawk SIGINT sensors.

(U) This project provides the warfighter with a near-term combat capability with increased capability improvements implemented as soon as technology and risk achieve satisfactory levels. The current sensor being developed for the Global Hawk SIGINT is ASIP. In concordance with an evolutionary acquisition strategy, ASIP will begin preliminary design activities to support spiral software and hardware upgrades beginning in FY08. These upgrades are designed to exploit evolving signals of interest to meet emerging operational requirements.

(U) Budget Activity Justification This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Signals Intelligence (SIGINT) Sensor Integration on the Global Hawk aircraft		4.958	10.520
(U) Total Cost	0.000	4.958	10.520

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Sensor Integration 0305205/030220F - Sensor Development	62.074								

(U) ASIP development for FY05 and before resides in the U-2 and Global Hawk PEs

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to this platform using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5184 RQ-4 (Airborne SIGINT Development - Global Hawk**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Integration	CPAF	Northrop Grumman Mission Sys, San Jose, CA		0.000		4.958	Jan-06	10.520	Jan-07	21.905	37.383	TBD
Subtotal Product Development			0.000	0.000		4.958		10.520		21.905	37.383	TBD
Remarks:												
(U) Total Cost			0.000	0.000		4.958		10.520		21.905	37.383	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5184 RQ-4 (Airborne SIGINT Development - Global Hawk

ASIP GH Integration

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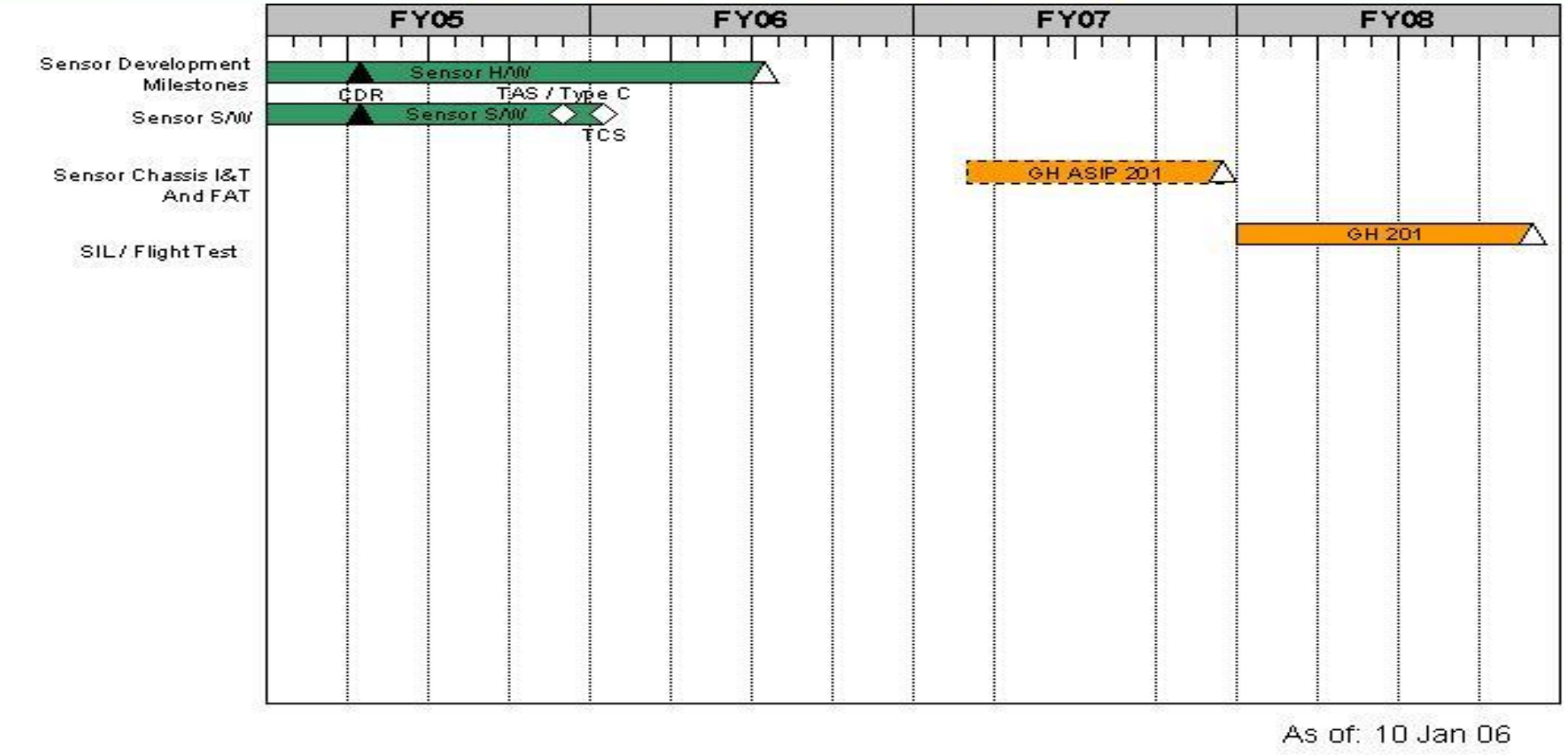


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5184 RQ-4 (Airborne SIGINT Development - Global Hawk**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	End-to-end flight test of ASIP sensor			1-4Q
(U)	Sensor integration efforts of capabilities developed under Project 675183 of this PE and any quick reaction capabilities developed for the RQ-4			1-4Q
(U)	Sensor Development		1-3Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5185	Compass Bright (Airborne SIGINT Development - Compass Bright)	0.000	0.387	8.250	8.492	8.730	8.964	9.151	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) All funds in Compass Bright are 3600 RDT&E. The source for these funds was the redistribution of SIGINT funds moved into the ASE PE from other USAF SIGINT projects as explained in the R2.

(U) A. Mission Description and Budget Item Justification

(U) The COMPASS BRIGHT program develops, demonstrates, and rapidly transitions advanced Air Force-specific signals intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals. It is the only USAF program that pursues SIGINT and RF MASINT technology transition. Funds were reduced in FY06 from previous submissions due to higher USAF priorities.

(U) The COMPASS BRIGHT program objective is to develop technologies for application in SIGINT and RF MASINT systems/subsystems. Acquisition and production of these developed technologies will occur within the appropriate platform programs.

(U) Compass Bright projects are selected through a data call process whereby the USAF evaluates proposals from the labs and industry to select those projects that are most promising. This process is completed the year prior to award.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue COMPASS BRIGHT development projects in the signals intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) areas			7.286
(U) Mission Support, Program Management Activities		0.387	0.964
(U) Total Cost	0.000	0.387	8.250

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, PE 0305206F, BPAC 674882 - Compass Bright Development	2.105								2.105

Compass Bright Funds for FY06 and out were moved from the above PE to the ASE PE

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U) D. Acquisition Strategy

(U) Ongoing COMPASS BRIGHT technology development and demonstration contracts will continue through existing laboratory relationships and other existing contractual vehicles, with future development projects emphasizing full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

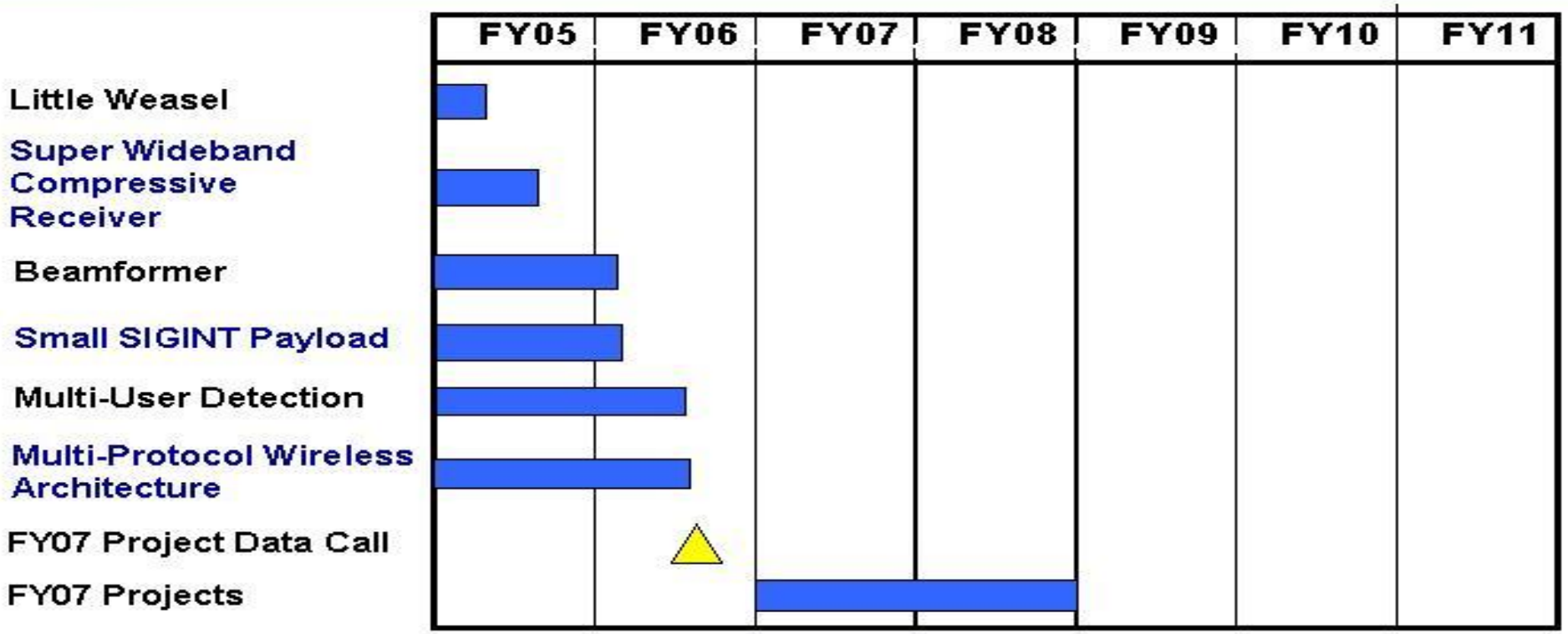
DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	Various	AFRL				0.000	Jan-06	7.286	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		7.286		Continuing	TBD	TBD
Remarks:												
(U) Management												
ASC/RSW		WPAFB, OH		0.000		0.387		0.964		Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.387		0.964		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.387		8.250		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0304260F Airborne SIGINT Enterprise (JMIP)	PROJECT NUMBER AND TITLE: 5185 Compass Bright (Airborne SIGINT Development - Compass Bright)

COMPASS BRIGHT Project Schedules



Note1: COMPASS BRIGHT Projects are 1-2 years in duration, thus no outyear projects are shown

Note 2: Efforts previous to FY 06 were funded from PE 0305206F, Project 4882

1

As Of: 10 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5185 Compass Bright (Airborne SIGINT Development - Compass Bright)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Little Weasel	2Q		
(U) Super Wideband	3Q		
(U) Beamformer		1Q	
(U) SSP Demo		1Q	
(U) Multi-User Detection Demo		3Q	
(U) Multi-Protocol Wireless Architecture Demo		3Q	
(U) FY07 Proposal Call		3Q	
(U) FY07 Proposals Evaluated and Approved		4Q	
(U) FY07 Proposals Authorized to Proceed			1Q
(U) FY08 Proposal Call			3Q
(U) FY08 Proposals Evaluated and Approved			4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5186	Special Programs (Airborne SIGINT Development - Special Platforms)	0.000	0.000	4.228	4.349	4.470	4.691	4.888	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) This project supports special SIGINT studies as well as the development and integration of advanced SIGINT capabilities on Senior Scout and other classified platforms. Through extensive utilization of commercial-off-the-shelf (COTS)-based solutions to fielding of needed capabilities, it also incurs the need for continuous diminishing manufacturing sources integration efforts consistent with the COTS technology cycle.

(U) Senior Scout development efforts will include antenna improvements, sensitivity upgrades, and radio frequency distribution upgrades. Additionally, development will begin to allow this platform to network with other SIGINT assets to increase collection accuracy.

(U) This project provides the warfighter with a near term combat capability with increased capability improvements accomplished as soon as technology and risk achieve satisfactory levels. Sensors will be integrated and tested on various platforms as funding permits.

(U) Budget Activity Justification: This program effort is Budget Activity 7, Operational Systems Development, because it involves Air Force RDT&E necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Signals Intelligence (SIGINT) Sensor Integration			4.228
(U) Total Cost	0.000	0.000	4.228

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

(U) Signals Intelligence (SIGINT) capabilities will be integrated on to various classified platforms using an Evolutionary Acquisition approach.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0304260F Airborne SIGINT Enterprise (JMIP)**	**5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
SIGINT Sensor Integration	Various	Various		0.000		0.000		4.228	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		4.228		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		4.228		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

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Special Projects

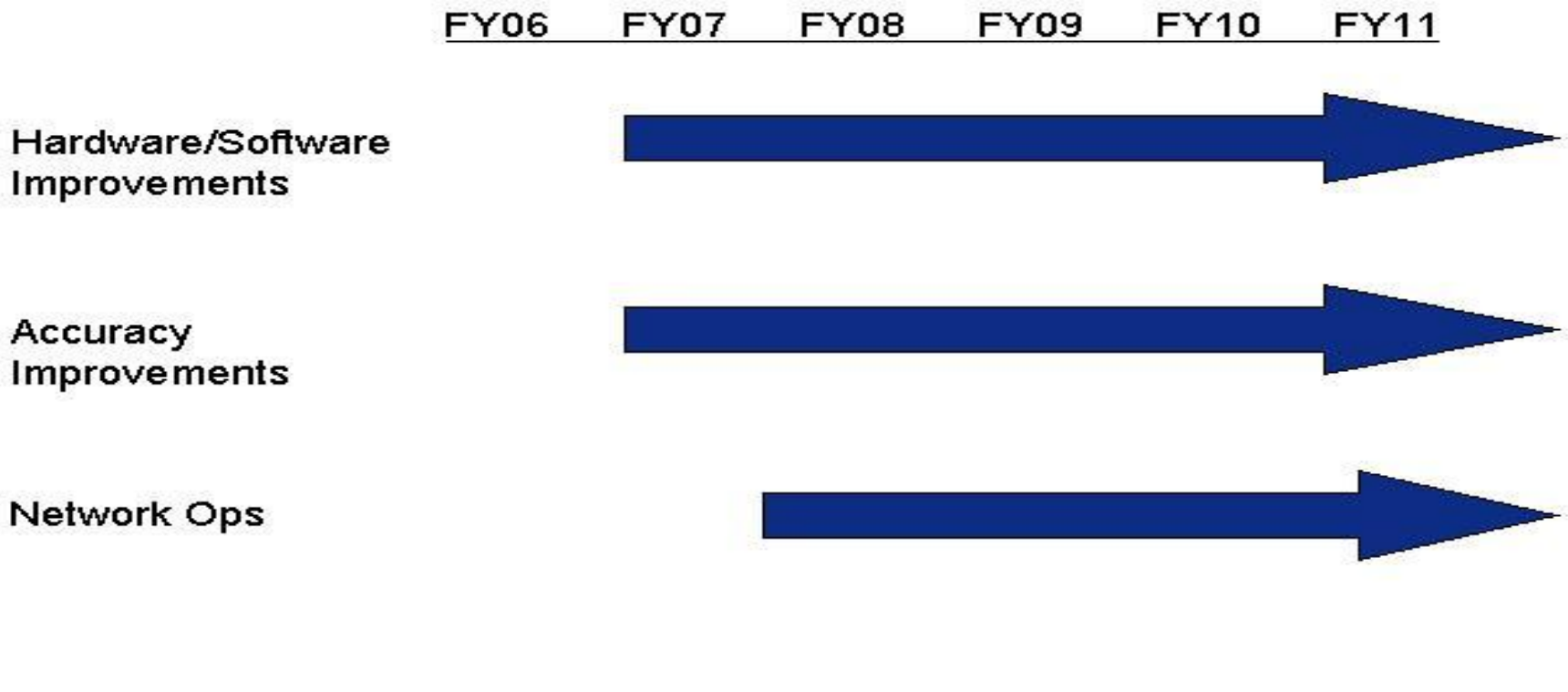

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0304260F Airborne SIGINT Enterprise (JMIP)**	PROJECT NUMBER AND TITLE **5186 Special Programs (Airborne SIGINT Development - Special Platforms)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Sensor Development on Senior Scout			2-4Q

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PE NUMBER: 0305099F
PE TITLE: Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	6.727	6.943	6.620	6.616	6.250	6.091	5.845	Continuing	TBD
4689	Global Access Architecture	6.727	6.943	6.620	6.616	6.250	6.091	5.845	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM): is the Air Force program designed to meet the evolving International Civil Aviation authority mandates and ensure unfeltered access to worldwide airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The Global Air Traffic Systems Group (GATSG) supports CNS/ATM as the AF's central focal point for analyzing and evaluating operational requirements, developing aircraft system architectures, and test capabilities acquiring aviation equipment, and certifying weapon system implementation. Per AFPD 63-13, GATSG support funds engineering services, acquisition support, and supports certification of platform integration. The system architectures identify necessary equipment and aircraft capability shortfalls across the Air Force inventory, for mobility, information dominance, bombers, fighters, trainers, helicopters, and unmanned aerial vehicles. For those capabilities where no current solution exists, development activities are undertaken in conjunction with existing DoD communications, navigation, surveillance, and safety program offices. Dual-use capabilities of avionics to satisfy both military and civilian CNS/ATM requirements of the Air Force fleet will be explored as well as net-centricity operations. GATSG will continue projections of studies and prototype efforts necessary to ensure AF aviation weapon systems are postured to meet civil standards and future changes to the civil standards leading to free flight. GATSG supports the definition of requirements for ACAT III projects across multiple weapon systems. No existing program satisfies the requirements of the CNS/ATM initiatives. GATSG upgrades avionics to add CNS/ATM capabilities to currently fielded weapon systems and is assigned Budget Activity 7, Operational Systems Development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	6.974	7.139	7.679
(U)	Current PBR/President's Budget	6.727	6.943	6.620
(U)	Total Adjustments	-0.247	-0.196	
(U)	Congressional Program Reductions	-0.247	-0.196	
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY07: Global Air Traffic Management (GATM) name changed to Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM). FY06/07: Reductions due to reprogramming to higher DoD priorities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4689 Global Access Architecture	6.727	6.943	6.620	6.616	6.250	6.091	5.845	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM): is the Air Force program designed to meet the evolving International Civil Aviation authority mandates and ensure unfeltered access to worldwide airspace. CNS/ATM and Navigation Warfare (NAVWAR) are major components of the DoD's Global Access, Navigation, and Safety (GANS) management effort. The Global Air Traffic Systems Group (GATSG) supports CNS/ATM as the AF's central focal point for analyzing and evaluating operational requirements, developing aircraft system architectures, and test capabilities acquiring aviation equipment, and certifying weapon system implementation. Per AFPD 63-13, GATSG support funds engineering services, acquisition support, and supports certification of platform integration. The system architectures identify necessary equipment and aircraft capability shortfalls across the Air Force inventory, for mobility, information dominance, bombers, fighters, trainers, helicopters, and unmanned aerial vehicles. For those capabilities where no current solution exists, development activities are undertaken in conjunction with existing DoD communications, navigation, surveillance, and safety program offices. Dual-use capabilities of avionics to satisfy both military and civilian CNS/ATM requirements of the Air Force fleet will be explored as well as net-centricity operations. GATSG will continue projections of studies and prototype efforts necessary to ensure AF aviation weapon systems are postured to meet civil standards and future changes to the civil standards leading to free flight. GATSG supports the definition of requirements for ACAT III projects across multiple weapon systems. No existing program satisfies the requirements of the CNS/ATM initiatives. GATSG upgrades avionics to add CNS/ATM capabilities to currently fielded weapon systems and is assigned Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue operational requirements analysis, demonstration, and evaluation	1.195	1.187	1.122
(U) Continue development of common avionics and technologies	1.938	2.027	1.937
(U) Continue acquisition of ID/IQ aviation equipment	0.912	0.964	0.840
(U) Continue Nav/Safety and GPS/NAVWAR integration and interoperability evaluations	0.629	0.593	0.510
(U) Continue system architechure definitions, development, and certification	2.053	2.172	2.211
(U) Total Cost	6.727	6.943	6.620

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) The methodology used to attain CNS/ATM capabilities as required by the MAJCOMs for									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**	PROJECT NUMBER AND TITLE **4689 Global Access Architecture**

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

each platform varies widely - the estimating and tracking of these costs varies even more from program to program. Funding summary information can only be provided by analyzing the specific platform's budget/PE. Please refer to each particular PE affected by CNS/ATM for funding data.

(U) D. Acquisition Strategy

The CNS/ATM Global Access Architecture acquisition strategy enables the GATSG to guide equipment acquisition supporting global air traffic management. The GATSG will ensure standardization and support certification of USAF platforms/systems that operate in the national and global air traffic environments. GATSG will provide performance assessment, technical expertise and interface with appropriate product/support centers, battle labs, and Department of Defense (DOD) research and development facilities in the execution of assigned tasks. Program Research and Development Agreements (PRDAs), Cooperative Research and Development Agreements (CRDAs), and Indefinite Delivery/Indefinite Quantity (ID/IQ) contracts will be competitively awarded.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**

PROJECT NUMBER AND TITLE: **4689 Global Access Architecture**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
MIT	FFP		5.406	0.650	Oct-04	0.534	Oct-05	0.673	Oct-06	Continuing	TBD	
Honeywell	FFP		2.745							Continuing	TBD	
Allied Signal	FFP		1.975							0.000	1.975	
Rockwell Collins	FFP		1.504							Continuing	TBD	
MITRE Corporation	CPAF		10.719	3.168	Oct-04	3.150	Oct-05	3.223	Oct-06	Continuing	TBD	
Horizons Technology Inc	FFP		3.974							Continuing	TBD	
TASC	CPFF		0.728							0.000	0.728	
Smiths Industries	FFP		0.194							Continuing	TBD	
SAIC	T&M		0.530							0.000	0.530	
ARINC Inc	FFP		0.946							Continuing	TBD	
Lockheed Martin	CPAF		0.159							0.000	0.159	
Bremmer Associates	FFP		0.729							0.000	0.729	
Northop Grumman	CPAF		2.499							0.000	2.499	
MCR	IDIQ		1.526	0.422	May-04	0.336	May-05	0.348	May-06	Continuing	TBD	
Federal Tech Services	FFP		0.300							0.000	0.300	
DISA/DIT	FFP		0.000							Continuing	TBD	
ACS Defense			2.538	1.595	May-04	1.635	May-05	1.673	May-06		7.441	
Various	various		2.935	0.391		0.756		0.264		Continuing	TBD	
Subtotal Product Development			39.407	6.226		6.411		6.181		Continuing	TBD	0.000
Remarks:												
(U) Support												
MITRE Corporation			1.369							Continuing	TBD	
Various	Various		1.327	0.501		0.532		0.439		Continuing	TBD	
Subtotal Support			2.696	0.501		0.532		0.439		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
412th FLTS (Edwards AFB)			0.111							Continuing	TBD	
Subtotal Test & Evaluation			0.111	0.000		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			42.214	6.727		6.943		6.620		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

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GATM

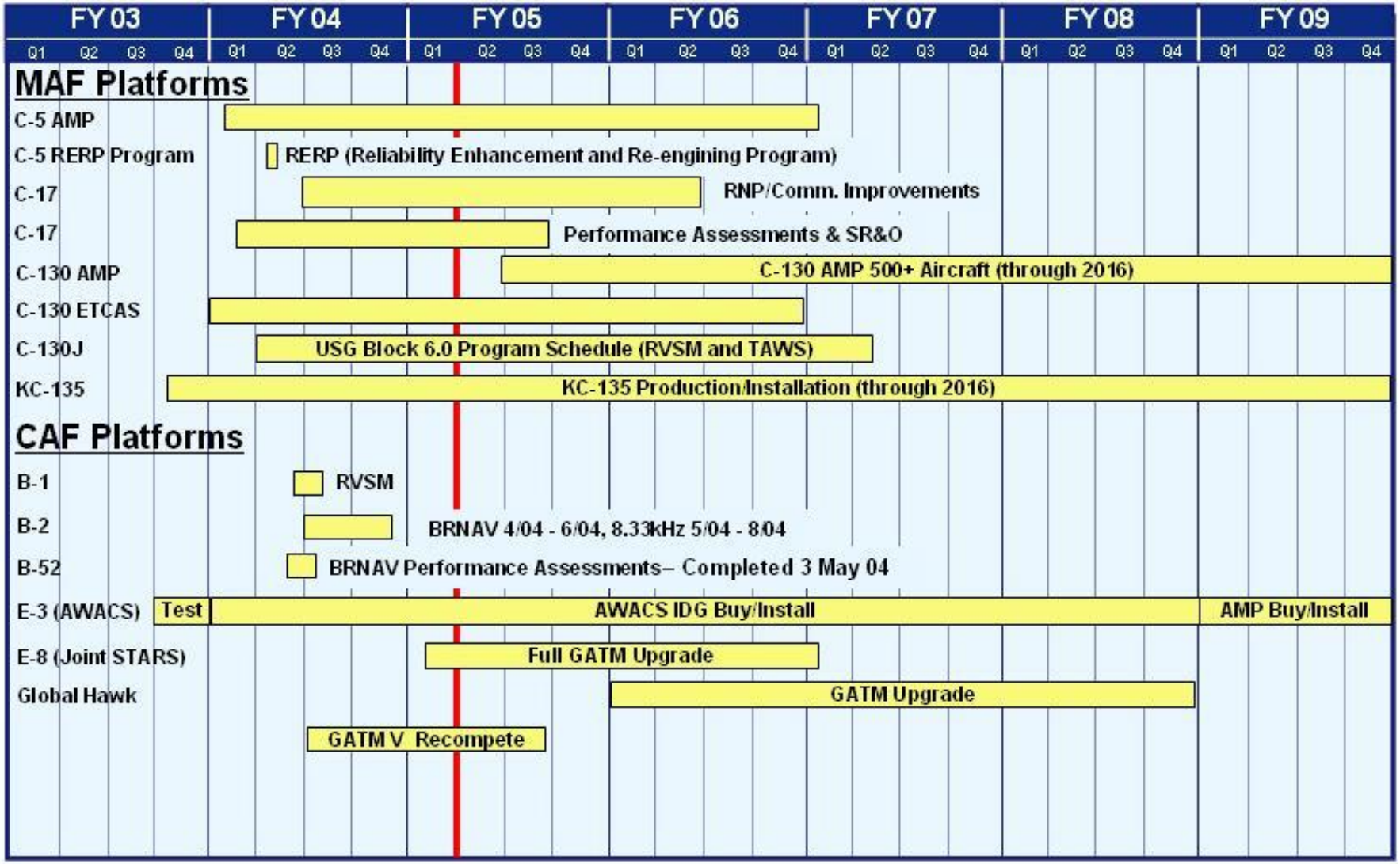

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)	PROJECT NUMBER AND TITLE: 4689 Global Access Architecture

U.S. AIR FORCE

Long Term Schedule

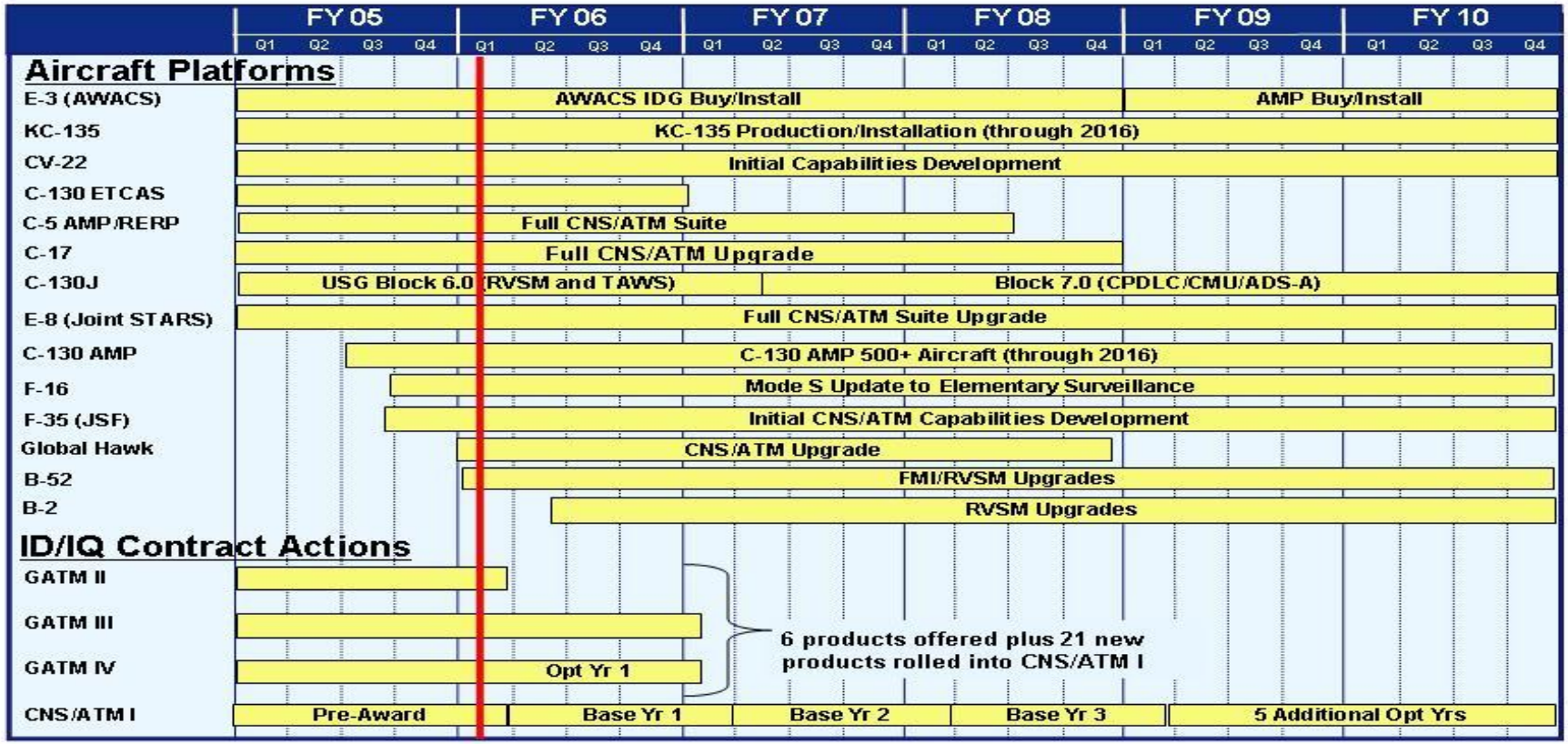

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305099F Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM)**	PROJECT NUMBER AND TITLE **4689 Global Access Architecture**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) System Architecture Definitions	1-4Q	1-4Q	1-4Q
(U) Operational Requirements Analysis	1-4Q	1-4Q	1-4Q
(U) Development of common avionics and technologies	1-4Q	1-4Q	1-4Q
(U) Acquisition of ID/IQ equipment	1-4Q	1-4Q	1-4Q
(U) GPS/NAVWAR Integration Activities	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305110F
PE TITLE: Satellite Control Network

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	19.379	31.170	19.907	17.501	16.798	19.048	16.961	Continuing	TBD
3276	Satellite Control Network	19.379	31.170	19.907	17.501	16.798	19.048	16.961	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters USAF-approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for DoD to deploy and operate its satellites. AFSCN provides the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational and future satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Gapfiller System (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and NOAA satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305110F Satellite Control Network**

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastucture for a multi-domain and web-based system.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	20.013	29.143	20.487
(U)	Current PBR/President's Budget	19.379	31.170	19.907
(U)	Total Adjustments	-0.634	2.027	
(U)	Congressional Program Reductions	-0.015	-0.451	
	Congressional Rescissions		-0.022	
	Congressional Increases		2.500	
	Reprogrammings	-0.074		
	SBIR/STTR Transfer	-0.545		

(U) Significant Program Changes:

FY06: Congressional increase (+2.5M) to conduct research into feasibility of augmenting AFSCN capabilities with commercial satellite control services (Civil Reserve Space Service -- CRSS)

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE: 3276 Satellite Control Network	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3276 Satellite Control Network	19.379	31.170	19.907	17.501	16.798	19.048	16.961	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Air Force Satellite Control Network (AFSCN) mission is to command and control space systems and to distribute space system information in support of operational DoD missions, National Security, RDT&E programs, and other designated users. Air Force Space Command (AFSPC) performs operations, maintenance, modernization, and sustainment of the system to provide operational capabilities validated by a Joint Staff Capstone Requirements Document and a Headquarters USAF-approved Operational Requirements Document (ORD). This program element contains funds for the development and acquisition of this integrated national satellite telemetry, tracking, commanding, and data relay capability to meet the requirements of the growing inventory of operational and developmental DoD, National, Civil, and Allied satellite systems.

The AFSCN is a global infrastructure of control centers, Remote Tracking Stations (RTSs), and communications links that provides unique capability for DoD to deploy and operate its satellites. AFSCN provides the highly reliable command and control, communications, and range systems required to support the nation's surveillance, navigation, communications, warning, and weather satellite operations. The AFSCN is the DoD's common user network that provides satellite state-of-health, telemetry, tracking, and commanding (TT&C) for the following operational and future satellite systems: Defense Meteorological Satellite Program (DMSP), Global Positioning System (GPS), Defense Satellite Communications System (DSCS), Defense Support Program (DSP), Space Based Infrared System (SBIRS), Space Based Surveillance System (SBSS), Space Tracking and Surveillance System (STSS), Fleet Satellite (FLEETSAT), Military Strategic and Tactical Relay Satellite (MILSTAR), the Navy's Ultra High Frequency Follow-On (UHF F/O), Mobile User Objective System (MUOS), Advanced EHF (AEHF), Wideband Gapfiller System (WGS), Transformational Communications Satellites (TSAT), Skynet, NATO III/IV, and classified programs. Support to NASA and NOAA satellites is provided on an "as required" basis. In addition, the AFSCN provides launch and early orbit tracking operations in support of all major US launches and provides satellite end-of-life disposal operations. It is the world's only global satellite control network equipped with high-power capability necessary for satellite rescue and anomaly resolution operations.

AFSCN Improvement and Modernization (I&M) is an ongoing program of replacements and upgrades which will meet AFSPC operational requirements to replace non-standard, unsupportable equipment with more reliable, maintainable, interoperable, and standardized hardware and software. This new equipment will enable AFSPC satellite operations to be performed with fewer, less skilled personnel and will reduce hardware/software maintenance costs. The principal efforts within this program are currently focused on Range Upgrades and Network Operations Upgrades.

RANGE UPGRADES: This effort will upgrade the current RTSs. Several integrated efforts, which are now grouped into the Remote Tracking Station (RTS) Block Change (RBC) effort, will standardize, automate and make interoperable the remote tracking stations through the replacement of outdated government unique equipment with commercial off-the-shelf technology in order to reduce failures, correct operational deficiencies, and reduce operating and sustainment costs. Additionally, interoperability efforts to address standards and protocols and external user connectivity are included in this segment.

NETWORK OPERATIONS UPGRADES: These upgrades, that include resource scheduling and orbit analysis system follow-on, build upon the Electronic Schedule

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305110F Satellite Control Network	PROJECT NUMBER AND TITLE 3276 Satellite Control Network

Dissemination (ESD) and Orbit Analysis Subsystem (OAS) deliveries to improve AFSCN resource management capabilities. These capabilities include electronic scheduling and status report information dissemination. Also, these upgrades provide the infrastructure for a multi-domain and web-based system.

This effort is in Budget Activity 7, Operational System Development, because it supports a fielded system.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Range Upgrades: continue upgrades to include development of interoperability and RTS Block Change efforts. Continue predeployment system engineering and network integration.	11.000	23.821	12.211
(U)	Network Operations Upgrades: continue upgrades to network operations to include development of Phase 2 and Phase 3 (Enterprise Management) of Orbit Analysis Subsystem follow-on upgrade and predeployment system engineering and network integration.	1.977	0.621	4.032
(U)	Program support for Systems Program Office	4.077	4.265	3.664
(U)	Conduct research into technical feasibility of augmenting AFSCN capabilities with commercial satellite control antennas (Civil Reserve Space Service -- CRSS)	2.325	2.463	
(U)	Total Cost	19.379	31.170	19.907

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	OPAF, Electronics & Telecom Equipment (BA 03, PE 0305110F, P-64)	42.126	50.951	85.512	65.933	65.318	62.631	65.247	Continuing	TBD
(U)	OPAF, Initial Spares & Repair Parts (BA 05 PE 0305110F, P-103)	3.155	3.396	3.569	0.000	0.000	0.000	0.000	0.000	18.098

(U) D. Acquisition Strategy

The AF uses the competitively awarded Satellite Control Network Contract (SCNC), managed by Space and Missile System Center, to modernize and sustain the AFSCN on a non-interference basis as it continues to support operational, RDT&E, and other designated users.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305110F Satellite Control Network**

PROJECT NUMBER AND TITLE: **3276 Satellite Control Network**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Satellite Control Network Contract	C/CPAF	Honeywell, Colorado Springs, CO	48.722	12.977	Dec-04	24.442	Jan-06	16.243	Dec-06	Continuing	TBD	TBD
Congressional increase for Civil Reserve Space Service	various	various	1.950	2.325	Feb-05	2.463	Apr-06	0.000			6.738	TBD
Subtotal Product Development			50.672	15.302		26.905		16.243		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Support (FFRDC, SETA, SPO ops)	various	various	86.830	4.077	Dec-04	4.265	Dec-05	3.664	Dec-06	Continuing	TBD	TBD
Subtotal Support			86.830	4.077		4.265		3.664		Continuing	TBD	TBD
Remarks:												
(U) Subtotal additional reprogrammings												
(U) Total Cost			137.502	19.379		31.170		19.907		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305110F Satellite Control Network	3276 Satellite Control Network

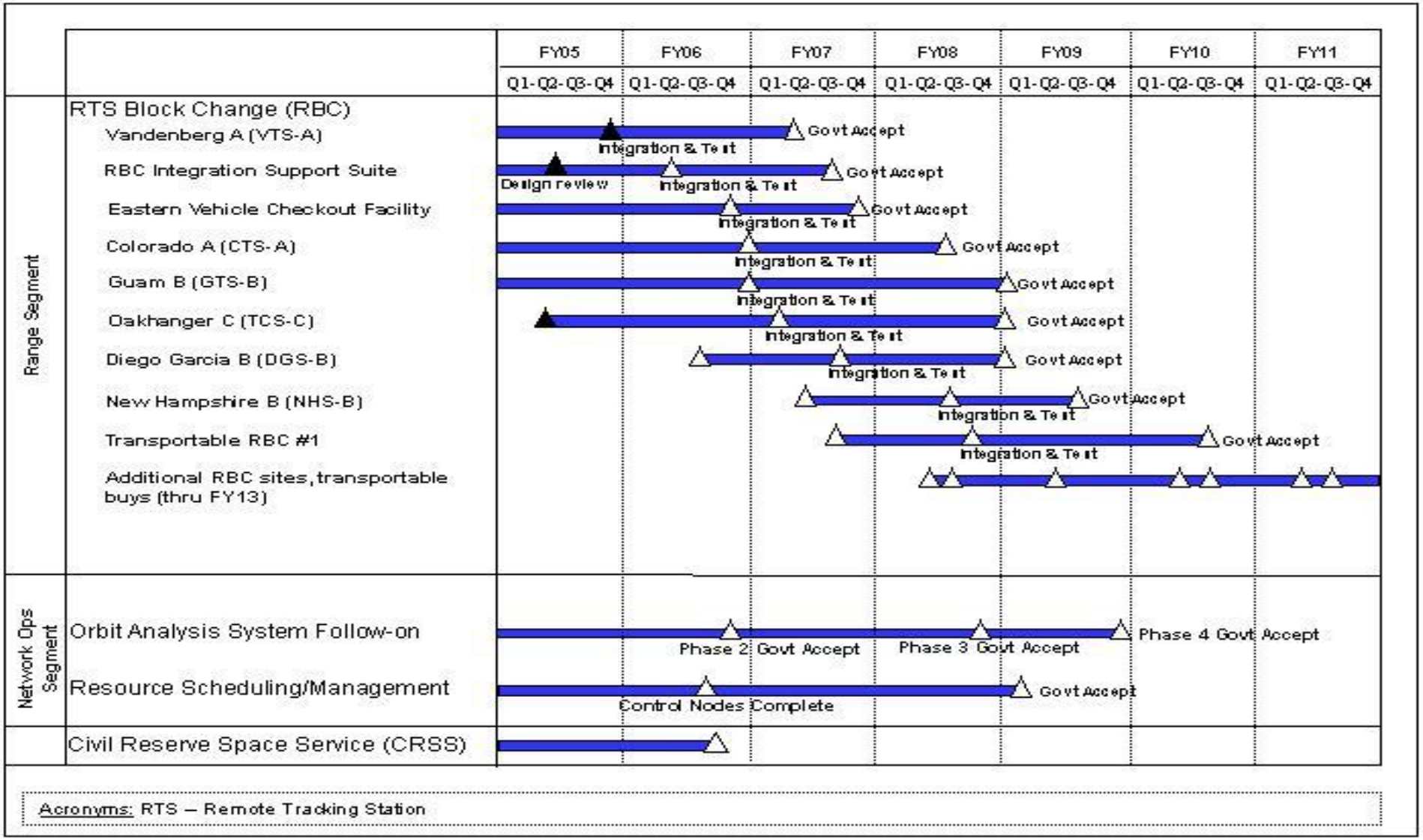

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305110F Satellite Control Network	3276 Satellite Control Network

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) RANGE UPGRADES (Remote Tracking Station (RTS) Block Change)			
(U) - Diego Garcia RTS Block Change site survey		2Q	
(U) - EVCF Gov't acceptance			4Q
(U) - Vandenberg RTS Developmental/operational test & eval	4Q		
(U) - Vandenberg RTS Gov't acceptance			2Q
(U) - Remote Tracking Station Block Change Integration Support Suite (RISS) CDR	2Q		
(U) - RISS Gov't acceptance			3Q
(U) NETWORK OPERATIONS UPGRADES			
(U) - OAS Follow-on Phase 2 Gov't acceptance		4Q	
(U) - OAS Follow-on Phase 3 Preliminary Design Review			2Q
(U) - OAS Follow-on Phase 3 Critical Design Review			4Q

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PE NUMBER: 0305111F
PE TITLE: WEATHER SERVICE

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	16.848	28.222	34.899	41.555	52.545	34.729	31.126	Continuing	TBD
2738	Weather Service	16.848	28.222	34.899	41.555	52.545	34.729	31.126	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS supports worldwide operations of Air Force and Army warfighters, as well as Special Operation Forces (SOF) and other government agencies, by providing observations and forecasts of terrestrial and space weather. The AFWWS provides fixed and transportable equipment supporting the Air and Space Expeditionary Force (EAF) with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides for terrestrial and space environmental sensing using automated weather observing capabilities at fixed and deployed locations worldwide. WDA provides interoperability for the AFW infrastructure with users and data sources, and includes the assimilation of advanced models, radar, lightning, and satellite data into a single user interface for the timely analysis and production of tailored weather products. Weather Forecasting integrates advanced scientific numerical weather prediction capabilities into the AFW Strategic Center for automated, high resolution mission-tailored weather forecast products. Beginning in FY06, funding becomes available within the WDC, WDA, and Forecasting capabilities to exploit data from the National Polar-orbiting Operational Environmental Satellite System (NPOESS), a joint DoD/Department of Commerce program. PT/WA provides timely, fine-scale weather products and services 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 also provides the capability to ingest multiple sources of weather information to provide timely and precisely tailored weather products for the warfighter and supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305111F WEATHER SERVICE

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	16.526	28.675	34.836
(U)	Current PBR/President's Budget	16.848	28.222	34.899
(U)	Total Adjustments	0.322	-0.453	
(U)	Congressional Program Reductions		-0.045	
	Congressional Rescissions	-0.206	-0.408	
	Congressional Increases	1.000		
	Reprogrammings			
	SBIR/STTR Transfer	-0.472		

(U) Significant Program Changes:

FY05: Congressional Mark-up of $1.0M for Pacific Islands Ocean Typhoon Experiment (PILOT) to be conducted by US Army Corps of Engineers.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2738 Weather Service	16.848	28.222	34.899	41.555	52.545	34.729	31.126	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This budget activity funds operational development necessary to acquire, modify, and sustain segments of the Air Force Weather Weapon System (AFWWS). The AFWWS supports worldwide operations of Air Force and Army warfighters, as well as Special Operation Forces (SOF) and other government agencies, by providing observations and forecasts of terrestrial and space weather. The AFWWS provides fixed and transportable equipment supporting the Air and Space Expeditionary Force (EAF) with weather observing and forecasting capabilities at in-garrison and deployed locations. Air Force Weather (AFW) programs are aligned under the five capability areas of Weather Data Collection (WDC), Weather Data Analysis (WDA), Weather Forecasting, Product Tailoring/Warfighter Applications (PT/WA), and Weather Dissemination (relies on Commercial-off-the-Shelf products and so does not use RDT&E funding). Through this alignment, AFW ensures an integrated and systems-oriented approach to program management decisions.

WDC provides for terrestrial and space environmental sensing using automated weather observing capabilities at fixed and deployed locations worldwide. WDA provides interoperability for the AFW infrastructure with users and data sources, and includes the assimilation of advanced models, radar, lightning, and satellite data into a single user interface for the timely analysis and production of tailored weather products. Weather Forecasting integrates advanced scientific numerical weather prediction capabilities into the AFW Strategic Center for automated, high resolution mission-tailored weather forecast products. Beginning in FY06, funding becomes available within the WDC, WDA, and Forecasting capabilities to exploit data from the National Polar-orbiting Operational Environmental Satellite System (NPOESS), a joint DoD/Department of Commerce program. PT/WA provides timely, fine-scale weather products and services 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 also provides the capability to ingest multiple sources of weather information to provide timely and precisely tailored weather products for the warfighter and supports the 'train as you fight' concept by assuring fixed and deployable systems have a similar look and feel.

This effort is in Budget Activity 7, Operational System Development, because it supports operational software development and system tests associated with the upgrade and replacement of currently operational systems, systems already in production, and systems with approved production funds in the DoD budget.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) WDC: Includes AF participation with National Weather Service and Federal Aviation Administration in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar and starting in FY06 includes development of new satellite ingest capabilities preparatory to NPOESS.	0.865	2.338	5.338
(U) WDA: Continues incremental software development and integration of enhanced analysis capabilities including NPOESS and other meteorological satellite data starting in FY06.	2.196	6.527	8.407
(U) Forecasting: Continues integration of advanced terrestrial and space weather forecast capabilities within AFW Strategic Center including NPOESS and other meteorological satellite data starting in FY06.	4.205	11.563	13.002

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service

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

		FY 2005	FY 2006	FY 2007
(U)	PT/WA: Continues software development and integration of regional and tactical weather systems and integration with warfighter C4I systems.	8.582	7.794	8.152
(U)	PILOT: Pacific Islands Ocean Typhoon experiment to be conducted by US Army Corps of Engineers.	1.000		
(U)	Total Cost	16.848	28.222	34.899

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF, Weather Service (PE 0305111F WSC 833070, 838010, and 86190A)	44.892	48.376	51.760	57.959	65.015	61.399	61.209	Continuing	TBD
(U)	Operations and Maintenance	134.483	136.130	139.947	150.719	154.645	164.545	166.545	Continuing	TBD

(U) D. Acquisition Strategy

AFWWS employs an incremental development strategy with a series of incremental IOCs and software releases to enable rapid development and fielding of capabilities using full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

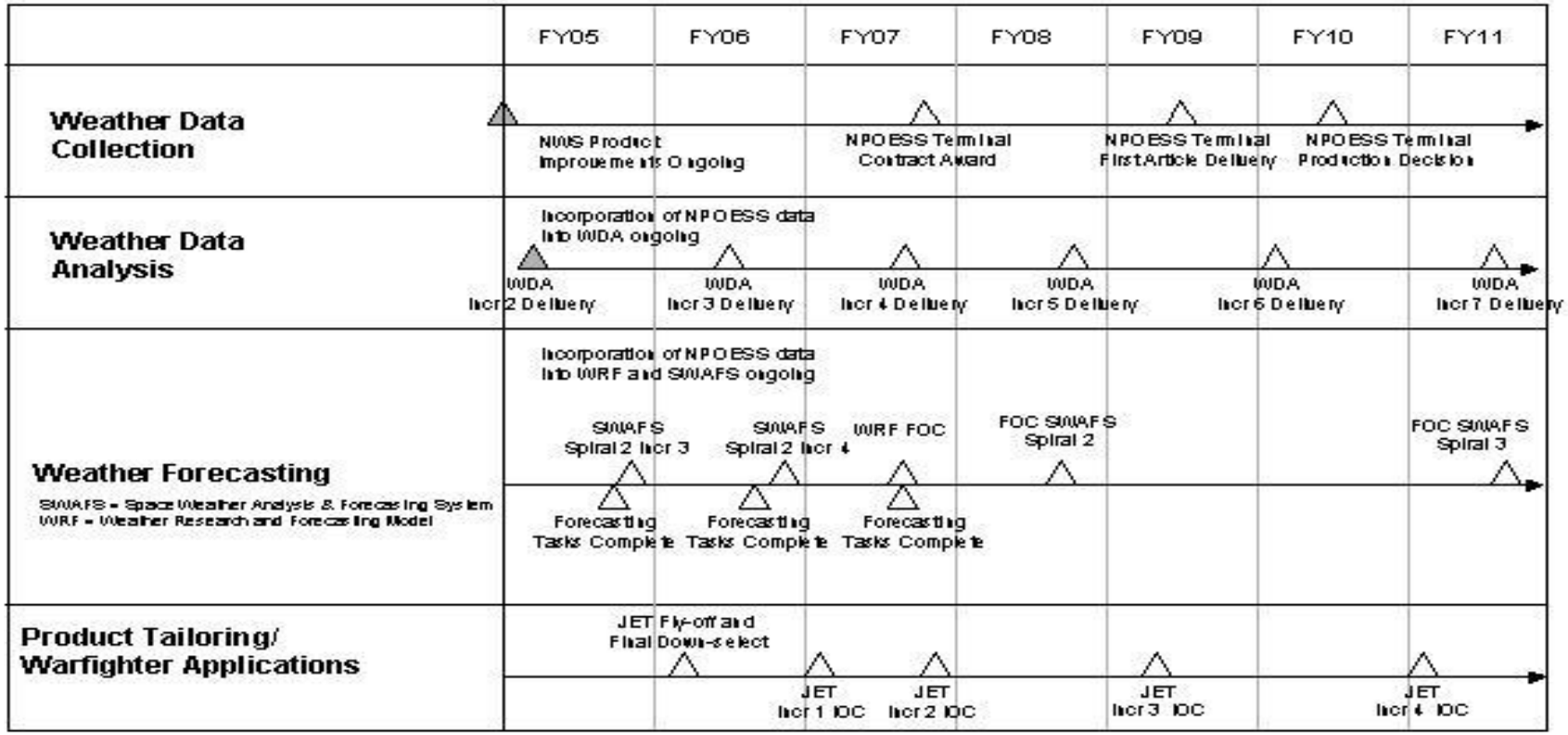
PE NUMBER AND TITLE: **0305111F WEATHER SERVICE**

PROJECT NUMBER AND TITLE: **2738 Weather Service**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Northrop Grumman	GSA schedule/LOE	Colorado Springs, CO	4.685	2.072	Feb-05	2.296	Mar-06	2.357	Oct-06	Continuing	TBD	TBD
Raytheon	C/CPFF	Bellevue, NE	2.112	1.681	May-05	1.903	Jun-06	1.949	Mar-07	Continuing	TBD	TBD
Multiple [PT/WA JET]	C/FFP	various	2.730	5.920	Nov-04						8.650	9.089
TBD [JET]	C/CPAF					4.788	Mar-06	5.133	Nov-06	Continuing	TBD	TBD
TBD [WDC - NPOESS]	C/CPAF					2.000	Jun-06	5.000	Jun-07	Continuing	TBD	TBD
TBD [WDA - NPOESS]	C/CPAF					4.300	Jun-06	5.600	Jan-07	Continuing	TBD	TBD
TBD [Forecasting - NPOESS]	C/CPAF					5.650	Jun-06	6.900	Jan-07	Continuing	TBD	TBD
National Center for Atmospheric Research	MIPR	Boulder, CO		1.215	Feb-05	1.200	Mar-06	1.500	Jan-07	Continuing	TBD	TBD
US Army Corps of Engineers [PILOT]	MIPR	Millington, TN		1.000	Feb-05						1.000	1.000
Various	various	various	5.304	2.540	Oct-04	3.046	Oct-05	3.388	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			14.831	14.428		25.183		31.827		Continuing	TBD	TBD
Remarks:												
(U) Management												
Electronic Sytems Center		Hanscom AFB, MA	3.755	2.086	Oct-04	2.709	Oct-05	2.742	Oct-06	Continuing	TBD	TBD
Space & Missile Systems Center		Los Angeles AFB, CA	0.351	0.099	Oct-04	0.095	Oct-05	0.095	Oct-06	Continuing	TBD	TBD
Air Force Research Laboratory		Hanscom AFB, MA		0.235	Oct-04	0.235	Oct-05	0.235	Oct-06	Continuing	TBD	TBD
Subtotal Management			4.106	2.420		3.039		3.072		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			18.937	16.848		28.222		34.899		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305111F WEATHER SERVICE	PROJECT NUMBER AND TITLE: 2738 Weather Service

Exhibit R-4: PE 0305111F Weather Service



As of 10 Jan 05

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305111F WEATHER SERVICE**	PROJECT NUMBER AND TITLE **2738 Weather Service**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) WDC NWS Product Improvement Effort (Note 1)	1-4Q	1-4Q	1-4Q
(U) WDC - NPOESS Terminal Award			3Q
(U) WDA Increment Delivery	2Q	3Q	4Q
(U) Forecasting Tasks Complete	3Q	3Q	3Q
(U) Forecasting - SWAFS Spiral 2 Increment 3 IOC	4Q		
(U) Forecasting - SWAFS Spiral 2 Increment 4 IOC		4Q	
(U) PT/WA Final JET Down-Select		2Q	
(U) PT/WA JET Increment 1 IOC			1Q
(U) PT/WA JET Increment 2 IOC			4Q

Note 1: AF participation with National Weather Service (NWS) and Federal Aviation Administration (FAA) in Product Improvement Plans for automated weather sensors and the Next Generation Weather Radar (NEXRAD).

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PE NUMBER: 0305114F
PE TITLE: Air Traffic Control/Approach/Landing System (ATCALS)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	12.512	2.169	0.000	0.000	2.608	3.901	3.427	Continuing	TBD
3587	Air Traffic Control Systems	12.512	2.169	0.000	0.000	2.608	3.901	3.427	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program funds research, development, and management of new air traffic control surveillance, positioning, and precision approach capabilities. This project includes the Mobile Approach Control System (MACS) which will replace non-standard, unsupportable, large footprint mobile radar approach systems with a common, easily-transportable system for use by both the Air National Guard and active duty AF. This project funds the advance of Global Procedures Designer (GPD) formerly known as Air Force Terminal Instrument Procedures - Replacement (AFTERPS-R), which provides automated development of terminal flight instrument procedures. These procedures are specifically designed to accurately and precisely measure critical information necessary for pilots to fly designated flight paths that safely avoid obstacles and other hazards during a final approach to landing. Funding is also provided for the Transportable Transponder Landing System (TTLS) which provides a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide ATC services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the FAA plans to implement new or improved capabilities into the NAS in an evolutionary manner. This program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2009 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) that predominantly focus on aircraft issues.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305114F Air Traffic Control/Approach/Landing System (ATCALS)

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	9.783	0.000	0.000
(U)	Current PBR/President's Budget	12.512	2.169	0.000
(U)	Total Adjustments	2.729	2.169	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.007	-0.031	
	Congressional Increases		2.200	
	Reprogrammings	3.000		
	SBIR/STTR Transfer	-0.264		

(U) Significant Program Changes:

- FY05: Reprogramming of $3.0M for the Mobile Approach Control System (MACS).
- FY06: Congressional add for $2.2M for Transportable Transponder Landing System (TTLS)

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)	PROJECT NUMBER AND TITLE: 3587 Air Traffic Control Systems

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3587 Air Traffic Control Systems	12.512	2.169	0.000	0.000	2.608	3.901	3.427	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program funds research, development, and management of new air traffic control surveillance, positioning, and precision approach capabilities. This project includes the Mobile Approach Control System (MACS) which will replace non-standard, unsupportable, large footprint mobile radar approach systems with a common, easily-transportable system for use by both the Air National Guard and active duty AF. This project funds the advance of Global Procedures Designer (GPD) formerly known as Air Force Terminal Instrument Procedures - Replacement (AFTERPS-R), which provides automated development of terminal flight instrument procedures. These procedures are specifically designed to accurately and precisely measure critical information necessary for pilots to fly designated flight paths that safely avoid obstacles and other hazards during a final approach to landing. Funding is also provided for the Transportable Transponder Landing System (TTLS) which provides a rapidly deployable, all weather, precision, terminal air traffic control capability under instrument flight rules (IFR) conditions. These efforts are key to ensuring Air Force Air Traffic Systems work collaboratively to safely and efficiently provide ATC services, as well as net-centric operations within the National Airspace System (NAS) and in host nations overseas. Over the next 15 years, the FAA plans to implement new or improved capabilities into the NAS in an evolutionary manner. This program will participate in the development, testing, and implementation of international standards (to include North Atlantic Treaty Organization (NATO) standardization agreements) to ensure joint, Allied, and coalition interoperability.

FY 2009 and beyond will see additional capabilities being planned to enable the concept of Free Flight throughout the NAS. Since the Air Force must provide the same level of air traffic service to the military and flying public, funds are required to conduct interoperability and architecture studies and analyses on a wide range of aviation concepts. Pre-planned product improvements (P3I) complement similar activities associated with other safety of flight and airspace access programs such as Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) that predominantly focus on aircraft issues.

This program is in budget activity 7, Operational System Development, because it upgrades currently fielded systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Develop MACS Airport Surveillance Radar (ASR) and Ops Shelter	2.273		
(U) Develop MACS Precision Approach Radar (PAR)	1.004		
(U) Peform study for GPD Release C	4.009		
(U) Perform Engineering Support for all ATCALS projects	1.538		
(U) Perform MACS Test & Evaluation Support	1.279		
(U) Perform Transportable Transponder Landing System (TTLS) Demonstrations	2.409	2.169	
(U) Total Cost	12.512	2.169	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	APAF - BA 5 (PE 35114F) Weapon System Code CO2900	15.698	3.765						0.000	19.463
(U)	OPAF - BA 3 (PE 0305114F) Weapon System Code 833010	2.778	39.623	6.241	0.998	0.991	1.016	1.031	Continuing	TBD
(U)	OPAF, BA 3, (PE 0305137F) Weapon System Code 833020	40.330	54.630	53.761	54.887	55.452	57.386	57.808	Continuing	TBD
(U)	OPAF, BA 5, (PE 0305137F) Weapon System Code 86190A Initial Spares	3.285	4.685	5.415	5.433	5.546	5.786	5.869	Continuing	TBD
(U)	OPAF - BA 3 (PE 0305114F) Weapon System Code 86190A Initial Spares	0.000	1.788	1.938	0.000	0.000	0.000	0.000	0.000	3.726

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**

PROJECT NUMBER AND TITLE: **3587 Air Traffic Control Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Global Procedures Designer (GPD)	C/FFP	MacDonald Dettwiler; Vancouver, BC	4.774	3.524	Nov-04					0.000	8.298	8.298
MACS Airport Surveilliance Radar (ASR) and Operational Shelter Development	C/FFP	ITT Gilfillan; Van Nuys, CA	34.281	0.935	May-05					0.000	35.216	TBD
Engineering Support	C/FFP	Mitre Corp; Bedford, MA	3.801	1.538	Nov-04					0.000	5.339	5.339
Various	Multiple	Multiple	3.003	0.144	Jul-05					0.000	3.147	3.147
MACS Precision Approach Radar (PAR) Development	C/FFP	ITT Gilfillan; Van Nuys, CA	3.392	0.244	Jul-05					0.000	3.636	TBD
Transportable Transponder Landing System (TTLS)	C/FFP	Adv Nav & Positioning Corp; Hood River, OR		2.409	May-05	2.169	May-06				4.578	TBD
Subtotal Product Development			49.251	8.794		2.169		0.000		0.000	60.214	TBD
Remarks:												
(U) Support												
Various	C/FFP/T&M	Multiple	3.238	0.892	Oct-04					0.000	4.130	4.130
Subtotal Support			3.238	0.892		0.000		0.000		0.000	4.130	4.130
Remarks:												
(U) Test & Evaluation												
Test & Evaluation for MACS & GDP	MIPR	46th Test Wing, Eglin AFB FL	2.697	1.233	Dec-04					0.000	3.930	3.930
Other Test Requirements	MIPR	Multiple	0.452	0.046	Oct-04						0.498	0.498
Subtotal Test & Evaluation			3.149	1.279		0.000		0.000		0.000	4.428	4.428
Remarks:												
(U) Management												
Cost Estimating Support	C/T&M	MCR Federal Inc; McLean, VA	0.750	0.062	May-05					0.000	0.812	0.812
Program Management Support	C/T&M	ManTech Inc; Bedford, MA	2.574	1.485	Dec-04					0.000	4.059	4.059
Subtotal Management			3.324	1.547		0.000		0.000		0.000	4.871	4.871
Remarks:												

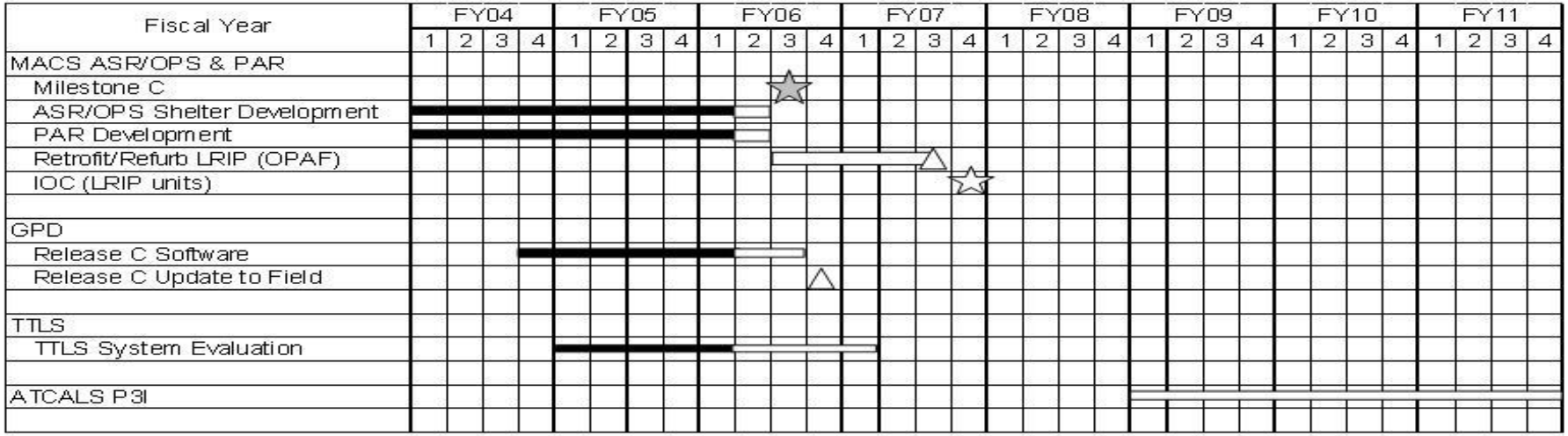
Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305114F Air Traffic Control/Approach/Landing System (ATCALS)	PROJECT NUMBER AND TITLE: 3587 Air Traffic Control Systems	

(U) Total Cost	58.962	12.512	2.169	0.000	0.000	73.643	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	**3587 Air Traffic Control Systems**



As of Jan 2006

IOC (LRIP Units)

Milestone C

Planned Ongoing Activity

Ongoing Activity that is Complete

Completed Event

Planned Task(s)

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305114F Air Traffic Control/Approach/Landing System (ATCALS)**	PROJECT NUMBER AND TITLE **3587 Air Traffic Control Systems**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Complete MACS ASR operations shelter development		2Q	
(U)	Complete MACS PAR development		2Q	
(U)	MACS MS C		3Q	
(U)	MACS IOC			4Q
(U)	Complete GPD Release C software development/testing		3Q	
(U)	Field GPD Release C		4Q	
(U)	Begin TTLS system evaluation	1Q		
(U)	Complete TTLS system evaluation			1Q

PE NUMBER: 0305116F
PE TITLE: AERIAL TARGETS

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.909	6.547	5.203	5.297	5.348	5.473	5.567	Continuing	TBD
5136 Target Systems Development	2.909	6.547	5.203	5.297	5.348	5.473	5.567	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY07, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate product improvement opportunities that will identify areas of needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY07 will also fund system acquisition and engineering support for studies and analysis of alternatives for the Air Superiority Target which is the planned follow-on full scale target to the QF-4. Funding will also support acquisition planning efforts for the AST program, to include risk reduction and prototyping activities as required, which is planned to begin in FY08.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	5.132	6.641	5.241
(U)	Current PBR/President's Budget	2.909	6.547	5.203
(U)	Total Adjustments	-2.223	-0.094	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.004	-0.094	
	Congressional Increases			
	Reprogrammings	-2.075		
	SBIR/STTR Transfer	-0.144		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305116F AERIAL TARGETS

PROJECT NUMBER AND TITLE: 5136 Target Systems Development

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5136 Target Systems Development	2.909	6.547	5.203	5.297	5.348	5.473	5.567	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Full-scale and subscale targets assure warfighters that weapon systems will perform effectively against real-world enemy fighters and cruise missiles. Aerial targets help adherence to public law Title 10, Section 2366, which requires major systems and munitions programs to conduct survivability and lethality testing before full-rate production. The Aerial Targets program provides drones to satisfy "Live Fire/Lethality" developmental/operational test requirements. Target drones are used to validate operational missile/weapon system effectiveness and fighter operational flight program (OFP) updates. Target drones are also essential for developmental/operational testing for all air-to-air and ground-to-air missiles, and for the F-22A, F-16, F-15, etc., aircraft. The objective is to provide realistic targets for missile testing to enable the development of air defense systems capable of defeating changing airborne threats. This funding improves/updates aerial target systems to ensure aerial targets represent enemy threat airborne systems. This program element also funds development of full-scale/subscale aerial targets and target control systems. Specialized target payload subsystems are developed for requirements such as: missile scoring, electronic attack and infrared (IR) countermeasures, radar and IR signature augmentation, and chaff and flare dispensing systems. In FY07, the Air Force Subscale Aerial Target (AFSAT) program will continue to evaluate product improvement opportunities that will identify areas of needed enhancements to the performance, payload capability, and payload capacity to support growth initiatives that will continue throughout the Future Years Defense Program (FYDP). FY07 will also fund system acquisition and engineering support for studies and analysis of alternatives for the Air Superiority Target which is the planned follow-on full scale target to the QF-4. Funding will also support acquisition planning efforts for the AST program, to include risk reduction and prototyping activities as required, which is planned to begin in FY08.

This program is in budget activity 7 - RDT&E Operational System Development because it provides aerial targets, target payloads, and target control systems in support of operational and RDT&E testing.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue Aerial Targets basic operating support.	0.718	0.750	0.803
(U) Continue system acquisition and engineering support to include studies, upgrades for the target control system, the weapon scoring system, payload systems and other aerial targets support systems	1.500	1.256	0.400
(U) Complete Air Superiority Target analysis of alternatives and initiate acquisition planning activities that support risk reduction (to include prototyping as required)		2.000	1.500
(U) Continue product improvement program for the Air Force Subscale Aerial Target (AFSAT) program to include payload and propulsion improvements, radar augmentation, and other objective requirements/enhancements	0.691	2.541	2.500
(U) Total Cost	2.909	6.547	5.203

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	PE35116F: Appn: Aircraft Procurement, AF(APAF), Program Title: Aerial Targets	72.558	81.805	82.042	84.479	89.391	91.551	92.589	Continuing	TBD
(U)	Initial Spares	0.397	0.471	0.488	0.502	0.518	0.532	0.538	Continuing	TBD
(U)	Munitions	3.322	3.569	3.833	3.944	4.101	4.207	4.262	Continuing	TBD
(U)	Electronic Attack Pods	0.000	4.926	5.497	5.499	5.141	5.380	5.552	Continuing	TBD

(U) D. Acquisition Strategy

The acquisition strategy is competitive, with cost plus and fixed price contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305116F AERIAL TARGETS**

PROJECT NUMBER AND TITLE: **5136 Target Systems Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Composite Engineering Inc.	CPFF			0.691	Feb-05	2.541	Apr-06	2.500	Nov-06		5.732	
TBD - AST Analysis of Alternatives	TBD					2.000	Feb-06	1.500			3.500	
Subtotal Product Development			0.000	0.691		4.541		4.000		0.000	9.232	0.000
Remarks: Spiral Development Program for the BQM-167A (AFSAT) subscale program												
(U) Support												
Mission Support	Various	Various		0.718		0.750		0.803			2.271	
Subtotal Support			0.000	0.718		0.750		0.803		0.000	2.271	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
System Acq and Engineering Support	Various	Various		1.500		1.256		0.400			3.156	
Subtotal Management			0.000	1.500		1.256		0.400		0.000	3.156	0.000
Remarks:												
(U) Total Cost			0.000	2.909		6.547		5.203		0.000	14.659	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE 5136 Target Systems Development

BQM-167A Spiral Development Roadmap

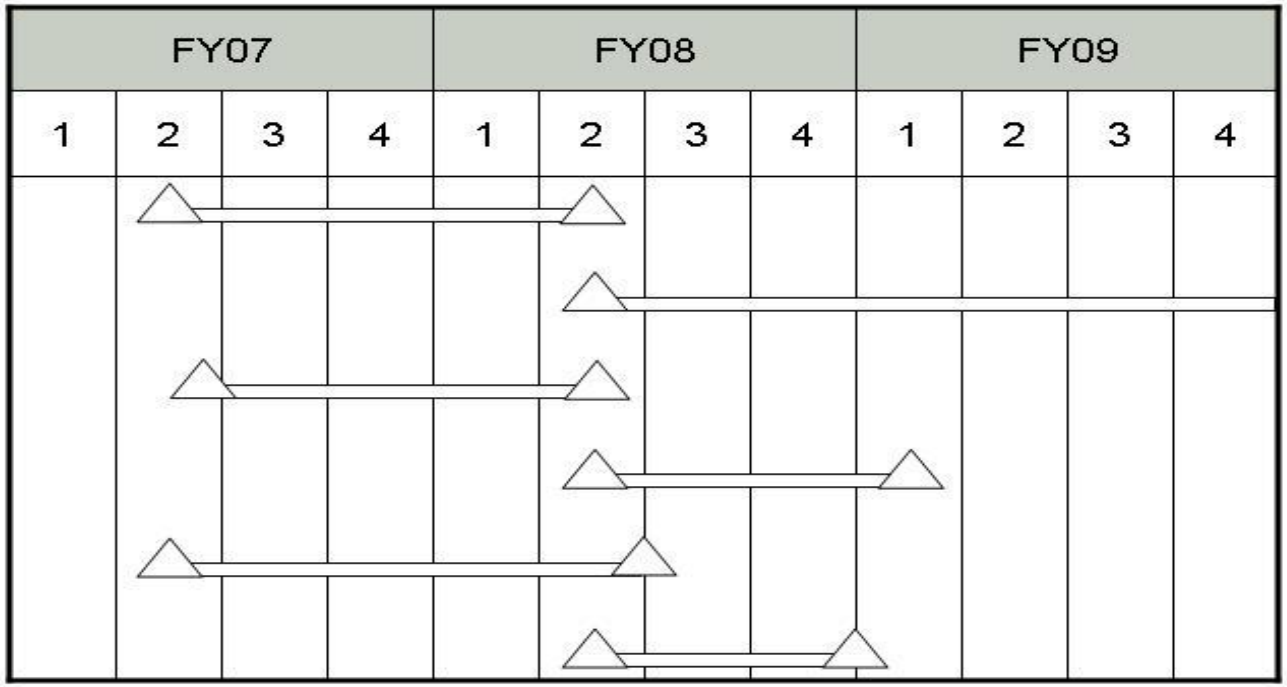


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305116F AERIAL TARGETS	PROJECT NUMBER AND TITLE: 5136 Target Systems Development

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) EA Internalization Modification for the BQM-167A			2Q
(U) BQM-167A Performance Enhancements			2Q
(U) Simultaneous ALE-47/DLQ-9 Operations for BQM-167A			2Q

PE NUMBER: 0305128F
PE TITLE: Security And Investigative Activities

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.663	0.484	0.509	0.521	0.531	0.543	0.552	Continuing	TBD
1931	TECH SURVEIL COUNTER MEAS EQPT	0.663	0.484	0.509	0.521	0.531	0.543	0.552	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Air Force Office of Special Investigations (AFOSI) conducts specialized investigative activities and force protection support for Air Force (AF) commanders worldwide. This assists AF commanders in protecting their people and resources. AFOSI's mission includes investigating criminal matters affecting AF personnel, contract fraud and economic crimes involving AF weapons systems and spare parts, the investigation of environmental crime, counterdrugs, computer intrusion detection and forensic media analysis of computer crimes. This element supports Technical Surveillance Countermeasures (TSCM), Computer Crime Investigations (CCI), and technical support to criminal and counterintelligence investigations and operations conducted by AFOSI. AFOSI's TSCM mission conducts counterintelligence investigations for both AF and DoD facilities and programs in order to deter and detect technical surveillance operations conducted by Foreign Intelligence Services to compromise classified or sensitive information. The purpose of CCI research is to improve AF and DoD Information Operations capability by enhancing AFOSI's ability to deter or prevent spies, hackers, or saboteurs from manipulating, damaging, or stealing sensitive war fighting data or systems. Failing that, to investigate, identify, and prosecute those who do. While most research to meet operational requirements is Operational System Development, there is also research in the category of Engineering and Manufacturing Development due to a need for modifications to present technology.

The equipment required to provide technical support to investigations is unique and complex. This equipment must be continually updated to provide state-of-the-art capabilities to detect and neutralize criminal activities targeted against the AF and DoD. In an era of advancing technology, reduced manning, and increasingly high level fraud, environmental crime and computer crime investigations, technical investigative equipment must be continuously updated to enable AFOSI special agents to have the most cost effective and best possible means of thwarting criminal acts. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through a global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems.

Critical Infrastructure Protection identifies weaknesses in the Air Force Critical infrastructure, highlights critical countermeasures and acquires and deploys cost-effective solutions. The intent is to provide an Air Force-wide review of current infrastructure vulnerabilities; prioritize AF protection planning and integrate with existing programs; identify gaps based on AF needs; direct studies to refine AF requirements.

This program is in Budget Activity 7, Operational System Development, because its products are primarily for use in investigative activity of an operational nature.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.484	0.484	0.509
(U)	Current PBR/President's Budget	0.663	0.484	0.509
(U)	Total Adjustments	0.179	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.004		
	Congressional Increases	0.196		
	Reprogrammings			
	SBIR/STTR Transfer	-0.013		

(U) Significant Program Changes:

In FY05 program received GWOT Supplemental funds for Classified Projects.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
1931	TECH SURVEIL COUNTER MEAS EQPT	0.663	0.484	0.509	0.521	0.531	0.543	0.552	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Air Force Office of Special Investigations (AFOSI) conducts specialized investigative activities and force protection support for Air Force (AF) commanders worldwide. This assists AF commanders in protecting their people and resources. AFOSI's mission includes investigating criminal matters affecting AF personnel, contract fraud and economic crimes involving AF weapons systems and spare parts, the investigation of environmental crime, counterdrugs, computer intrusion detection and forensic media analysis of computer crimes. This element supports Technical Surveillance Countermeasures (TSCM), Computer Crime Investigations (CCI), and technical support to criminal and counterintelligence investigations and operations conducted by AFOSI. AFOSI's TSCM mission conducts counterintelligence investigations for both AF and DoD facilities and programs in order to deter and detect technical surveillance operations conducted by Foreign Intelligence Services to compromise classified or sensitive information. The purpose of CCI research is to improve AF and DoD Information Operations capability by enhancing AFOSI's ability to deter or prevent spies, hackers, or saboteurs from manipulating, damaging, or stealing sensitive war fighting data or systems. Failing that, to investigate, identify, and prosecute those who do. While most research to meet operational requirements is Operational System Development, there is also research in the category of Engineering and Manufacturing Development due to a need for modifications to present technology.

The equipment required to provide technical support to investigations is unique and complex. This equipment must be continually updated to provide state-of-the-art capabilities to detect and neutralize criminal activities targeted against the AF and DoD. In an era of advancing technology, reduced manning, and increasingly high level fraud, environmental crime and computer crime investigations, technical investigative equipment must be continuously updated to enable AFOSI special agents to have the most cost effective and best possible means of thwarting criminal acts. The evolution of a new wave of computer crimes has made AFOSI responsible for the collection, investigative analysis, national level law enforcement coordination, and dissemination of hacker activity and intrusion incidents for the Air Force. AFOSI's computer crime equipment must stay on the leading edge of technology to collect criminal information as well as pursue and apprehend criminals through a global medium. AFOSI must continually update its existing high tech computer surveillance equipment to support ongoing and future investigative operations to identify hackers and hacker groups, as well as potential hostile government activities targeting Air Force communication and control systems.

Critical Infrastructure Protection identifies weaknesses in the Air Force Critical infrastructure, highlights critical countermeasures and acquires and deploys cost-effective solutions. The intent is to provide an Air Force-wide review of current infrastructure vulnerabilities; prioritize AF protection planning and integrate with existing programs; identify gaps based on AF needs; direct studies to refine AF requirements.

This program is in Budget Activity 7, Operational System Development, because its products are primarily for use in investigative activity of an operational nature.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE 1931 TECH SURVEIL COUNTER MEAS EQPT

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

		FY 2005	FY 2006	FY 2007
(U)				
(U)	Next generation Technical Surveillance Countermeasures (TSCM) receiver.	0.221	0.161	0.170
(U)				
(U)	Continue development of Computer Crimes Investigative (CCI) Equipment and Software.	0.221	0.162	0.169
(U)	Next Generation TSCM receiver Continuing Development	0.221	0.161	0.170
(U)				
(U)	Total Cost	0.663	0.484	0.509

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement/Technical Surveillance Countermeasures Equipment 3080/WSC 846030	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Other Procurement/Heavily Armored Vehicle 3080/WSC 821700	0.242	0.241	0.241	0.246	0.250	0.265	0.270	Continuing	TBD

(U) D. Acquisition Strategy

Market Research is accomplished jointly within the DoD, Counterintelligence, and Law Enforcement communities with the various government laboratories and major defense contractors to identify locations with the ability to develop investigative tools unique to our mission needs, these technologies, capabilities, and limitiations of current and future investigative tools is sometimes highly sensitive or classified.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305128F Security And Investigative Activities**

PROJECT NUMBER AND TITLE: **1931 TECH SURVEIL COUNTER MEAS EQPT**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Sandia Natl Lab	MIPR			0.147	Mar-05	0.107	Mar-06	0.113	Mar-07	Continuing	TBD	TBD
AFWIC	MIPR			0.147	Mar-05	0.107	Mar-06	0.113	Mar-07	Continuing	TBD	TBD
Other Agency	MIPR			0.148	Apr-05	0.108	Apr-06	0.113	Apr-07	Continuing	TBD	TBD
											0.000	
Subtotal Product Development			0.000	0.442		0.322		0.339		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
US Armor Working Group	MIPR			0.221	Apr-05	0.162		0.170	Apr-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.221		0.162		0.170		Continuing	TBD	TBD
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) AF Infrastructure Protection Studies												
AF Infrastructure Protection Studies										Continuing	TBD	TBD
Subtotal AF Infrastructure Protection Studies												
Remarks:												
(U) Subtotal												
			0.000	0.000		0.000		0.000				
Subtotal Subtotal												
Remarks:												
(U)												
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.663		0.484		0.509		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305128F Security And Investigative Activities	PROJECT NUMBER AND TITLE: 1931 TECH SURVEIL COUNTER MEAS EQPT

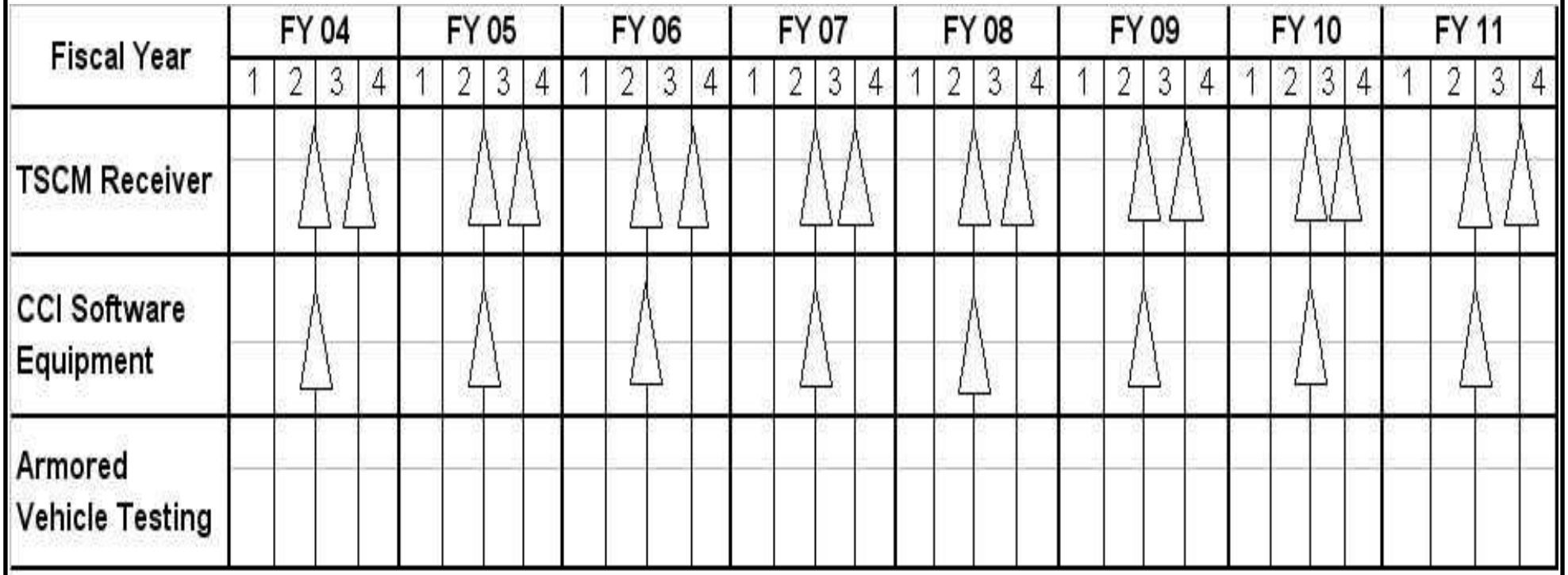


Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305128F Security And Investigative Activities**	**1931 TECH SURVEIL COUNTER MEAS EQPT**

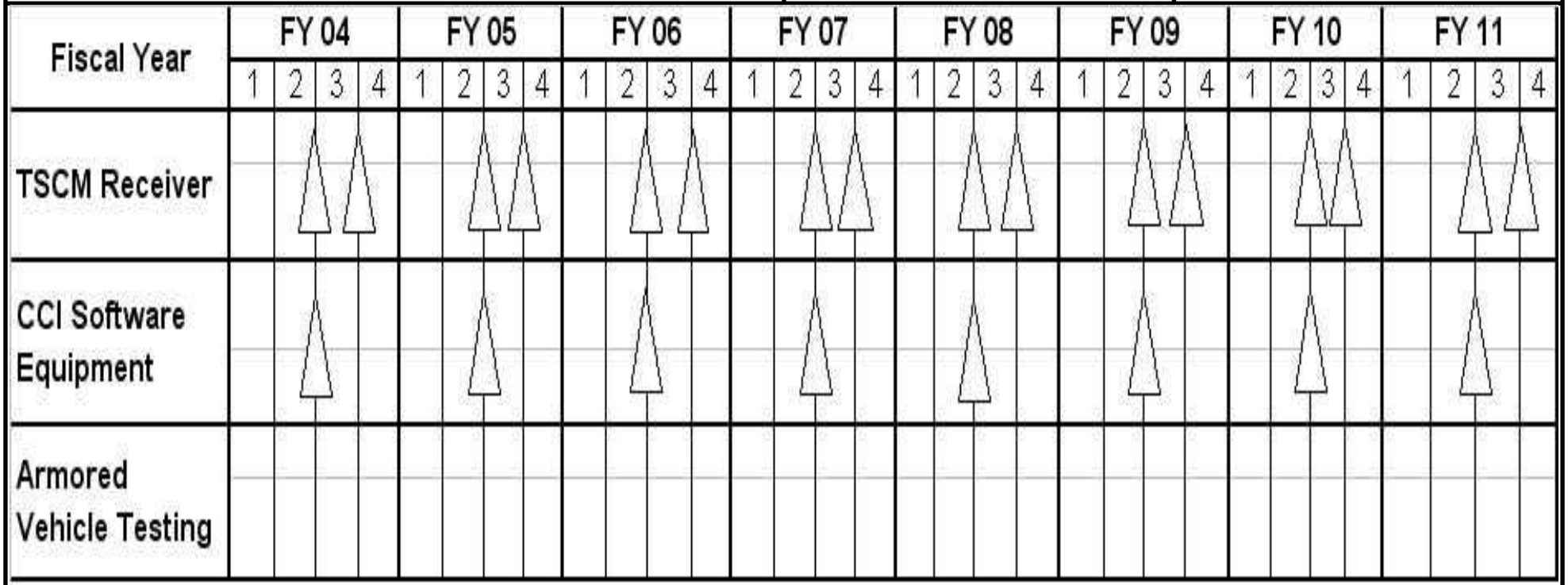


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305128F Security And Investigative Activities**	PROJECT NUMBER AND TITLE **1931 TECH SURVEIL COUNTER MEAS EQPT**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) TSCM Receiver	2-4Q	2-4Q	2-4Q
(U) CCI Software/Equipment	2-3Q	2-3Q	2-3Q

PE NUMBER: 0305148F
PE TITLE: AF Tac Measurement & Sign

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305148F AF Tac Measurement & Sign

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	13.811	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.307
5053 ARGUS	13.811	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.307

(U) A. Mission Description and Budget Item Justification

The Advanced Remote Ground Unattended Sensor (ARGUS) Program will develop an air deliverable, unattended ground sensor design that will be tested and produced by the United States Marine Corps (USMC) Advanced Air Delivered Sensor (AADS) program. The sensor design will provide the USMC and joint forces with Intelligence, Surveillance & Reconnaissance (ISR) derived information for Intelligence Preparation of the Battlespace (IPB) on tactical targets. The system will inherently have the capability to provide situational awareness on mobile targets, to include Time Critical Targets (TCTs). The sensor will be autonomous and report in near real-time. The sensor is designed for 24/7 operations and can be air-delivered or hand-emplaced. Each sensor is self-contained with internal battery power, satellite communication transceiver, and sensor suite. The ARGUS design is a technology refresh and upgrade to the successful STEEL EAGLE and STEEL RATTLER Advanced Concept Technology Demonstrations.

This program is in budget activity 7, Operational Systems Development, because it addresses development and capabilities to support already operational weapon systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.905	0.000	0.000
(U)	Current PBR/President's Budget	13.811	0.000	0.000
(U)	Total Adjustments	5.906	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.176		
	Congressional Increases	6.350		
	Reprogrammings			
	SBIR/STTR Transfer	-0.268		

(U) Significant Program Changes:

USAF involvement in the ARGUS program was cancelled at the end of FY05 to support higher priority requirements. ARGUS program completed design phase in FY05 and transitioned test and procurement activity to the USMC AADS.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305148F AF Tac Measurement & Sign

PROJECT NUMBER AND TITLE: 5053 ARGUS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5053 ARGUS	13.811	0.000	0.000	0.000	0.000	0.000	0.000	0.000	32.307
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Advanced Remote Ground Unattended Sensor (ARGUS) Program will develop an air deliverable, unattended ground sensor design that will be tested and produced by the United States Marine Corps (USMC) Advanced Air Delivered Sensor (AADS) program. The sensor design will provide the USMC and joint forces with Intelligence, Surveillance & Reconnaissance (ISR) derived information for Intelligence Preparation of the Battlespace (IPB) on tactical targets. The system will inherently have the capability to provide situational awareness on mobile targets, to include Time Critical Targets (TCTs). The sensor will be autonomous and report in near real-time. The sensor is designed for 24/7 operations and can be air-delivered or hand-emplaced. Each sensor is self-contained with internal battery power, satellite communication transceiver, and sensor suite. The ARGUS design is a technology refresh and upgrade to the successful STEEL EAGLE and STEEL RATTLER Advanced Concept Technology Demonstrations.

This program is in budget activity 7, Operational Systems Development, because it addresses development and capabilities to support already operational weapon systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program	0.000		
(U) System Development and Demonstration (SDD)	13.811		
(U) Test support to SDD	0.000		
(U) Simulation Support	0.000		
(U) Total Cost	13.811	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) O&M, AF (3400)	0.000	0.000	0.000	0.000	0.000	0.000	0.000		

Funds previously allocated to ARGUS O&M in future years have been reprogrammed to higher priority operational efforts with the termination of ARGUS in FY06.

(U) D. Acquisition Strategy

ARGUS develops the design for a remote measurement and signatures intelligence (MASINT) ground sensor using a spiral approach. ARGUS terminated its activity with the completion of Spiral 1 design activities. AADS will test and produce the design. Future improvements will be addresssed by AADS and the acquisition strategy will be determined by the USMC.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305148F AF Tac Measurement & Sign**

PROJECT NUMBER AND TITLE: **5053 ARGUS**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
System Development & Demonstration & Contract												
(U) Termination												
Textron	C/CPAF	ESC, Hanscom AFB, MA		9.750	Aug-04					0.000	9.750	
MIPR to USMC to complete developmental test		USMC		4.061	Mar-05						4.061	
Subtotal System Development & Demonstration & Contract Termination			0.000	13.811		0.000		0.000		0.000	13.811	0.000
Remarks:												
(U) Test & Evaluation												
40th Test Wing, Sandia; Joint Munitions Test & Evaluation Program Office; Textron	MIPR, C/CPAF	Eglin AFB, FL; DOE-Washington, DC; Hanscom AFB, MA								0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Simulation Support												
Lincoln Lab, SEEK Eagle	FFRDC, MIPR	Hanscom AFB, MA; Eglin AFB, FL		0.000						0.000	0.000	
Subtotal Simulation Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
Concept & Technology Development (ACTD												
(U) Completion)												
Sandia; Joint Munitions T&E Program Office	MIPR	DOE-Washington DC; Eglin AFB, FL		0.000						0.000	0.000	
Subtotal Concept & Technology Development (ACTD Completion)			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	13.811		0.000		0.000		0.000	13.811	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305148F AF Tac Measurement & Sign	PROJECT NUMBER AND TITLE 5053 ARGUS

ARGUS/AADS Acronyms & Legend

- ARGUS: Advanced Remote Ground Unattended Sensor
- AADS: Advanced Air-Delivered Sensor
- SRR: System Readiness Review
- PDR: Preliminary Design Review
- CDR: Critical Design Review
- LRIP: Low-Rate Initial Production
- DT/OA: Development Test/Operational Evaluation
- OT&E: Operational Test & Evaluation

ARGUS activities

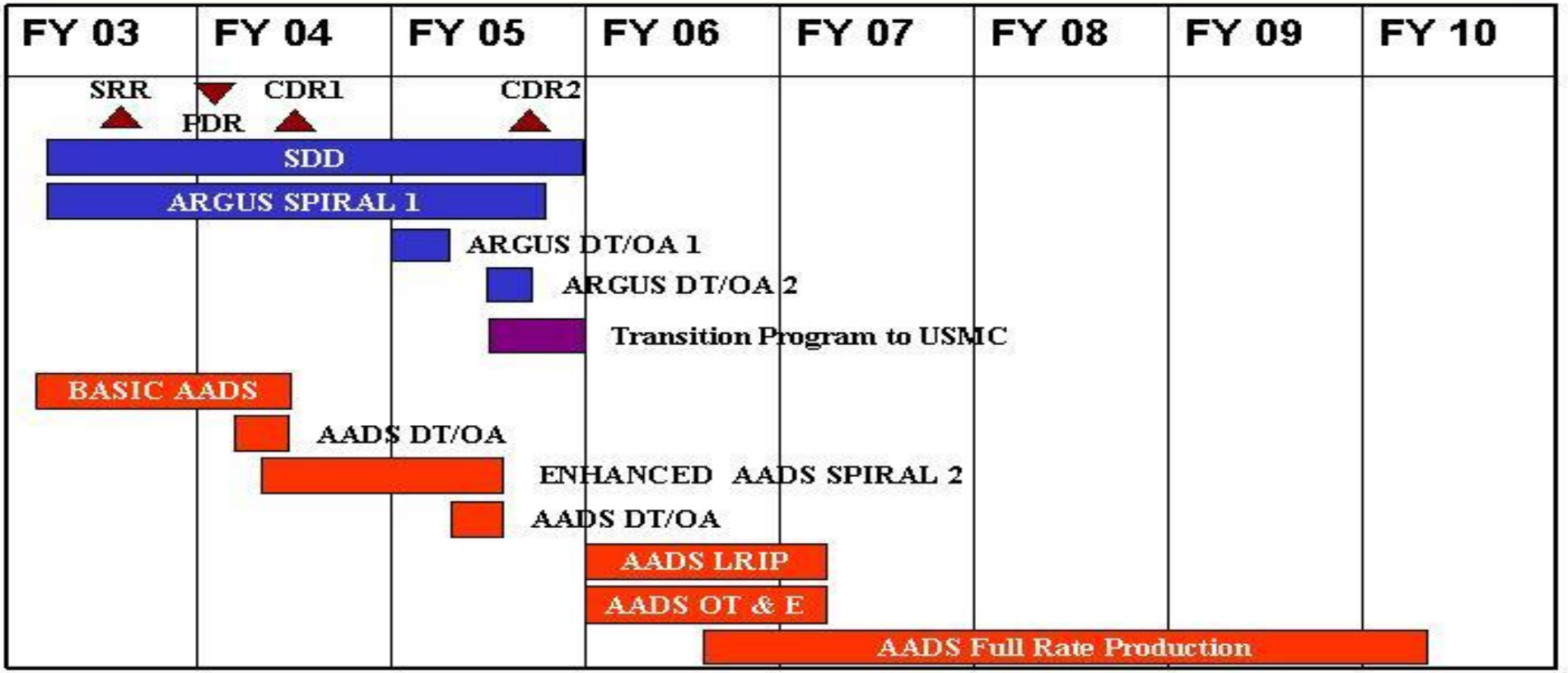
AADS activities

Integrity - Service - Excellence *Semper Fidelis*

1

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305148F AF Tac Measurement & Sign	PROJECT NUMBER AND TITLE 5053 ARGUS

ARGUS/AADS Schedule



Integrity - Service - Excellence *Semper Fidelis*

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305148F AF Tac Measurement & Sign**	PROJECT NUMBER AND TITLE **5053 ARGUS**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	ARGUS Development Test 1, Ballistic Test	1Q		
(U)	AADS Development Test 2, Aerobody	2Q		
(U)	ARGUS Development Test 2, Ballistic Test	3Q		
(U)	Critical Design Review 2, corrections for ballistic test and aerobody	3Q		
(U)	Transition program to USMC for initial operational test and production. Terminates USAF involvement after Critical Design Review 2	4Q		

PE NUMBER: 0305160F
PE TITLE: Defense Meteorological Satellite Program

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186
4758 DMSP Program	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day). DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Fully redundant Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office is also evaluating a range of possible service life extension options to maximize longevity of the remaining satellites. DMSPs F-17 through F-20 will launch on Evolved Expendable Launch Vehicle (EELV) boosters. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 launch is scheduled for 4th Quarter FY06.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305160F Defense Meteorological Satellite Program

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	3.908	0.958
(U)	Current PBR/President's Budget	0.000	3.852	0.969
(U)	Total Adjustments	0.000	-0.056	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.056	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305160F Defense Meteorological Satellite Program**	**4758 DMSP Program**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4758 DMSP Program	0.000	3.852	0.969	0.000	0.000	0.000	0.000	0.000	912.186
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Meteorological Satellite Program (DMSP) is a fully operational program supporting a broad range of strategic and tactical national security users that require timely and accurate global weather information. DMSP is a critically important tool enabling commanders to effectively employ weapon systems and protect DoD resources in any operational battlespace. DMSP is DoD's only assured source of global weather data providing visible and infrared cloud cover imagery (1/3 nautical miles (nm) constant resolution) and other meteorological, oceanographic, land surface, and space environmental data. At least two satellites (one in each of two orbit planes) are required in sun-synchronous, 450nm polar-orbit at all times (sun-synchronous means the satellites cross the equator at the same local sun time on each of their 14 orbits/day). DMSP F-15 was the first Block 5D3 spacecraft (with legacy sensors) and was launched on a Titan-II booster in Dec 99. Premature attitude determination gyro failures on DMSP F-15 exposed a fleet-wide life-limiting problem with the attitude determination gyros that will fly on all remaining DMSP satellites. Fully redundant Mini-Inertial Measurement Units (MIMUs) are being integrated to DMSPs F-17 through F-20 to reduce risk of mission failures due to gyro problems. DMSP F-16 was launched in Oct 03 aboard the last Titan II booster and is the first 'full-up' Block 5D3 (spacecraft bus plus sensors). Operational imperatives drove a need to launch DMSP F-16 before it could be integrated with a MIMU to provide attitude determination system redundancy. DMSP F-16 flies a new series of highly capable microwave and ultraviolet sensors to perform comprehensive environmental sensing. A number of systemic problems were identified during those sensors' calibration and validation period that will be addressed prior to the launch of all remaining satellites. The program office is also evaluating a range of possible service life extension options to maximize longevity of the remaining satellites. DMSPs F-17 through F-20 will launch on Evolved Expendable Launch Vehicle (EELV) boosters. The Spacecraft Integration & Test (SIT) contract for spacecraft support and the Independent Verification and Validation contract for test flight software were both awarded in Jun 02. DMSP's consolidated sensors support and services follow-on contract was awarded in Nov 04. DMSP F-17 launch is scheduled for 4th Quarter FY06.

This program is in Budget Activity 7, Operational Systems Development, because it supports the current operational DMSP constellation.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue system integration and test, studies, and related support activities		2.775	0.969
(U) Continue EELV interface design (transition to EELV)		1.077	0.000
(U) Total Cost	0.000	3.852	0.969

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**	PROJECT NUMBER AND TITLE **4758 DMSP Program**

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

(U) Missile Procurement/PE 0305160F (P-24)	88.017	66.285	86.720	80.829	75.373	74.137	74.853	103.700	2,872.716

Related RDT&E:

PE 0305178F, National Polar-orbiting Operational Environmental Satellite System (NPOESS)

PE 0305160N, Navy Meteorological and Oceanographic Sensor-Space (METOC) (provides funds for Navy unique studies)

(U) D. Acquisition Strategy

Support and services contracts for the spacecraft, sensors, ground systems, and supporting software have been awarded to various contractors. No major milestone decisions remain. Production of DMSP satellites has been completed. Remaining effort is to continue spacecraft and sensor integration and test and successfully launch remaining DMSP satellites.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305160F Defense Meteorological Satellite Program**

PROJECT NUMBER AND TITLE: **4758 DMSP Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed -Martin	SS/CPAF		3.764								3.764	
Lockheed-Martin	SS/CPAF		11.064								11.064	
Northrop-Grumman (CSS&S)	SS/CPAF		13.208								13.208	
Lockheed-Martin	C/CPAF		39.513								39.513	
Lockheed-Martin	C/CPAF		6.456			3.852	Feb-06	0.969	Oct-06		11.277	
Harris (SSMIS/STT SW)	C/CPAF		8.617								8.617	
Det 11/GSA (Mark IVB P3I)	MIPR		2.986								2.986	
Lockheed-Martin (Titan II Msn Unique Studies)	SS/CPAF		5.953								5.953	
Boeing (EELV Msn Unique Studies & Services)	SS/CPAF		2.585								2.585	
Aerojet	SS/CPAF		2.530								2.530	
Aerojet	C/CPAF/FFP		85.979								85.979	
Aerojet (SSM/TW/IS S&S & Model + SSMIS)	SS/CPAF		2.183								2.183	
Raytheon, formerly Hughes (SSMI Spt & Svc)	SS/CPFF		0.236								0.236	
AFRL	MIPR/PD		5.838								5.838	
NRL	MIPR/Var		15.782								15.782	
APL	MIPR/Var		4.332								4.332	
SMC (Det 3 SSSG/NPOESS)	FCA/MIPR		2.506								2.506	
Sandia	MIPR/Var		0.820								0.820	
NOAA			0.034								0.034	
Other	Various		6.671								6.671	
Historical Satellite Blocks	Various		583.786								583.786	
NONE											0.000	
Subtotal Product Development			804.843	0.000		3.852		0.969		0.000	809.664	0.000
Remarks:												
(U) Support												
FFRDC	AF 277		25.623								25.623	
PRC/BD Systems/TASS	C/CPAF		9.515								9.515	
Program Mgmt			22.720								22.720	
Litigation Support			1.809								1.809	
Other	Various		4.325								4.325	
Historical Satellite Blocks	Various		38.530								38.530	
NONE											0.000	
Subtotal Support			102.522	0.000		0.000		0.000		0.000	102.522	0.000
Remarks:												
(U) Test & Evaluation												
NONE											0.000	
NONE											0.000	

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program	

	Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Management							
							0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Total Cost	907.365	0.000	3.852	0.969	0.000	912.186	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305160F Defense Meteorological Satellite Program**	PROJECT NUMBER AND TITLE **4758 DMSP Program**

DMSP Schedule

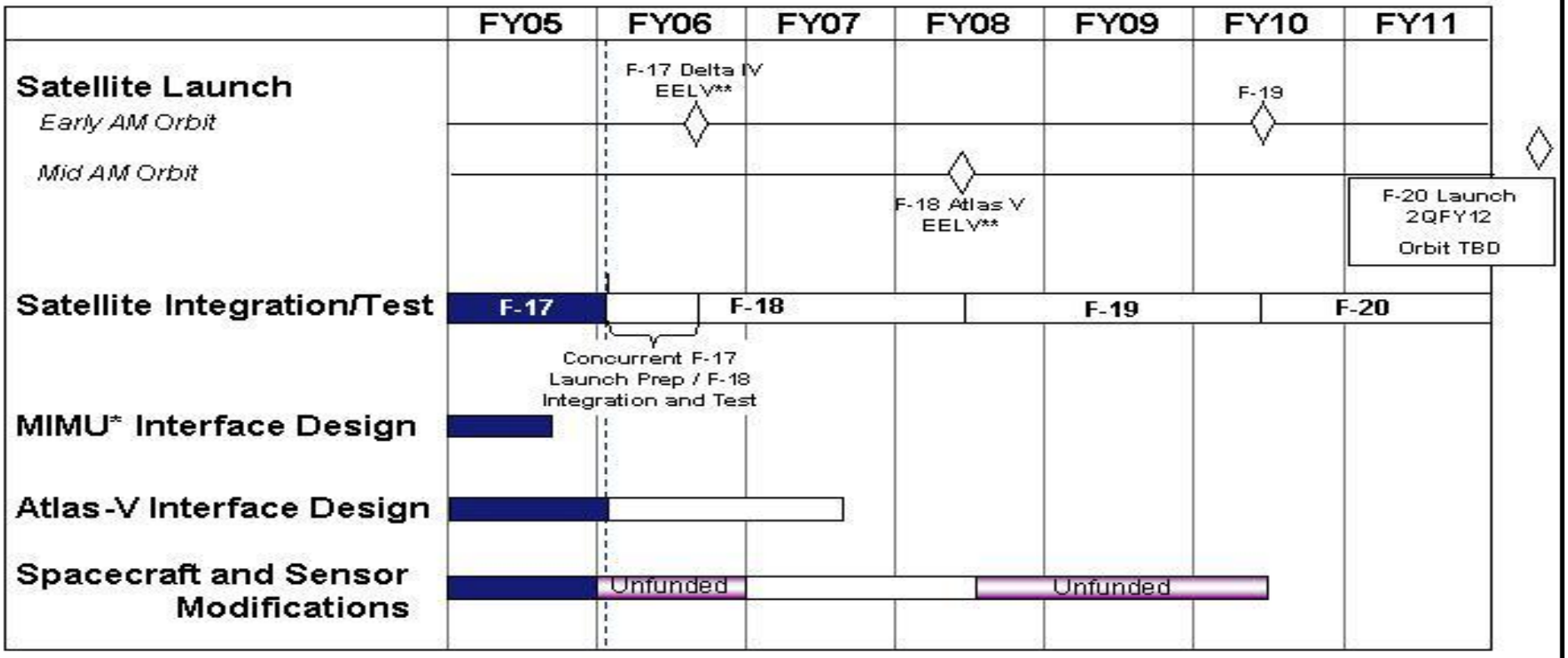

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305160F Defense Meteorological Satellite Program	PROJECT NUMBER AND TITLE: 4758 DMSP Program

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) F-17 Satellite Launch		4Q	

PE NUMBER: 0305164F
PE TITLE: NAVSTAR Global Positioning System User Equipment Space

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	93.408	123.794	131.083	92.394	66.187	67.729	67.617	Continuing	TBD
3028 Navstar GPS	93.408	123.794	131.083	92.394	66.187	67.729	67.617	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space-based radio positioning, navigation, and time distribution system. GPS User Equipment (UE) consists of standardized receivers, antennas, antenna electronics, etc., grouped together in sets to derive navigation and time information transmitted from GPS satellites. These receiver sets are used by DoD. RDT&E funds UE development and testing, studies and engineering to assist UE aircraft integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation, and mission support. Due to increasing military GPS dependence and emerging Electronic Warfare (EW) threat, the Navigation Warfare (Navwar) program was established to address EW solutions for GPS. Key elements of GPS Modernization include protecting U.S. military and allies' use of GPS, preventing hostile exploitation of GPS, and preserving civil use of GPS outside the area of operations (AOO).

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	102.432	125.778	107.617
(U)	Current PBR/President's Budget	93.408	123.794	131.083
(U)	Total Adjustments	-9.024	-1.984	
(U)	Congressional Program Reductions	-0.079	-0.192	
	Congressional Rescissions		-1.792	
	Congressional Increases			
	Reprogrammings	-6.500		
	SBIR/STTR Transfer	-2.445		

(U) Significant Program Changes:

FY05: -$6.5M in FY05 for higher Air Force priorities; +$23.466M adjustment for Modernized User Equipment 2nd vendor.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space	PROJECT NUMBER AND TITLE: 3028 Navstar GPS

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3028 Navstar GPS	93.408	123.794	131.083	92.394	66.187	67.729	67.617	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Global Positioning System (GPS) is a space-based radio positioning, navigation, and time distribution system. GPS User Equipment (UE) consists of standardized receivers, antennas, antenna electronics, etc., grouped together in sets to derive navigation and time information transmitted from GPS satellites. These receiver sets are used by DoD. RDT&E funds UE development and testing, studies and engineering to assist UE aircraft integration, software upgrades, product improvement studies, commercial GPS UE test and evaluation, and mission support. Due to increasing military GPS dependence and emerging Electronic Warfare (EW) threat, the Navigation Warfare (Navwar) program was established to address EW solutions for GPS. Key elements of GPS Modernization include protecting U.S. military and allies' use of GPS, preventing hostile exploitation of GPS, and preserving civil use of GPS outside the area of operations (AOO).

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue Advanced UE Technology efforts	19.274	16.522	13.489
(U) Continue SAASM/GRAM-SAASM development	9.898	3.405	1.449
(U) Continue Integration, Test and Evaluation	2.526	5.816	6.266
(U) Continue System Engineering	22.739	26.532	24.746
(U) Continue Program Support	5.237	7.419	7.514
(U) Continue Modernization efforts (Modernized UE Development)	33.734	64.100	77.619
(U) Total Cost	93.408	123.794	131.083

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) Operations and Maintenance (PE 0305164F, BA 1 - Operating Forces, SAG 13D)	2.612	2.842	3.545	7.095	8.062	8.578	5.548	Continuing	TBD
(U) Aircraft Procurement (PE 0305164F, BA 7, Aircraft	28.033	11.521	10.888	12.421	21.147	27.984	31.102	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305164F NAVSTAR Global Positioning System User Equipment Space**	PROJECT NUMBER AND TITLE **3028 Navstar GPS**

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

(U) Other Procurement (PE 0305164F, BP 83 - Electronics & Telecommunications Equipment, WSC 836730, P-62); BP 86 - Spares & Repair Parts, WSC 190A, P-62) Support Equipment, BP19)	9.863	8.974	6.004	5.483	4.514	4.779	5.136	Continuing	TBD

(U) D. Acquisition Strategy

Several ongoing and planned concept definition and technology risk reduction programs will define and mature GPS technologies needed for GPS Modernization. Military signal (M-Code) capability is the latest layer to GPS military user equipment foundation that will establish protection of navigation security architecture. Air Force strategy is to develop an open system architecture for a GPS receiver based on the GPS Receiver Applications Module (GRAM) concept. The GRAM-Selective Availability Anti-Spoofing Module (SAASM) program is a further risk reduction effort to integrate the GPS receiver operations internally between GRAM and SAASM. Also, several anti-jam technology risk reduction efforts will be pursued to mature technologies and prepare for technology insertion. GPS UE continues to work with platforms/users to identify requirements and upgrade paths for GPS enhancements. In addition, to combat the potential threat that U.S. forces may be denied the use of GPS signals, the Advanced Digital Antenna Production (ADAP) program (a follow-on to the GPS Antenna System (GAS-1)), is being developed.

The Modernized User Equipment (MUE) program will develop controlled, non-proprietary specifications and interface control documents (ICDs), to enable the Services to acquire affordable Modernized UE through their program offices and/or the GPS JPO. An assurance plan will verify compliance. The program will use a phased approach:

- Cost Plus Fixed Fee (CPFF) Program and Research Development Announcement (PRDA) contracts for program concept development are intended to reduce risk and advance the technology required for future development (awarded 3QFY03).
- A contract will be awarded FY06 to develop an aviation and ground receiver card capable of position, velocity, and time (PVT) utilizing Y-Code/Modernized UE/Coarse Acquisition (YMCA). A second MUE vendor will be funded to expand the industrial base for critical modernized capabilities.
- Cost Plus Award Fee (CPAF) Development contract (award March 2006)

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305164F NAVSTAR Global Positioning System User Equipment Space**

PROJECT NUMBER AND TITLE: **3028 Navstar GPS**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Rockwell (MAGR)	C/FPIF/FFP / CPAF		19.293	0.000		0.000		0.000		0.000	19.293	
DOE Sandia (SAASM)	MIPR	Kirtland AFB, NM	34.478	8.810	Jan-05	2.793	Jan-06	0.837	Jan-07	Continuing	TBD	
NAWC (SAASM)	MIPR		0.599	0.000		0.000		0.000		0.000	0.599	
Various (SAASM/GB-GRAM)	Various	Various	29.113	0.819		0.612		0.612		Continuing	TBD	
Various (Modernized UE)	Various	Various	60.056	33.734	Jan-05	64.100	Mar-06	77.619	Jan-07	Continuing	TBD	
Alliant Techsys Inc (SAASM) & Multiple NAVWAR PRDAs	C/CPFF & C/CPAF		18.222	0.000		0.000		0.000		0.000	18.222	
Holloman AFB (Various Integration)	Project Order	46th TG, Holloman AFB, NM	6.022	0.282	Jan-05	0.400	Jan-06	0.684	Jan-07	Continuing	TBD	
SPAWAR (Various Integration)			0.000	0.122	Jan-05	0.164	Jan-06	0.000		0.000	0.286	
General Dynamics (Various)	Time and Materials		1.810	0.000		0.000		0.000		0.000	1.810	
Completed technology development efforts	Various		85.634	0.000		0.000		0.000		0.000	85.634	
Allan Osborne, Alliant Tech, Rockwell Collins, and Raytheon (DAGR)	PRDA	Various	25.953	2.155	Jun-05	0.000		0.000		0.000	28.108	
Raytheon (MAGR2K) (GRAM-SAASM)	PRDA		31.126	0.269		0.000		0.000		0.000	31.395	
Advanced UE Tech Invest	Various		4.646	0.000		0.000		0.000		0.000	4.646	
Receiver Technology	MIPR	AFRL - WPAFB, OH & KAFB, NM	13.880	2.168	Dec-04	3.875	Dec-05	3.320	Dec-06	Continuing	TBD	
Anti-jam Filter Technology	Various	Various	7.847	0.000		0.000		0.000		0.000	7.847	
Advanced Antenna Technology	Various	Various	33.889	14.951		12.647		10.169		Continuing	TBD	
Subtotal Product Development			372.568	63.310		84.591		93.241		Continuing	TBD	0.000
Remarks:												
(U) Support												
Overlook Sys (OASD/C3I)	C/CPFF	OASD, Arlington, VA	27.573	0.324	Jan-05	1.000	Jan-06	1.000	Jan-07	Continuing	TBD	
Aerospace Corp (Technical Supt)	CPFF	Aerospace, Los Angeles, CA	14.968	4.913	Oct-04	6.419	Oct-05	6.514	Oct-06	Continuing	TBD	
PRC (Technical Supt)	Time and Materials		0.714	0.000		0.000		0.000		0.000	0.714	
Miscellaneous (Program Spt)	Various	Various	53.360	22.739		26.532		24.746		Continuing	TBD	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305164F NAVSTAR Global Positioning System User Equipment Space**

PROJECT NUMBER AND TITLE: **3028 Navstar GPS**

	Various (Other Navwar Studies)	Various		7.883	0.000	0.000	0.000	0.000	7.883	
	Subtotal Support			104.498	27.976	33.951	32.260	Continuing	TBD	0.000
	Remarks:									
(U)	Test & Evaluation									
	46th TG (SAASM/Test)	Project Order		31.987	0.000	0.000	0.000	0.000	31.987	
	46th TG/UE development & production Testing	Project Order / Various	Holloman AFB, NM / Various	18.112	2.122	5.252	5.582	Continuing	TBD	
	Subtotal Test & Evaluation			50.099	2.122	5.252	5.582	Continuing	TBD	0.000
	Remarks:									
(U)	Management									
									0.000	
	Subtotal Management			0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:									
(U)										
									0.000	
	Subtotal			0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:									
(U)	Total Cost			527.165	93.408	123.794	131.083	Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305164F NAVSTAR Global Positioning System User Equipment Space	PROJECT NUMBER AND TITLE: 3028 Navstar GPS

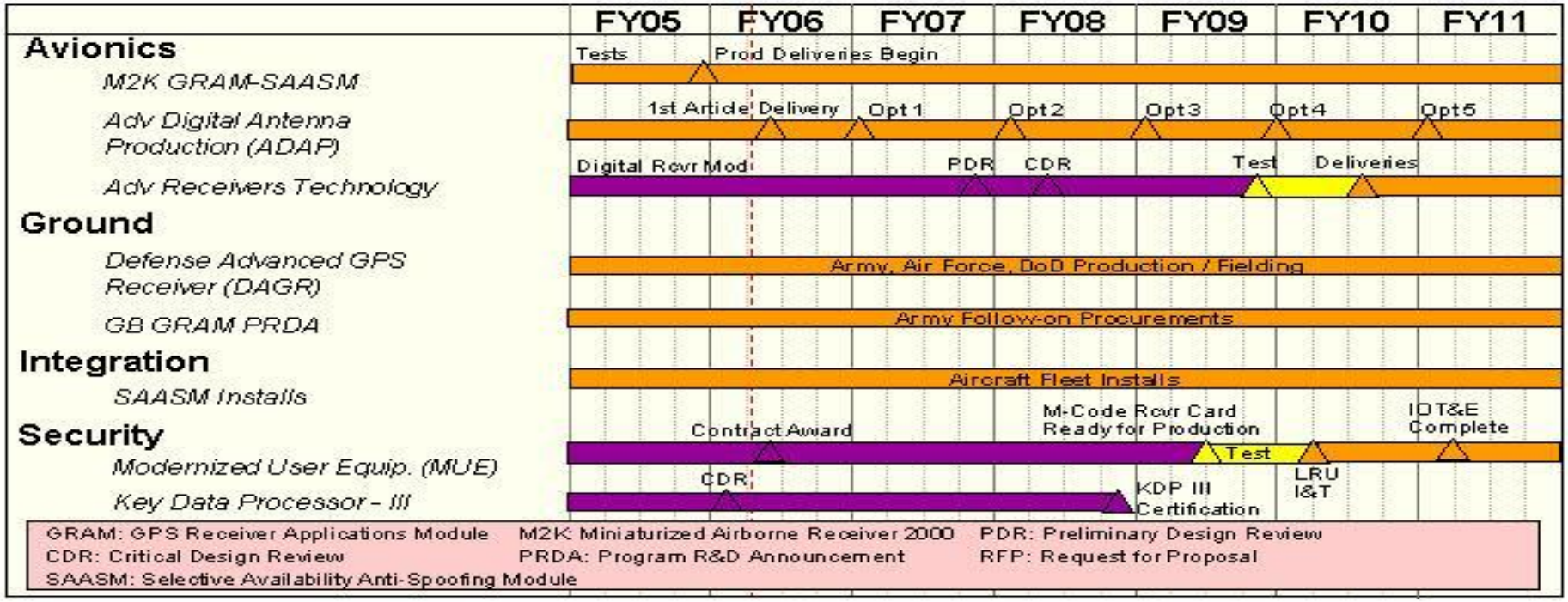

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305164F NAVSTAR Global Positioning System User Equipment Space**	PROJECT NUMBER AND TITLE **3028 Navstar GPS**

(U)	**Schedule Profile**	FY 2005	FY 2006	FY 2007
(U)	Adv Digital Antenna Production (ADAP) Prog Mgt Review	2Q		
(U)	Modernized UE (MUE) Reqmts/Specs Definition	3Q		
(U)	KDP III Operational Software Design Complete	3Q		
(U)	KDP III System Level Critical Design Review		1Q	
(U)	Miniaturized Adv GPS Rcvr (MAGR2K) Negotiation/Testing		1Q	
(U)	MUE Development Contract Award		2Q	
(U)	Begin Digital Receiver Module Delivery		2Q	
(U)	ADAP First Article Delivery		2Q	
(U)	KDP III Application Specific Integrated Circuit (ASIC) Preliminary Design Review with Foundry		2Q	
(U)	MUE Contractors' Awards (YMCA)		2Q	
(U)	Digital Antenna Control Unit (DACU) Integration/Test		2Q	
(U)	ADAP First Production Order			1Q
(U)	KDP III ASIC Ready for Production			1Q
(U)	Multibeam Steering Adv Electronics PDR			1Q
(U)	MUE Key Data Point-B (KDP) Decision			2Q
(U)	Adv Tech - MultiBeam Steering (MBS) CDR			3Q
(U)	KDP III Preliminary Review by NSA Technical Review Board			4Q
(U)	MUE ASIC Complete			4Q

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PE NUMBER: 0305165F
PE TITLE: NAVSTAR GPS (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	128.349	184.756	177.792	106.837	77.123	56.396	35.103	Continuing	TBD
3030 NAVSTAR GPS (Space & Control)	128.349	184.756	177.792	106.837	77.123	56.396	35.103	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments of the overall GPS program. Includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support the entire GPS system deployment. This PE funds R&D for modernization and future GPS systems including efforts to provide anti-jam capability through increased M-Code signal power.

GPS Block IIF satellites and IIR satellites will be modified to include a second civil signal (L2C) and new military signal (M-code). Block IIF satellites will also include a third civil signal (L5). A new GPS Block III program (PE 0603421F) was initiated after new start approval in August 2000.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	147.037	188.301	131.624
(U)	Current PBR/President's Budget	128.349	184.756	177.792
(U)	Total Adjustments	-18.688	-3.545	
(U)	Congressional Program Reductions		-0.862	
	Congressional Rescissions	-0.113	-2.683	
	Congressional Increases			
	Reprogrammings	-15.000		
	SBIR/STTR Transfer	-3.575		

(U) Significant Program Changes:

FY05: -$15.000M in FY2005 for higher Air Force priorities; FY07: +$46.168M increased funding for interim M-Code and civil capability and GPS Operations Center (GPSOC) connectivity.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3030	NAVSTAR GPS (Space & Control)	128.349	184.756	177.792	106.837	77.123	56.396	35.103	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This Program Element (PE) funds Research and Development (R&D) for the Navstar Global Positioning System (GPS) Space and Control segments of the overall GPS program. Includes, but not limited to: satellite development, training simulators, Integrated Logistics Support (ILS) products, ground control segment development, procurement, and operation; sustaining engineering; space and ground segments upgrades; and R&D efforts to support the entire GPS system deployment. This PE funds R&D for modernization and future GPS systems including efforts to provide anti-jam capability through increased M-Code signal power.

GPS Block IIF satellites and IIR satellites will be modified to include a second civil signal (L2C) and new military signal (M-code). Block IIF satellites will also include a third civil signal (L5). A new GPS Block III program (PE 0603421F) was initiated after new start approval in August 2000.

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue system engineering, spectrum/frequency management and program operations	6.019	2.800	1.792
(U)	Continue IIF satellite development/Parts Obsolescence	25.600	27.000	35.000
(U)	Continue GPS Modernization for Space and enhanced anti-jam capabilities	3.222	1.000	0.500
(U)	Continue Operational Control Segment (OCS) development/modernization	92.049	153.956	140.500
(U)	Completed GPS Stewardship	1.459	0.000	0.000
(U)	Total Cost	128.349	184.756	177.792

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Related RDT&E (PE 0603421F, BA-4/R-41, Project 644993 - GPS Block III)	33.773	85.172	315.314	492.094	781.671	912.128	839.576	Continuing	TBD
(U)	Other APPN									
(U)	Operations and Maintenance (PE 0305165F, BA 1 - Operating Forces, SAG 13D)	55.569	68.787	77.664	84.376	85.116	93.212	102.326	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)	

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

(U) Missile Procurement (PE 0305165F, BA 5 - Space and Other Support, P-22, 23)	327.423	313.089	140.441	267.468	326.219	162.245	520.155	Continuing	TBD
(U) Other Procurement (PE 0305165F, BP 83 - Electronics and Telecommunications Equipment, WSC 836790, P-67, and WSC 836730; BP 86 - Spares & Repair Parts, WSC 86190A, P-62)	7.777	13.454	12.280	5.653	6.234	11.008	69.051	Continuing	TBD

(U) D. Acquisition Strategy

GPS OCS upgrade was competitively awarded to a single contractor (Lockheed Martin) in July 1995. Block IIF satellite and IIF ground systems development contract was competitively awarded to a single contractor (Boeing) in April 1996. The Single Prime Initiative (SPI) consolidated these efforts and was added to the Boeing IIF contract (with Lockheed Martin as a subcontractor) on 1 Oct 1999. GPS Modernization efforts for the Block IIR were awarded sole source to Lockheed Martin under a new contract in August 2000. Modernization efforts for Block IIF were added to the existing contract with Boeing as Engineering Change Proposals (ECPs).

The Air Force is unable to deliver full M-Code capability within the operational control segment (OCS) by FY11. This OCS slip created a significant overlap with the planned GPS III modernized control segment (OCX) development causing the potential for duplicative development efforts and near simultaneous fielding of the full M-code capability and new civil signals (L2C and L5) on both the OCX and OCS contracts. Currently the existing OCS contract is being modified to replace the delivery of full M-code capability and new civil signals with the delivery of a simplified early M-code/civil monitoring capability. The delivery of full M-code capability and new civil signals will be implemented in OCX (funded in the GPS III PE 0603421F).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305165F NAVSTAR GPS (Space)**

PROJECT NUMBER AND TITLE: **3030 NAVSTAR GPS (Space & Control)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Applied Research Labs	MIPR	Various	3.649	0.000		0.000		0.000		0.000	3.649	
OCS Development & IIF Modernization (F0470196C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	934.836	92.049	Oct-04	153.956	Oct-05	140.500	Oct-06	Continuing	TBD	1,944.179
IIF Dev/Parts Obsolescence (F047019C0025)	FPAF/CPAF/CPFF	Boeing, Seal Beach, CA	0.000	25.600	Dec-04	27.000	Oct-05	35.000	Oct-06	0.000	87.600	77.600
IIR Modernization Development (F0470100C0006)	CPIF	Lockheed Martin, King of Prussia, PA	74.786	0.000		0.000		0.000		0.000	74.786	74.786
GPS III Modernization (F0470101C0008)	FFP	Lockheed Martin, King of Prussia, PA	15.767	0.000		0.000		0.000		0.000	15.767	TBD
GPS III Modernization (F0470101C0010)	FFP	Boeing, Seal Beach, CA	16.000	0.000		0.000		0.000		0.000	16.000	
Control Segment Support	MIPR/PO	Various Gov't agencies	4.897	3.222	Dec-04	1.000	Dec-05	0.500	Dec-06	Continuing	TBD	TBD
EELV Mission Unique Svcs & Clock Development	MIPR/Other SPO Contracts	NRL & Contractors	24.402	2.075	Dec-04	0.000		0.000		Continuing	TBD	TBD
Stewardship	MIPR	Various	11.874	1.459	Dec-04	0.000		0.000		Continuing	TBD	TBD
Accuracy Improvement Initiative (AII)	FPA/CPAF/CPFF	Boeing, Seal Beach, CA	10.000	0.000		0.000		0.000		0.000	10.000	
Subtotal Product Development			1,096.211	124.405		181.956		176.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
System Engineering/Support	Various	FFRDC (Aerospace/Mitre), SETA	39.276	1.303	Oct-04	0.400	Oct-05	0.400	Oct-06	Continuing	TBD	TBD
GPS Modernization Tech Spt			43.249	0.000		0.000		0.000		0.000	43.249	
Miscellaneous	Various	Various	3.231	0.000		0.000		0.000		0.000	3.231	
Subtotal Support			85.756	1.303		0.400		0.400		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Flex Power Testing (F0470100C0006)	FPAF/CPAF/CPFF	Lockheed Martin, King of Prussia, PA & various gov't activities	3.588	1.000	Feb-05	2.000	Feb-06	1.000	Feb-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			3.588	1.000		2.000		1.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305165F NAVSTAR GPS (Space)**	**3030 NAVSTAR GPS (Space & Control)**

	Remarks:									
(U)	Management									
	Technical Support	Various SETA & FFRDCs	FFRDC (Aerospace) & SETA	13.301	1.641	0.400	0.392	Continuing	TBD	TBD
	Subtotal Management			13.301	1.641	0.400	0.392	Continuing	TBD	TBD
	Remarks:									
(U)	Total Cost			1,198.856	128.349	184.756	177.792	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)

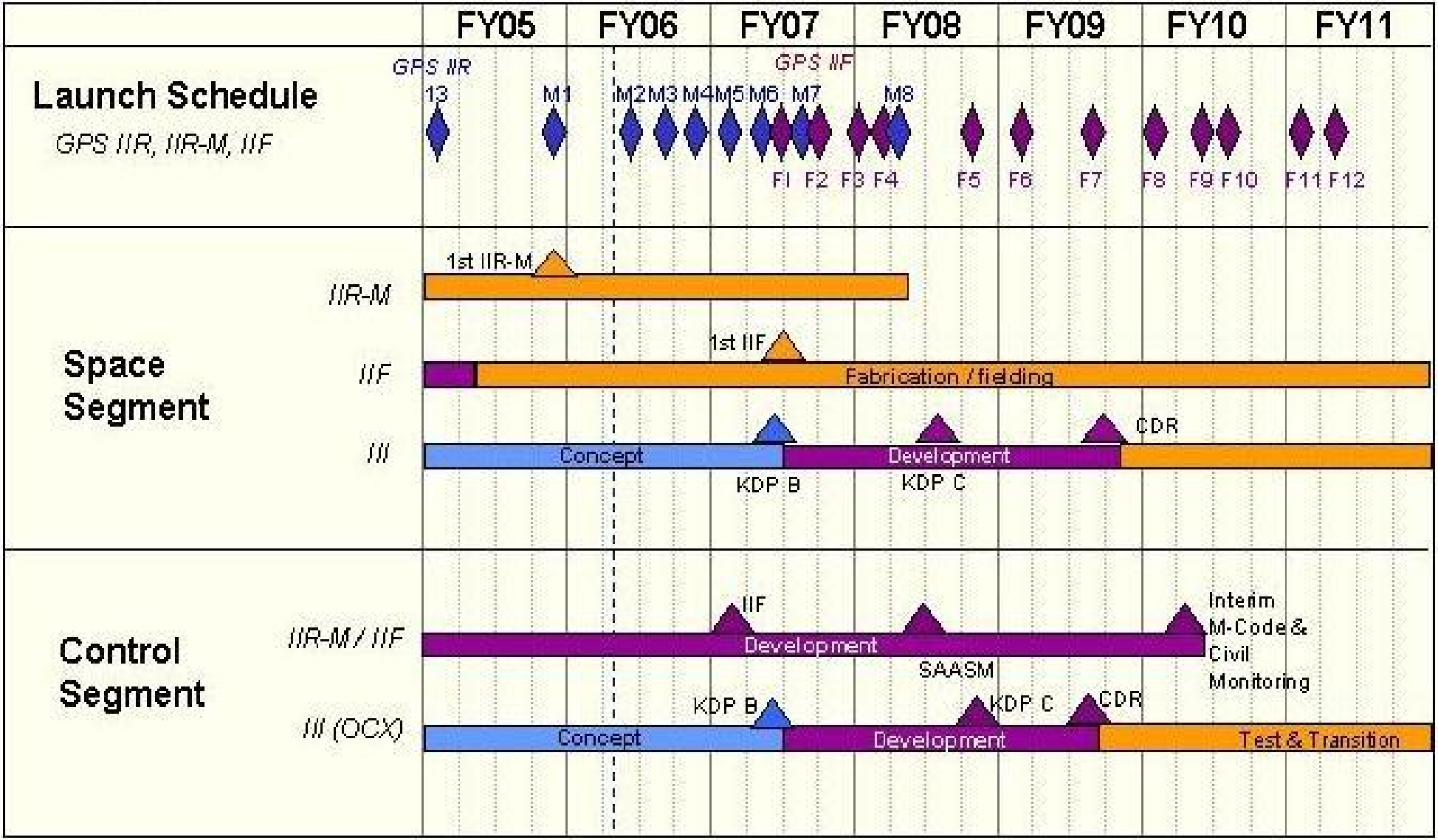

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305165F NAVSTAR GPS (Space)	PROJECT NUMBER AND TITLE: 3030 NAVSTAR GPS (Space & Control)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) IIF flight software development delivery to site	3Q		
(U) Legacy Accuracy Improvement Initiative (AII) Capability complete		1Q	
(U) M-Code development begins		4Q	
(U) Launch, Anomaly resolution & Disposal Operations (LADO) Release 1 delivery to site		4Q	
(U) IIF flight software development Complete			1Q
(U) SAASM development Formal Qualification Test (FQT)			1Q
(U) GPS Block IIF Development Complete			2Q
(U) LADO Release 2 Complete			2Q
(U) M-code Software Detail Design Complete			3Q

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PE NUMBER: 0305173F
PE TITLE: Space & Missile Test & Evaluation Center

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305173F Space & Missile Test & Evaluation Center

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	0.000	4.675	3.060	1.990	1.662	1.689	Continuing	TBD
A014	R&D Space and Missile Operations	0.000	0.000	4.675	3.060	1.990	1.662	1.689	Continuing	TBD

Note: In FY 2007, all funding from BPAC 4992 (PE# 0305173F) was transferred to new BPAC A014 - this re-name better reflects focus of efforts.

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program will focus on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program will start in FY 2007. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC will be a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) conduct residual operations capability for R&D satellites in order to develop/test tactics, techniques, procedures and concepts; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC will leverage demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC will also support all RDSMO-sustained space vehicles through existing resources. In addition, it will add the capability to rapidly support operational counterspace systems (such as Near-field Infrared Experiment (NFIRE), Interim Satellite as a Sensor (ISAS), and Rapid Attack Identification Detection and Reporting System (RAIDRS)).

The RDSMO Program Element also contains O&M and OPAF funds. RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Center for Research Support (CERES) at Schriever AFB, CO which operates residual satellites and serves as a test bed; (3) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (4) the Test, Operations, and Programs at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (5) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

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

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305173F Space & Missile Test & Evaluation Center**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	0.000	4.622
(U)	Current PBR/President's Budget	0.000	0.000	4.675
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	FY 2007 New Start Effort (MMSOC)			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305173F Space & Missile Test & Evaluation Center**	**A014 R&D Space and Missile Operations**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A014	R&D Space and Missile Operations	0.000	0.000	4.675	3.060	1.990	1.662	1.689	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Note: In FY 2007, all funding from BPAC 4992 (PE# 0305173F) was transferred to new BPAC A014 - this re-name better reflects focus of efforts.

(U) A. Mission Description and Budget Item Justification

The RDT&E efforts within this program will focus on the Multi-Mission Satellite Operations Center (MMSOC), which Research and Development (R&D) Space and Missile Operations (RDSMO) program will start in FY 2007. The main objective of MMSOC is to transition R&D space vehicle technology with residual military utility to operational status for immediate real world support and to perform initial operational utility assessment for future acquisition programs. MMSOC will be a multiple-mission operation system that uses standard software to (1) perform satellite command and control (C2) in support of launch requirements; (2) conduct residual operations capability for R&D satellites in order to develop/test tactics, techniques, procedures and concepts; (3) provide a satellite C2 spiral evolution resource for RDT&E of new systems and concepts; and (4) deliver new operational flexibility for currently-flying assigned satellites. MMSOC will leverage demonstrated RDT&E experience to expand the capabilities and proven technologies currently in use by other RDSMO facilities. MMSOC will also support all RDSMO-sustained space vehicles through existing resources. In addition, it will add the capability to rapidly support operational counterspace systems (such as Near-field Infrared Experiment (NFIRE), Interim Satellite as a Sensor (ISAS), and Rapid Attack Identification Detection and Reporting System (RAIDRS)).

The RDSMO Program Element also contains O&M and OPAF funds. RDSMO develops and acquires systems to: operate experimental and demonstration satellites; operate fixed and deployable satellite ground systems; perform satellite compatibility testing; act as the focal point and center of expertise for DoD experimental and demonstration space and missile operations; support space and missile R&D; and conduct/support experimental/demonstration space and missile Developmental Test and Evaluation (DT&E) and Initial Operational Test and Evaluation (IOT&E) activities. It consists of (1) the RDT&E Support Complex (RSC) at Kirtland AFB, NM which operates R&D satellites; (2) the Center for Research Support (CERES) at Schriever AFB, CO which operates residual satellites and serves as a test bed; (3) the Camp Parks Communication Annex at Dublin, CA which provides multi-band Telemetry Tracking and Commanding (TT&C), calibration and on-orbit testing; (4) the Test, Operations, and Programs at Kirtland AFB which is the focal point for tests, plans, programs, and policy and (5) the deployable test systems, based at Kirtland AFB, NM which deploys mobile antennas worldwide to support space RDT&E activities.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Multi-Mission Satellite Operations Center (MMSOC) development/integration	0.000	0.000	4.675
(U) Total Cost	0.000	0.000	4.675

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305173F Space & Missile Test & Evaluation Center**	PROJECT NUMBER AND TITLE **A014 R&D Space and Missile Operations**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) OPAF, Electronics & Telecom Equipment (BA 03, PE 0305173F, P-48)	0.251	0.236	7.077	7.668	10.035	3.495	3.550	Continuing	TBD

(U) D. Acquisition Strategy

The AF uses the competitively-awarded Engineering, Development, and Sustainment (EDS) Contract, managed by Space and Missile System Center, Detachment 12, to modernize and sustain RDSMO on a non-interference basis as it continues to support RDT&E and other designated users. The AF will use the competitively-awarded EDS Follow-on Contract to develop MMSOC.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305173F Space & Missile Test & Evaluation Center**

PROJECT NUMBER AND TITLE: **A014 R&D Space and Missile Operations**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Engineering, Development, and Sustainment (EDS) Follow-on Contract	C/CPAF	TBD	0.000	0.000		0.000		4.000	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.000		4.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Support (SETA, SPO ops)	Various	Various	0.000	0.000		0.000		0.675		Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.000		0.675		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		4.675		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305173F Space & Missile Test & Evaluation Center**	PROJECT NUMBER AND TITLE **A014 R&D Space and Missile Operations**

MMSOC Schedule

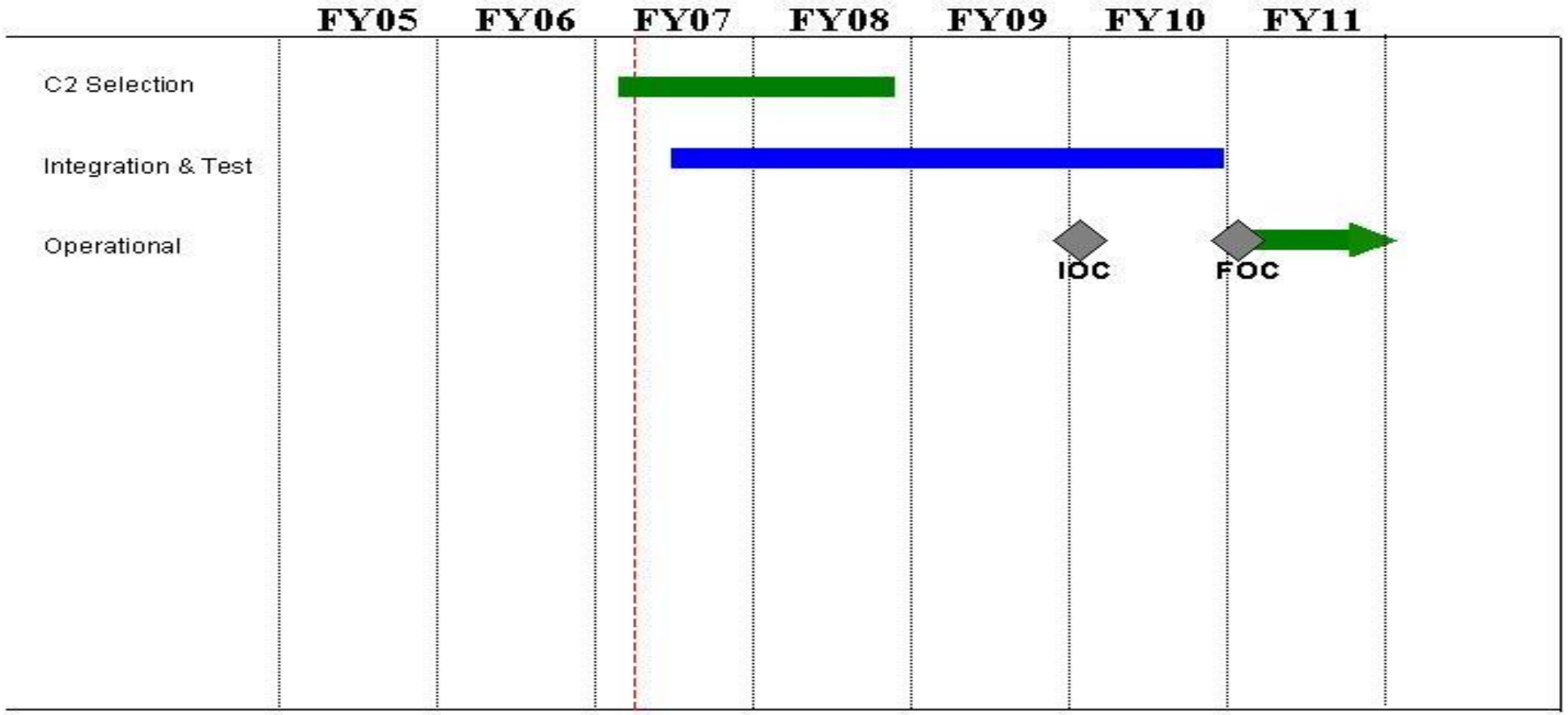

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305173F Space & Missile Test & Evaluation Center**	PROJECT NUMBER AND TITLE **A014 R&D Space and Missile Operations**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Begin MMSOC Design			1Q
(U) MMSOC Command and Control System Selection			2Q
(U) Begin MMSOC Integration			3Q

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PE NUMBER: 0305174F
PE TITLE: SPACE WARFARE CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.397	0.405	0.726	2.002	3.626	3.686	3.726	Continuing	TBD
A011	Space Analysis and Application Development	0.397	0.405	0.726	2.002	3.626	3.686	3.726	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Warfare Center develops, evaluates, and tests space application and utility concepts, new technologies, and tactics. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

The Space Analysis and Application Development project develops and modifies modeling and simulation tools that Air Force Space Command's Space Analysis Center uses for operations research, military utility analyses, tradeoff studies, and other evaluations of space mission areas to guide planning, programming, requirements generation, analyses of alternatives, and other activities. Development activities incorporate changes in fielded and projected space operational capabilities, as well as technical improvements, into the group's software tools to ensure their data and technology remain current.

This effort is in Budget Activity 7, Operational System Development, because it develops and modifies software models for fielded analysis systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.408	0.411	0.854
(U)	Current PBR/President's Budget	0.397	0.405	0.726
(U)	Total Adjustments	-0.011	-0.006	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.006	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.011		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER

PROJECT NUMBER AND TITLE: A011 Space Analysis and Application Development

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A011	Space Analysis and Application Development	0.397	0.405	0.726	2.002	3.626	3.686	3.726	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Located at Schriever Air Force Base, Colorado, the Space Warfare Center develops, evaluates, and tests space application and utility concepts, new technologies, and tactics. Its innovation, education, and training activities foster solutions to operational deficiencies and enhance the integration of space systems into Air Force operations, thereby enabling service and joint warfighters to realize the full potential of existing and planned space capabilities.

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This effort is in Budget Activity 7, Operational System Development, because it develops and modifies software models for fielded analysis systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue model modification	0.189	0.194	0.347
(U) Continue verification of model changes	0.088	0.087	0.152
(U) Continue validation of results	0.120	0.124	0.227
(U) Total Cost	0.397	0.405	0.726

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement, Air Force (Weapon System Code 832070, Intelligence Communications Equipment)*	0.523	0.521	0.539	0.547	0.555	0.563	0.572	Continuing	TBD

*Additional SWC Other Procurement, Air Force funding (not shown) supports efforts unrelated to Space Analysis Center development activities

(U) D. Acquisition Strategy

This effort was awarded under a cost plus award fee contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305174F SPACE WARFARE CENTER**

PROJECT NUMBER AND TITLE: **A011 Space Analysis and Application Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Develop/modify software tools and models	C/CPAF	Sparta Corp., Colorado Springs, CO	0.377	0.397	Apr-05	0.405	Apr-06	0.726	Apr-07	Continuing	TBD	
Subtotal Product Development			0.377	0.397		0.405		0.726		Continuing	TBD	0.000
Remarks:												
(U) Support												
Not applicable											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.377	0.397		0.405		0.726		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305174F SPACE WARFARE CENTER**	PROJECT NUMBER AND TITLE **A011 Space Analysis and Application Development**

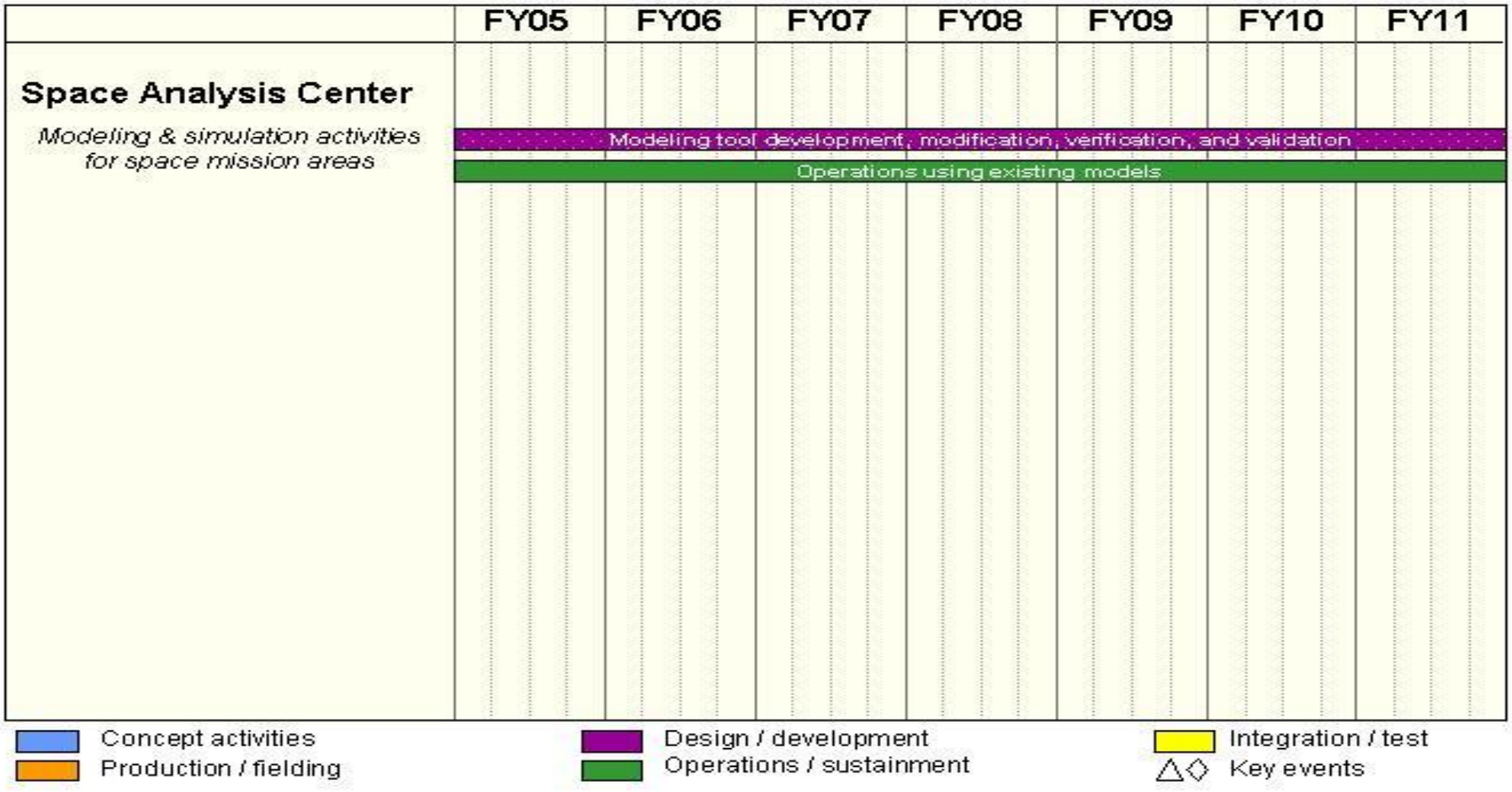

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305174F SPACE WARFARE CENTER	PROJECT NUMBER AND TITLE: A011 Space Analysis and Application Development

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Model modification, verification, and validation	1-4Q	1-4Q	1-4Q

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PE NUMBER: 0305182F
PE TITLE: Spacelift Range System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305182F Spacelift Range System

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	46.056	49.081	38.044	27.045	12.408	10.168	10.301	Continuing	TBD
4137	Launch and Test Range System (LTRS) Modernization	46.056	49.081	38.044	27.045	12.408	10.168	10.301	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB), FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile evaluations; and aeronautical and guided weapons tests. Many range assets are obsolete, unreliable, inefficient, and costly to operate and maintain. Reliability has been a major issue due to reliance on equipment such as 25-year old computers, 1960s vintage high frequency (HF) transmitters, wire-wrap circuit boards, etc. As a result, multiple assets are employed for redundancy during launches to ensure availability of range support.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Second, the SLRS Contract (SLRSC) modernizes instrumentation at both ranges. The SLRSC also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. The Air Force restructured the RSA IIA contract and added funding in FY06 through FY08 to complete modernization of weather, communications (voice, video, data, and timing; network management system; and digital telemetry), planning and scheduling, and flight operations and analysis systems (to include activation of the Western Range Operations Control Center).

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	49.314	48.854	37.513
(U)	Current PBR/President's Budget	46.056	49.081	38.044
(U)	Total Adjustments	-3.258	0.227	
(U)	Congressional Program Reductions	-1.638	-0.062	
	Congressional Rescissions		-0.711	
	Congressional Increases		1.000	
	Reprogrammings	-0.320		
	SBIR/STTR Transfer	-1.300		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305182F Spacelift Range System**

FY06: Congressional increase of $1.0M for California Space Infrastructure Program continuity

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE: 4137 Launch and Test Range System (LTRS) Modernization	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4137	Launch and Test Range System (LTRS) Modernization	46.056	49.081	38.044	27.045	12.408	10.168	10.301	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Eastern Range (ER) at Patrick Air Force Base (AFB), FL, and the Western Range (WR) at Vandenberg AFB, CA, make up the Spacelift Range System (SLRS). They provide tracking, telemetry, communications, flight analysis, and other capabilities necessary to safely conduct: national security, civil, and commercial spacelift operations; ballistic missile evaluations; and aeronautical and guided weapons tests. Many range assets are obsolete, unreliable, inefficient, and costly to operate and maintain. Reliability has been a major issue due to reliance on equipment such as 25-year old computers, 1960s vintage high frequency (HF) transmitters, wire-wrap circuit boards, etc. As a result, multiple assets are employed for redundancy during launches to ensure availability of range support.

The AF is addressing range deficiencies through two contracts. First, the Range Standardization and Automation (RSA) Phase IIA contract modernizes the control/display and communications segments at both ranges. Second, the SLRS Contract (SLRSC) modernizes instrumentation at both ranges. The SLRSC also provides overall systems engineering and architecture management, follow-on modernization of the control/display and communications segments, and system level testing to complete the modernization effort. The Air Force restructured the RSA IIA contract and added funding in FY06 through FY08 to complete modernization of weather, communications (voice, video, data, and timing; network management system; and digital telemetry), planning and scheduling, and flight operations and analysis systems (to include activation of the Western Range Operations Control Center).

These upgrades to fielded systems are categorized as Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue RSA Phase IIA. Continue development, test, and evaluation of RSA Phase IIA systems, including planning and scheduling, communications (voice, video, data, and timing; network management system; and digital telemetry), weather, and flight operations and analysis (to include activation of WR Operations Control Center). Develop upgrades needed to evolve and deliver operational range capabilities. Perform product engineering, integration efforts, engineering studies, and related tasks to support the architecture.	19.612	26.230	20.176
(U) Continue SLRSC. Continue systems engineering technical effort including architecture management, requirement management, systems integration, and engineering analyses. Develop specifications for SLRS systems. Integrate modernized instrumentation systems with legacy systems as well as systems developed by RSA Phase IIA. Develop, test, and evaluate: instrumentation to include command destruct, telemetry, and radars; and interfaces to establish the SLRS automated architecture and enable centralized and local control of instrumentation, to include activation of the WR Operations Control Center.	18.538	20.181	16.248

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE 4137 Launch and Test Range System (LTRS) Modernization

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

		FY 2005	FY 2006	FY 2007
(U)	Provide program support for Systems Program Office (SPO).	5.493	1.670	1.620
(U)	Partner with California Space Authority (CSA) to conduct California Space Infrastructure projects using funds added by Congress. FY05 projects are: Reservoir Assessment, Detection, & Response; and, California Space Infrastructure Program. FY06 project is California Space Infrastructure Program continuation.	2.413	1.000	
(U)	Total Cost	46.056	49.081	38.044

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	OPAF (Spacelift Range System Space, P-65, BA 03)	101.611	106.542	120.450	141.011	101.881	104.068	105.438	Continuing	TBD
(U)	OPAF (Spares and Repair Parts, P-103, BA 05)	1.397	2.723	2.807	2.895	2.954	2.997	3.046	Continuing	TBD

(U) D. Acquisition Strategy

The AF is using two competitively awarded, complementary contracts, managed by the Space and Missile Systems Center, to modernize the ranges on a minimal-interference basis, so the ranges can continue to operate in support of launches and tests.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305182F Spacelift Range System**

PROJECT NUMBER AND TITLE: **4137 Launch and Test Range System (LTRS) Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
RSA Phase IIA	C/CPAF	Lockheed Martin, Santa Maria, CA	237.947	19.612	Nov-04	26.230	Oct-05	20.176	Oct-06	Continuing	TBD	TBD
SLRSC	C/CPAF	ITT Industries, Cape Canaveral, FL	99.862	18.538	Oct-04	20.181	Oct-05	16.248	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			337.809	38.150		46.411		36.424		Continuing	TBD	TBD
Remarks:												
(U) Support												
SPO Program Support (FFRDC, SETA, SPO Ops)	Various	Various	28.621	5.493	Oct-04	1.670	Oct-05	1.620	Oct-06	Continuing	TBD	TBD
California Space Authority Studies/Projects	Various	Various	30.013	2.413	Jun-05	1.000	Jun-06			Continuing	TBD	TBD
Subtotal Support			58.634	7.906		2.670		1.620		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			396.443	46.056		49.081		38.044		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305182F Spacelift Range System	PROJECT NUMBER AND TITLE: 4137 Launch and Test Range System (LTRS) Modernization

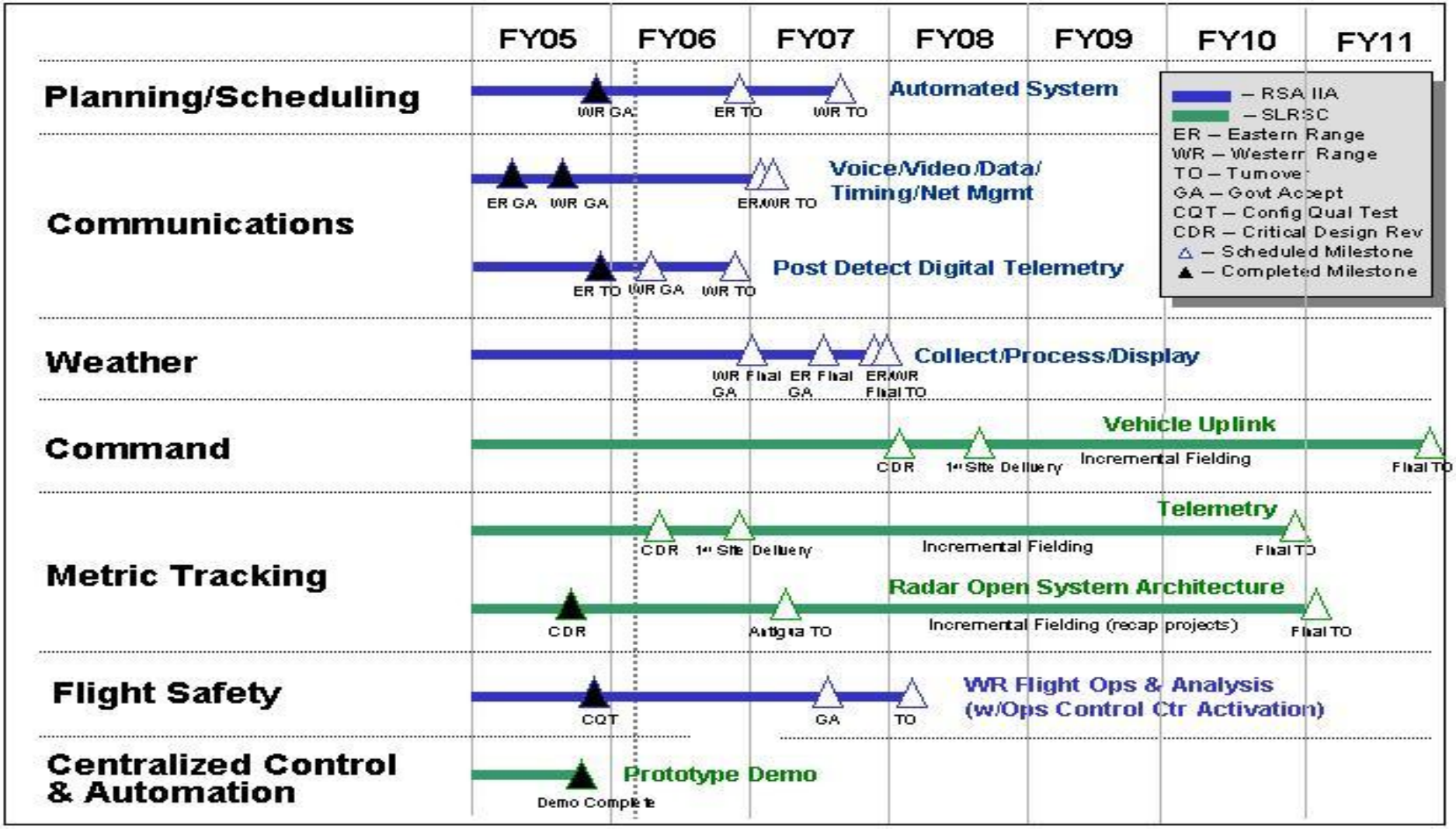

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305182F Spacelift Range System**	PROJECT NUMBER AND TITLE **4137 Launch and Test Range System (LTRS) Modernization**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) RSA Phase IIA			
(U) - Planning & Scheduling WR Govt Acceptance	4Q		
(U) - Planning & Scheduling ER Operational Turnover		4Q	
(U) - Planning & Scheduling WR Operational Turnover			3Q
(U) - Communications ER Final Govt Acceptance	2Q		
(U) - Communications ER Final Operational Turnover			1Q
(U) - Communications WR Final Govt Acceptance	3Q		
(U) - Communications WR Final Operational Turnover			2Q
(U) - Post Detect Digital Telemetry WR Govt Acceptance		2Q	
(U) - Post Detect Digital Telemetry ER Operational Turnover	4Q		
(U) - Post Detect Digital Telemetry WR Operational Turnover		4Q	
(U) - Weather ER Final Govt Acceptance			3Q
(U) - Weather WR Final Govt Acceptance			1Q
(U) - Weather ER Final Turnover			4Q
(U) - Weather WR Final Turnover			4Q
(U) - WR Flight Operations and Analysis Qualification Testing	3Q		
(U) - WR Flight Ops and Analysis Government Acceptance			3Q
(U) - WR Flight Ops and Analysis Operational Integration/Testing			4Q
(U) SLRS Contract			
(U) - Telemetry Instrumentation CDR		2Q	
(U) - Telemetry 1st Site Delivery		4Q	
(U) - Radar 1st Site Operational Turnover			2Q
(U) California Space Authority Projects			
(U) - Reservoir Assessment, Detection, and Response Contract Award	4Q		
(U) - California Space Infrastructure Project Management Contract Award	3Q	3Q	

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PE NUMBER: 0305193F
PE TITLE: INTEL SPT TO INFO OPS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	1.087	3.566	3.813	4.039	4.472	7.428	7.748	Continuing	TBD
4871	Information Operations Technology	1.087	3.566	3.813	4.039	4.472	7.428	7.748	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element supports, but is not limited to, intelligence activities focused on the development, integration and assessment of systems or applications in support of non-traditional and contingency warfare. This program will also develop network-centric collaborative techniques to improve situational awareness and operational-intelligence planning efforts.

Funds the Joint Task Force - Global Network Operations (JTF-GNO) Threat Incident Database (JTID) development. JTID fuses network incident and intelligence data analyzed within the context of operationally relevant information from affected commands (Version 3); develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs limited sets of foreign GNO specific threat information to DoD's command and control infrastructure to include intentions and capabilities (Version 4); and is interoperable with law enforcement and allied communities of interest.

Also initiates the development of the Joint Integrative Analysis and Planning Capability (JIAPC). Derived from USSTRATCOM sponsored prototypes/demonstrations, JIAPC shall provide focused, timely analysis, Information Operations (IO) planning and targeting in support of Combatant Commanders. It will bridge the planner and focused intelligence missions to speed the warfighter decision-making process. As the JIAPC "lead component" for acquisition, the USAF is currently assisting USSTRATCOM with requirements definition, developing an acquisition strategy as well as a recommending an appropriate Milestone Decision Authority in FY06 to lead this effort to a Milestone B decision.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	1.087	3.597	3.698
(U)	Current PBR/President's Budget	1.087	3.566	3.813
(U)	Total Adjustments	0.000	-0.031	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.031	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Significant increase in total Program Element Costs beginning in FY06 due to JIAPC program initiation.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4871	Information Operations Technology	1.087	3.566	3.813	4.039	4.472	7.428	7.748	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program element supports, but is not limited to, intelligence activities focused on the development, integration and assessment of systems or applications in support of non-traditional and contingency warfare. This program will also develop network-centric collaborative techniques to improve situational awareness and operational-intelligence planning efforts.

Funds the Joint Task Force - Global Network Operations (JTF-GNO) Threat Incident Database (JTID) development. JTID fuses network incident and intelligence data analyzed within the context of operationally relevant information from affected commands (Version 3); develops appropriate response options and detailed courses-of-action in defense of protected networks; catalogs limited sets of foreign GNO specific threat information to DoD's command and control infrastructure to include intentions and capabilities (Version 4); and is interoperable with law enforcement and allied communities of interest.

Also initiates the development of the Joint Integrative Analysis and Planning Capability (JIAPC). Derived from USSTRATCOM sponsored prototypes/demonstrations, JIAPC shall provide focused, timely analysis, Information Operations (IO) planning and targeting in support of Combatant Commanders. It will bridge the planner and focused intelligence missions to speed the warfighter decision-making process. As the JIAPC "lead component" for acquisition, the USAF is currently assisting USSTRATCOM with requirements definition, developing an acquisition strategy as well as a recommending an appropriate Milestone Decision Authority in FY06 to lead this effort to a Milestone B decision.

This program is funded under BA-7, Operational Systems Development, because it supports intelligence efforts that involve engineering development.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue database modifications of limited sets of foreign CNO specific threat information to DoD's command and control infrastructure, to include intentions and capabilities (Version 3); Continue development and production of intelligence reports on computer network attacks against US systems (Version 4); Continue to develop better incident assessments and analysis modules. Researches improved means of supplying appropriate response options and detailed courses-of-action in defense of protected networks.	1.087	1.042	1.142
(U)	Initiation of the JIAPC program beginnning in FY-06		2.524	2.671
(U)	Total Cost	1.087	3.566	3.813

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	IOPC-J PE 28021	0.000	7.831	8.216	8.409	8.516	8.949	9.114	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305193F INTEL SPT TO INFO OPS**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

(U) D. Acquisition Strategy

The JTID program is executing an incremental improvement of JTID capabilities. Systems engineering, development and initial testing will be accomplished under a full and open competition, Time & Materials (T&M) contract.

The JIAPC program will execute a Gov't sponsored Feasibility Study task to help define and finalize program requirements. Upon finalization of requirements definition phase, all contracts for systems engineering and development will be awarded under a full and open competition, Cost Plus Award Fee contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305193F INTEL SPT TO INFO OPS**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JTID CNO Analyses	T&M	Northrop Grumman IT-TASC, Lorton VA		1.087	Jan-05	1.042	Dec-05	1.142	Dec-06	Continuing	TBD	TBD
JIAPC Initiation/Development	TBD	TBD		0.000		2.524		2.671			5.195	
Subtotal Product Development			0.000	1.087		3.566		3.813		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	TBD
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	TBD
Remarks:												
(U) Management												
											0.000	TBD
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	TBD
Remarks:												
(U) Total Cost			0.000	1.087		3.566		3.813		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE 4871 Information Operations Technology

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JTID Program Schedule

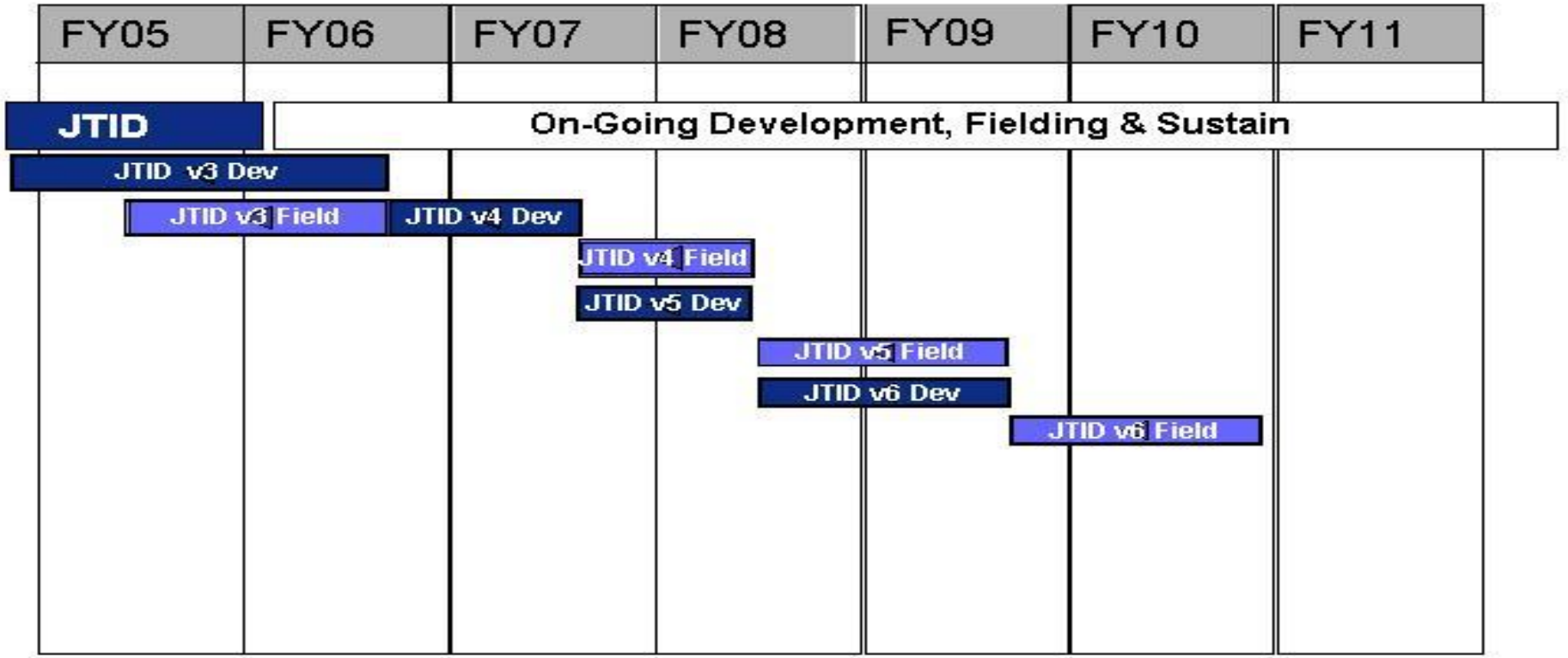

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305193F INTEL SPT TO INFO OPS	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Ongoing development of JTID functions	1-4Q	1-4Q	1-4Q
(U) Development of V.3	1-4Q	1-3Q	
(U) Fielding of V.3	2-4Q	1-3Q	
(U) Development of V.4		4Q	1-3Q
(U) Fielding of V.4			4Q

PE NUMBER: 0305202F
PE TITLE: Dragon U-2 (JMIP)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	83.862	10.013	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4820	Sensor Development	77.703	9.486	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4945	High Altitude Subsystems	6.159	0.527	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development for the U-2 Intelligence Surveillance Reconnaissance (ISR) system. The RDT&E portion of this program element funds efforts to develop enhancements and sustain the U-2 Dragon Lady ISR system. In addition to the RDT&E funding, there are procurement funds associated with these developments.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	86.972	10.158	0.000
(U)	Current PBR/President's Budget	83.862	10.013	0.000
(U)	Total Adjustments	-3.110	-0.145	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.773	-0.145	
	Congressional Increases			
	Reprogrammings	-2.337		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY06, all the U-2 Airborne Signals Intelligence Program (ASIP) development funding was transferred from the Dragon U-2 (JMIP) PE 0305202F, Project 674820 to the new Airborne SIGINT Enterprise PE 0304260F, and be distributed between Project 675181 (U-2 Integration) and Project 675183 (SIGINT Common Development).

In FY07, Air Force Transformation Flight Plan identified the U-2 Weapons System for early retirement, divesting the fleet by FY12. A plan, schedule, and budget are being developed to synchronize the U-2 retirement schedule to the Global Hawk (GH) development and fielding schedule in order to provide uninterrupted, high-altitude, ISR capabilities during the U-2 to Global Hawk transistion. The DoD is committed to keeping he U-2 Fleet capable until it is removed from service. Accordingly, additional modifications will be required before FY12. These additional modifications will be considered during future budget year submissions. All future non-safety related modifications that are not expected to see at least five years of in-service use will be the subject of the "Sunset Law" waiver process.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

PROJECT NUMBER AND TITLE: 4820 Sensor Development

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4820 Sensor Development	77.703	9.486	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This development project supports improvements to the U-2 sensors such as the Advanced Synthetic Aperture Radar System (ASARS-2A), advanced radar technology research such as foliage penetration, concealed target, and counter deception, SIGINT programs, and works in close cooperation with the ASIP program (PE 0304260F).

The ASARS-2A Program improves area search, precision geolocation, and image quality to support precision guided munitions targeting. The system produces complex imagery, enabling enhanced exploitation methods. ASARS-2A introduces Asynchronous Transfer Mode (ATM) datalink formats to the ISR community and supports National Imagery Transmission Format (NITF) standards. Requirements include ASARS-2A reliability improvements and exploitation tools for the user (for example, system robustness, Dual Data Link (DDL), Beyond Line of Sight (BLOS) communications, image quality, Ground Moving Target Indication (GMTI), geolocation and targeting, sensor position data, Receiver Exciter Controller (REC) upgrades and software upgrades). The ongoing ASARS-2A Image Quality Improvement Program (IQIP) addresses system robustness and image quality performance identified during initial system fielding.

The Senior Year Electro-Optical Reconnaissance System (SYERS-2/2A) Program includes upgrades such as multi-spectral collection and processing, polarization collection and processing , possible hyperspectral collection and processing, and the associated exploitation tools for the user. SYERS-2 also includes reliability and maintainability upgrades that incorporate next generation technology to maintain and enhance system supportability. SYERS Polarimetric Improvement (SYERS P4I) investigates the potential for using polarimetric collection data to find man-made objects on the battlefield. A depot for the repair and refurbishing of SYERS sensors will be established and a second source vendor qualified for the focal planes.

The SIGINT Program develops new sensors such as the Airborne Signals Intelligence Program (ASIP), and maintains present capability by developing replacements for current components affected by diminishing manufacturing sources as well as enhancing capability to exploit evolving signals of interest including Quick Reaction Capabilities (QRCs) to meet emerging operational requirements. The program has also examined and may modify current systems to allow them to function on Power/Electromagnetic Interference upgraded U-2s.

Plans for the testing and fielding of ASIP sensors on U-2 and Global Hawk are addressed in the Airborne SIGINT Enterprise exhibit (PE 0304260F).

All U-2 sensors and datalinks are being converted to the Asynchronous Transfer Mode (ATM) standard to address vanishing vendor issues and to optimize signals intelligence bandwidth allocation. Inherent in this transition is the incorporation of suitable security/encryption capabilities.

Budget Activity Justification - This program element is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development for the U-2 intelligence surveillance and reconnaissance (ISR) system.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE: 4820 Sensor Development

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

		FY 2005	FY 2006	FY 2007
(U)	Advanced Synthetic Aperture Radar System (ASARS-2A) Image Quality Improvement Program (IQIP)	15.240	3.184	
(U)	Senior Year Electro-Optical Reconnaissance System (SYERS-2/2A)		5.793	
(U)	Signals Intelligence (SIGINT) Sensor Development/Integration (Airborne Signals Intelligence Payload (ASIP)	62.463		
(U)	ASIP U-2 Integration		0.509	
(U)	Other Program Management/Systems Engineering			
(U)	Total Cost	77.703	9.486	0.000

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	RDT&E, PE 0305220F- Global Hawk ASIP Development	62.074							0.000	116.367
(U)	* APAF, 0305220F- Global Hawk ASIP Production (BP10)				15.000	53.300	55.800	45.600	0.000	169.700
(U)	* APAF, 0305220F- Global Hawk ASIP Production (BP 11)					52.900	50.300	33.300	112.600	249.100
(U)	RDT&E, PE 0304260F, BP 675181- Airborne SIGINT Development- U-2		1.972	5.260	5.385	5.509	5.629	5.719	Continuing	TBD

* FY09 APAF funding for Global Hawk ASIP was combined in the FY05 RDOC submission - BP10 and BP11 are now broken out.

(U) D. Acquisition Strategy

All contracts awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305202F Dragon U-2 (JMIP)**

PROJECT NUMBER AND TITLE: **4820 Sensor Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ASARS-2A Way Ahead Phase 2 Development	SS/CPIF	Raytheon, El Segundo	6.000	14.121	Jan-05	0.573	Mar-06			Continuing	TBD	TBD
Collaborative SIGINT Sensor- ASIP	SS/CPAF	Northrop Grumman Los Angeles	38.982	58.117	Aug-05					Continuing	TBD	TBD
SYERS-2	TBD	BF Goodrich, Boston				5.793	Apr-06			Continuing	TBD	
U-2 ASIP Integration	SS/CPIF	LM Aero, Palmdale, CA	1.486	4.149	Mar-05					Continuing	TBD	TBD
U-2 ASIP Integration	SS/CPIF	L3-Comm Garland, TX	0.145	0.197	Jan-05					Continuing	TBD	TBD
Subtotal Product Development			46.613	76.584		6.366		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Flight Test	SS/CP	LM Aero, Palmdale, CA	1.573	0.569	Jul-05	1.200	Jun-06			Continuing	TBD	TBD
Subtotal Test & Evaluation			1.573	0.569		1.200		0.000		Continuing	TBD	TBD
Remarks:												
(U) Management												
RSW/U2SF	C/FFP	Various	0.485	0.550	Mar-05	1.920	Dec-05			Continuing	TBD	TBD
Subtotal Management			0.485	0.550		1.920		0.000		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			48.671	77.703		9.486		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE 4820 Sensor Development

U.S. AIR FORCE

U-2

SYERS

ASARS-2A IQIP

ASIP Development

FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12

Development

Production

Fielding

Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305202F Dragon U-2 (JMIP)**	**4820 Sensor Development**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) ASARS-2A- Continue Image Quality Improvement Activities	1Q	1Q	
(U) ASARS-2A S/W Interim Delivery	4Q		
(U) ASARS-2A H/W First Article	3Q		
(U) ASARS-2A H/W Last Article		4Q	
(U) ASARS-2A S/W Final Delivery		4Q	
(U) ASIP Development	1-4Q		
(U) ASIP Development - CDR	2Q		
(U) ASIP Development - FAT		4Q	
(U) ASIP Development - Capability Demonstration			3Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)

PROJECT NUMBER AND TITLE: 4945 High Altitude Subsystems

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4945 High Altitude Subsystems	6.159	0.527	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project supports development and integration of subsystems on the U-2 (e.g., cockpit upgrades that include a glass cockpit with Electro-Optical View Sight (EOVS), Direct Threat Warning, navigator upgrades, datalinks) and compliance with Communications, Navigation, Surveillance/Air Traffic Management CNS/ATM requirements.

EOVS replaces the legacy optical drift sight that was removed in the U-2 Block 20 upgrade. The controls for the EOVS camera are in the legacy hand controllor, and the image will be displayed in the cockpit on one Multi-function Display (MFD), when selected.

The Dual Data Link (DDL-II) Program provides the capability to encrypt and transmit Intelligence Surveillance Reconnaissance (ISR) data via dual, simultaneous, independent wideband datalinks.

Budget Activity Justification - This program is categorized as Budget Activity 7 because it provides for development of technologies and capabilities in support of operational system development for the U-2 aircraft.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Electro-Optical View Sight (EOVS) development	4.228		
(U) Dual Data Link 2 (DDL2) development	1.353		
(U) RSW/U2SF DSM	0.578	0.527	
(U) Total Cost	6.159	0.527	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) APAF - 0305202F - Data Links	19.068	17.506							
(U) APAF - 0305202F - EOVS		5.470							5.470
(U) APAF - 0305202F -ADS	8.300	3.300							11.600

(U) D. Acquisition Strategy

Utilize mix of sole source and open competition as appropriate for the U-2 program to sustain and update platform sub-systems as required in order to maintain operational effectiveness.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305202F Dragon U-2 (JMIP)**

PROJECT NUMBER AND TITLE: **4945 High Altitude Subsystems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Electro-optical View Sight (EOVS)	SS/FFP	LM Aero, Palmdale, CA	2.300	4.188	Jan-05					0.000	6.488	TBD
DDL2 EMD	SS/CPIF	L3 Comm, Salt Lake City	22.559	0.498	Nov-04					0.000	23.057	TBD
DDL2 EMD	SS/CPIF	LM Aero, Palmdale, CA	5.401								5.401	
DDL2 WMA Dev	SS/FFP	L3 Comm, Salt Lake City		0.855	Jan-06					0.000	0.855	TBD
Subtotal Product Development			30.260	5.541		0.000		0.000		0.000	35.801	TBD
Remarks:												
(U) Test & Evaluation												
Flight Test			1.035								1.035	TBD
Subtotal Test & Evaluation			1.035	0.000		0.000		0.000		0.000	1.035	TBD
Remarks:												
(U) Management												
RSW/U2SF DSM	C/FFP	Various	2.439	0.618	Dec-04	0.527	Apr-06				3.584	TBD
Subtotal Management			2.439	0.618		0.527		0.000		0.000	3.584	TBD
Remarks:												
(U) Total Cost			33.734	6.159		0.527		0.000		0.000	40.420	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE: 4945 High Altitude Subsystems

U.S. AIR FORCE

U-2

EOVS

DDL

FY05 FY06 FY07 FY08 FY09 FY10 FY11 FY12

Development

Production

Fielding

Integrity - Service - Excellence

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305202F Dragon U-2 (JMIP)	PROJECT NUMBER AND TITLE: 4945 High Altitude Subsystems

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) DDL2 First Article Delivery	4Q		
(U) DDL2 Full Rate Production Contract Award	3Q		
(U) DDL2 EMD Contract Completion		1Q	
(U) EOVS EMD Contract Completion		3Q	

PE NUMBER: 0305206F
PE TITLE: Airborne Reconnaissance Systems

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	60.633	55.737	52.824	54.885	56.860	58.378	59.262	Continuing	TBD
4818	Imaging and Targeting Support	12.201	17.652	15.653	16.769	17.208	17.930	18.216	Continuing	TBD
4819	Common Data Link (CDL)	36.295	35.383	35.674	36.378	38.003	38.862	39.513	Continuing	TBD
4882	Compass Bright	2.105	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5038	Network Centric Collaborative Targeting	8.101	0.952	0.000	0.000	0.000	0.000	0.000	0.000	TBD
5092	JTC/SIL MUSE	1.931	1.750	1.497	1.738	1.649	1.586	1.533	Continuing	TBD

- FY 2006, Congressional GWOT add $3.0M, Project Number, 674818, to integrate Common Image Processor (CIP) in Theater Airborne Reconnaissance System (TARS)
- FY 2006, Congressional add $1.8M, Project Number, 674819, to conduct Airborne Optical Comm Flight Demonstration
- FY 2006, Project Number 675038, Network Centric Collaborative Targeting (NCCT) ACTD completes
- FY 2006-2011, Project Number 674882, Compass Bright, efforts were transferred from PE 0305206F, Airborne Reconnaissance Systems, to PE 0305260F, Airborne SIGINT Enterprise, Project, 675185; this consolidated AF SIGINT development efforts.

(U) A. Mission Description and Budget Item Justification

The Airborne Reconnaissance Systems program coordinates the development of advanced airborne reconnaissance system technologies (i.e., sensors, data links, targeting networks and products, and quick reaction capabilities) in support of multiple airborne reconnaissance platforms, both manned and unmanned. Its objective is to develop, demonstrate, and rapidly transition advanced, interoperable, multi-platform solutions to reduce the find, fix, target, and track kill chain timeline. This program also coordinates the development of common collection, processing, and dissemination solutions for near-real time intelligence, surveillance, and reconnaissance (ISR).

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	60.921	51.769	52.659
(U)	Current PBR/President's Budget	60.633	55.737	52.824
(U)	Total Adjustments	-0.288	3.968	
(U)	Congressional Program Reductions		-0.025	
	Congressional Rescissions		-0.807	
	Congressional Increases		4.800	
	Reprogrammings	-0.288		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY06, $5.254M was moved from Project 674882 (Compass Bright) to the PE 0304260F, Airborne SIGINT Enterprise.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems

In FY07, $5.608M was moved from Project 674882 (Compass Bright) to the PE 0304260F, Airborne SIGINT Enterprise.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4818 Imaging and Targeting Support	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4818 Imaging and Targeting Support	12.201	17.652	15.653	16.769	17.208	17.930	18.216	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY2006, Congressional GWOT add $3.0M, to integrate and test Common Image Processor (CIP) in Theater Airborne Reconnaissance System (TARS).

(U) A. Mission Description and Budget Item Justification

The purpose of the Imaging and Targeting Support (I&TS) program is to develop next-generation, common imagery reconnaissance sensors (e.g., radar and electro-optical systems) for multiple airborne platforms, and sensor products to aid in rapid targeting (e.g., geolocation models, sensor-based exploitation tools, sensor networking capabilities). Developmental efforts pursued are improved sensors (such as hyperspectral information [HSI], measurement and signature intelligence [MASINT], polarimetric imaging, ground moving target indication, foliage penetration, and other radar and electro-optical modes), increased geolocation accuracy, advanced sensor data correlation, automated target detection, network centric warfare, and other Intelligence, Surveillance, and Reconnaissance (ISR) technologies to reduce both target search and kill chain timelines; as well as, supporting traditional intelligence activities. I&TS will increase interoperability among developed systems by developing common standards and tools. I&TS focuses on the following thrust areas:

Development and integration of common radar and electro-optical sensors (e.g., Synthetic Aperture Radar [SAR], Low Frequency SAR, Electro-Optical [EO], Infrared [IR], Hyperspectral [HSI], Laser Radar [LADAR]) and their operational modes (e.g., High Resolution Imagery, Moving Target Indication, Spectral Identification) for multiple airborne platforms.

Development of advanced airborne tactical sensor processing algorithms and tools (e.g. automatic registration, automatic target detection/recognition, network centric warfare). Development of an integrated multi-sensor capability to detect and identify obscured targets (OT). Development of open architecture between tactical sensor models and target exploitation tools. Development of tactical sensor models for airborne reconnaissance platforms. Development and implementation of imagery standards (e.g. Common Ground Moving Target Indicator (GMTI), National Imagery Transmission Format (NITF) for HSI. 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.

Enhancement of Imagery Intelligence (IMINT) product quality. Monitoring and enhancement of IMINT product quality (e.g., radar and EO/IR imagery, GMTI data, and spectral information) and timeliness throughout the image chain (i.e. from sensor to user). Development and enhancement of compression techniques and algorithms for all instances of SAR and EO/IR data.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Theater Airborne Reconnaissance System (TARS)	0.430	3.500	1.000
(U) Continue development and delivery of sensor models for tactical airborne reconnaissance platforms.	2.660	4.000	3.100
(U) Continue efforts to transition HSI technology, such as the Spectral Infrared Imaging Technology Transition Testbed (SPIRITT) sensor and the Hyperspectral Collection and Analysis System (HYCAS) into airborne reconnaissance platforms.	6.695	5.100	
(U) Develop Obscured Target (OT) sensor capabilities		1.975	7.500

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4818 Imaging and Targeting Support

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue development and integration of compression techniques for Synthetic Aperture Radar (SAR) complex data.	0.145		1.000
(U)	Continue image quality baselining and assessment efforts for airborne reconnaissance platforms.	1.340	2.000	1.937
(U)	Mission Support	0.931	1.077	1.116
(U)	Total Cost	12.201	17.652	15.653

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT & E (PE 63203F, AFRL)	3.316	1.500	0.600	0.000	0.000	0.000	0.000	0.000	8.084

-Air Force Research Lab is contributing to the SPIRITT HSI sensor development.

(U) D. Acquisition Strategy

Acquisition strategy is to maximize commercial and national development efforts and investment through multiple contracting methods; including the use of Engineering Change Proposals (ECP) to modify existing contracts and new contracts that were awarded both competitively or on a sole source basis.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **4818 Imaging and Targeting Support**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
BAE Systems (SPIRITT)	C/CPFF	Greenlawn, NY	13.500	6.146	Nov-04	3.500	Nov-05	0.000		0.000	23.146	34.151
BAE Systems (TARS)	SS/CPFF	Greenlawn, NY	0.000	0.430	May-05	3.500	Feb-06	1.000	Nov-06	0.000	4.930	1.930
General Atomics (HYCAS)	SS/CPFF	Rancho Bernardo, CA	0.000	0.000		0.900	Feb-06	0.000		0.900	1.800	0.900
EOIR Technologies (HYCAS)	SS/CPFF	Fredricksburg, VA	0.000	0.000		0.700	Feb-06	0.000		0.000	0.700	0.700
Northrup Grumman (Complex SAR Compression)	SS/CPFF	Linthicum Heights, MD	1.800	0.145	Dec-04	0.000		1.000	Nov-06	0.000	2.945	2.807
ITT Space Systems (Image Quality)	SS/CPFF	Rochester, NY	2.100	0.740	Nov-04	1.000	Nov-05	1.000	Nov-06	0.000	4.840	4.869
General Dynamics (Image Quality)	SS/CPFF	Ypsilanti, MI	1.850	0.600	Nov-04	1.000	Nov-05	1.000	Nov-06	0.000	4.450	4.941
General Dynamics (API/TRD)	SS/CPFF	Dayton, OH	1.700	0.965	Nov-04	1.000	Nov-05	0.750	Nov-06	0.000	4.415	4.500
Others	Various	Various		2.244	Mar-05	5.000	Mar-06	9.787	Mar-07	Continuing	TBD	10.842
Subtotal Product Development			20.950	11.270		16.600		14.537		Continuing	TBD	65.640
Remarks: Majority of "Others" consitutes contracts to be competed for Tactical Sensor Models												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
										0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
ASC (ITS)	Various	Wright Patterson, AFB		0.931	Oct-04	1.052	Oct-05	1.116	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	0.931		1.052		1.116		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			20.950	12.201		17.652		15.653		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4818 Imaging and Targeting Support

PE 35206F, Airborne Reconnaissance Systems
BPAC 4818, Imaging and Targeting Support

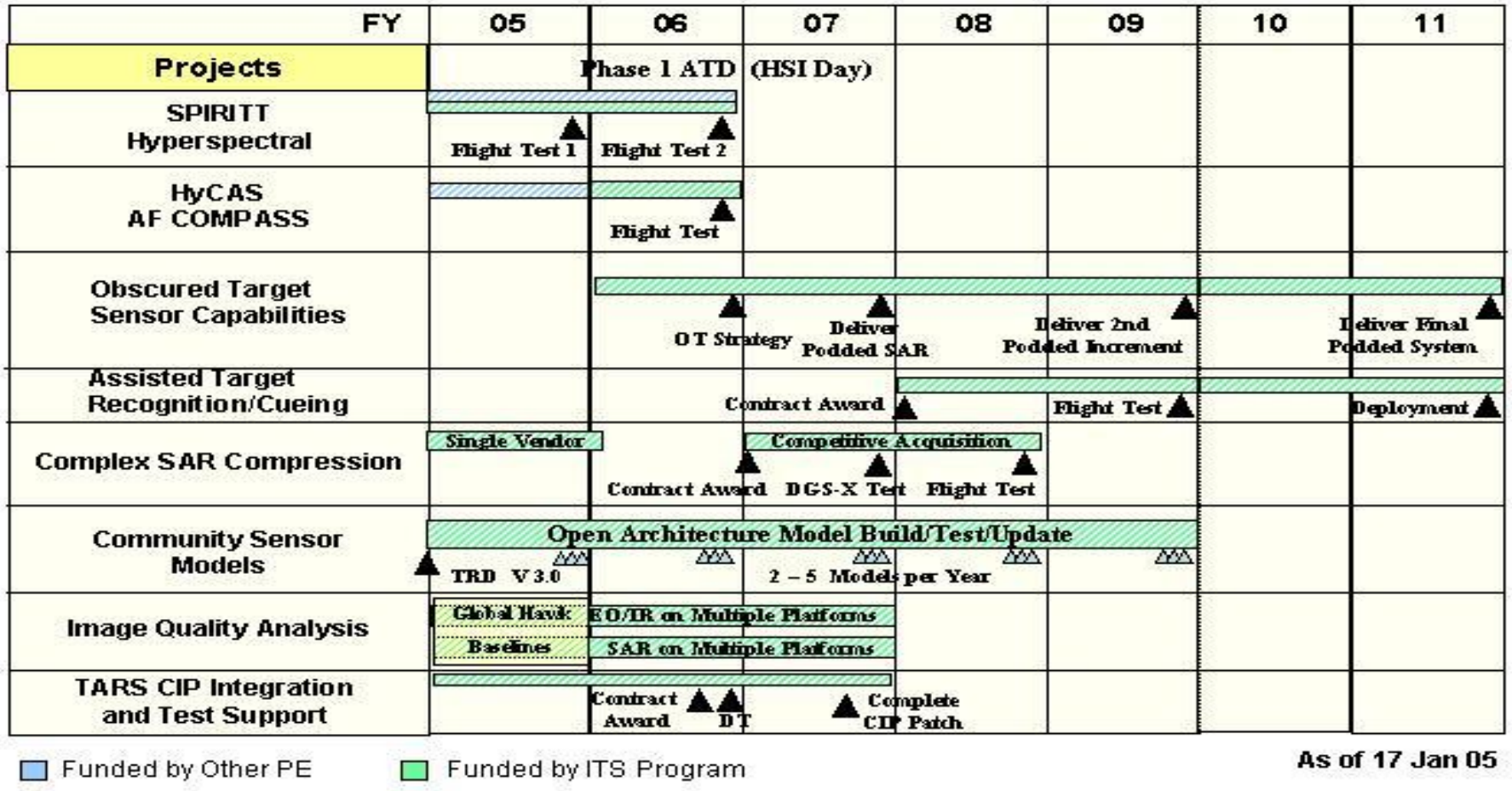

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Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305206F Airborne Reconnaissance Systems	4818 Imaging and Targeting Support

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) ITS: SPIRITT ATD Phase I Flight Test	4Q		
(U) ITS: SPIRITT ATD Phase I Flight Test #2		3Q	
(U) ITS: Community Sensor Model Contract Award	2Q	2-3Q	1Q
(U) ITS: Community Sensor Model Deliveries	1-4Q	4Q	4Q
(U) ITS: Image Quality Baseline Global Hawk Complete	3Q		
(U) ITS: Image Quality Baseline Predator complete		3Q	
(U) ITS: Image Quality Baseline for TARS EO complete			4Q
(U) ITS: Complex SAR Compression Contract Award			1Q
(U) ITS: Complex SAR Compression Algorithm Downselect			4Q
(U) ITS: Obscured Target Sensor Capabilities Study Contract Award		2Q	
(U) ITS:Obscured Target Sensor Capabilities Podded SAR Contract Award		3Q	
(U) ITS:Obscured Target Sensor Capabilities Study Strategy Report		4Q	
(U) ITS: Obscured Target Sensor Capabilities Podded SAR Delivery			4Q
(U) TARS: Contract Award		3Q	
(U) TARS: DT Begins		3Q	
(U) TARS: DT completes			2Q
(U) TARS: CIP patch complete			3Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems

PROJECT NUMBER AND TITLE: 4819 Common Data Link (CDL)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4819 Common Data Link (CDL)	36.295	35.383	35.674	36.378	38.003	38.862	39.513	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

- FY05 $6.1M Congressional Plus-up to support Software Communications Architecture (SCA) compliance.
- FY06 $1.8M Congressional Plus-up to support Ultra-Wideband Airborne Laser Communications Development

(U) A. Mission Description and Budget Item Justification

The objective of the CDL effort within the Air Force is to define an interoperable command, control, and communications capability for intelligence and reconnaissance assets to include both manned and unmanned platforms. As the Executive Agent, the Air Force will oversee joint development of CDL systems and specifications. CDL will achieve interoperable communications by employing a Joint Tactical Radio System (JTRS) Software Communications Architecture (SCA) architecture based on previously and newly developed hardware, software, and waveforms that promote commonality among the services, NATO, and allies. As the CDL executive agent, the Air Force is responsible for managing these multi-service funds, ensuring design configuration commonality and interoperability.

The CDL design will permit existing and future reconnaissance assets to operate worldwide, providing sensor data directly via point-to-point or point-to-multipoint broadcast to ground sites and airborne platforms, or via satellite or air-to-air relay when the asset and ground site are not within line-of-sight. The effort will integrate commercial and other classified satellite communications into the available satellite relay options to ensure sufficient wideband data relay capability. The system will have sufficient bandwidth to accommodate numerous sensors collecting Signals Intelligence (SIGINT), Imagery Intelligence (IMINT) (including video), multi-spectral and other data.

CDL concept development, technology development, system development and demonstration efforts support continuous improvements and implementation of line-of-sight and network Command and Control, Intelligence, Surveillance, and Reconnaissance (C2ISR) capabilities and the migration to software re-programmable cryptographic (COMSEC) equipment to enable a joint global strike task force. Modular design allows for future technology insertion. The commonality of modular components reduces non-recurring engineering and lifecycle costs to the user. Interoperability provides for the exchange of data across service and agency boundaries. (Note: the term A-series refers to full rate/capability CDL systems and T-Series refers to Tactical Common Data Link (TCDL).

This program is categorized as Budget Activity 07 because it provides for development of technologies and capabilities in support of operational system development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continued evolutionary development of TCDL (T-Series) for operational suitability on ISR platforms such as Guardrail Legacy Replacement, P-3, EP-3, Tactical UAV and Predator.	23.570	21.242	16.477
(U) Continued Airborne Information Transmission (ABIT) (A-Series) technology integration into CDL systems for application to ISR platforms such as Theater Airborne Reconnaissance System and completed ABIT system cost reduction initiatives.	0.000	0.023	0.552
(U) Continued configuration control of CDL architecture, standards, specification, and modules; provide for Joint-Service interoperability certification and spectrum management.	2.593	2.079	2.012
(U) Continued current development phase of COMSEC replacement and CDL transition to development of reprogrammable COMSEC.	0.045	0.043	3.157

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4819 Common Data Link (CDL)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continued development of advanced technology insertion activities (to include studies and analysis of future data link requirements and architectures), CDL certification test equipment development, and related Joint Service interoperability certification and spectrum management requirements to include OSD mandates.	3.087	0.972	1.100
(U)	Continued Multi-Platform-Common Data Link (MP-CDL) development of wideband integrated common data link to support Multi-Platform Radar Technology Insertion Program (MP-RTIP) and network centric communications development.	4.183	5.056	8.905
(U)	Continued NCCT ACTD wideband integrated common data link development.	1.000	1.000	0.000
(U)	Continued Ultra-wideband Airborne Laser Communications development. This is an FY06 Congressional Plus-up.	0.000	1.800	0.000
(U)	Provide CDL technical and engineering support.	1.817	3.168	3.471
(U)	Total Cost	36.295	35.383	35.674

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) None									

(U) D. Acquisition Strategy

CDL funds are managed by various government laboratories and program offices to support new and on-going contracted development efforts in support of providing a common, interoperable wideband data link as mandated by ASD(NII) policy. CDL contracts are/were awarded under full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **4819 Common Data Link (CDL)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
L-3 Communications	C & S; CPAF, CPFF, CPIF	Salt Lake City, UT	115.215	24.480	Nov-04	14.175	Feb-06	21.207	Nov-06	Continuing	TBD	TBD
Harris Corp	C & S; CPFF	Melbourne, FL	2.811	0.505	Nov-04	0.000		1.000	Nov-06	Continuing	TBD	TBD
SATCOM Interop/Global Grid/Other Govt Orgs	S; MIPR, CPIF	Multiple	8.092	0.015	Feb-05	0.000		0.100	Jan-07	Continuing	TBD	TBD
L-3 COMCEPT	C; CPFF	Rockwall, TX	19.619	1.000	Jun-05	1.000	Feb-06			0.000	21.619	21.619
ITT	C; IDIQ	Beavercreek, OH	2.700			1.800	Jun-06			0.000	4.500	4.500
Cubic	C, CPFF	San Diego, CA	12.005	1.945	Nov-04	8.022	Feb-06	1.650	Nov-06	Continuing	TBD	TBD
Other	S; MIPR, CPFF	Multiple	2.850	0.250	Nov-04	0.000	Feb-06	1.000	Nov-06	Continuing	TBD	TBD
Subtotal Product Development			163.292	28.195		24.997		24.957		Continuing	TBD	TBD
Remarks:												
(U) Support												
Various	C & S; CPFF, MIPR	Multiple	23.127	5.092	Nov-04	6.075	Dec-05	6.024	Nov-06	Continuing	TBD	TBD
Subtotal Support			23.127	5.092		6.075		6.024		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
JITC	MIPR	Fort Huachuca, AZ	3.523	0.500	Nov-04	0.300	Feb-06	0.309	Nov-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			3.523	0.500		0.300		0.309		Continuing	TBD	TBD
Remarks:												
(U) Management												
Various	MIPR	Multiple	7.231	2.508	Oct-04	4.011	Oct-05	4.384	Oct-06	Continuing	TBD	TBD
Subtotal Management			7.231	2.508		4.011		4.384		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			197.173	36.295		35.383		35.674		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305206F Airborne Reconnaissance Systems	4819 Common Data Link (CDL)

EXHIBIT R-2A (PE 0305206F)

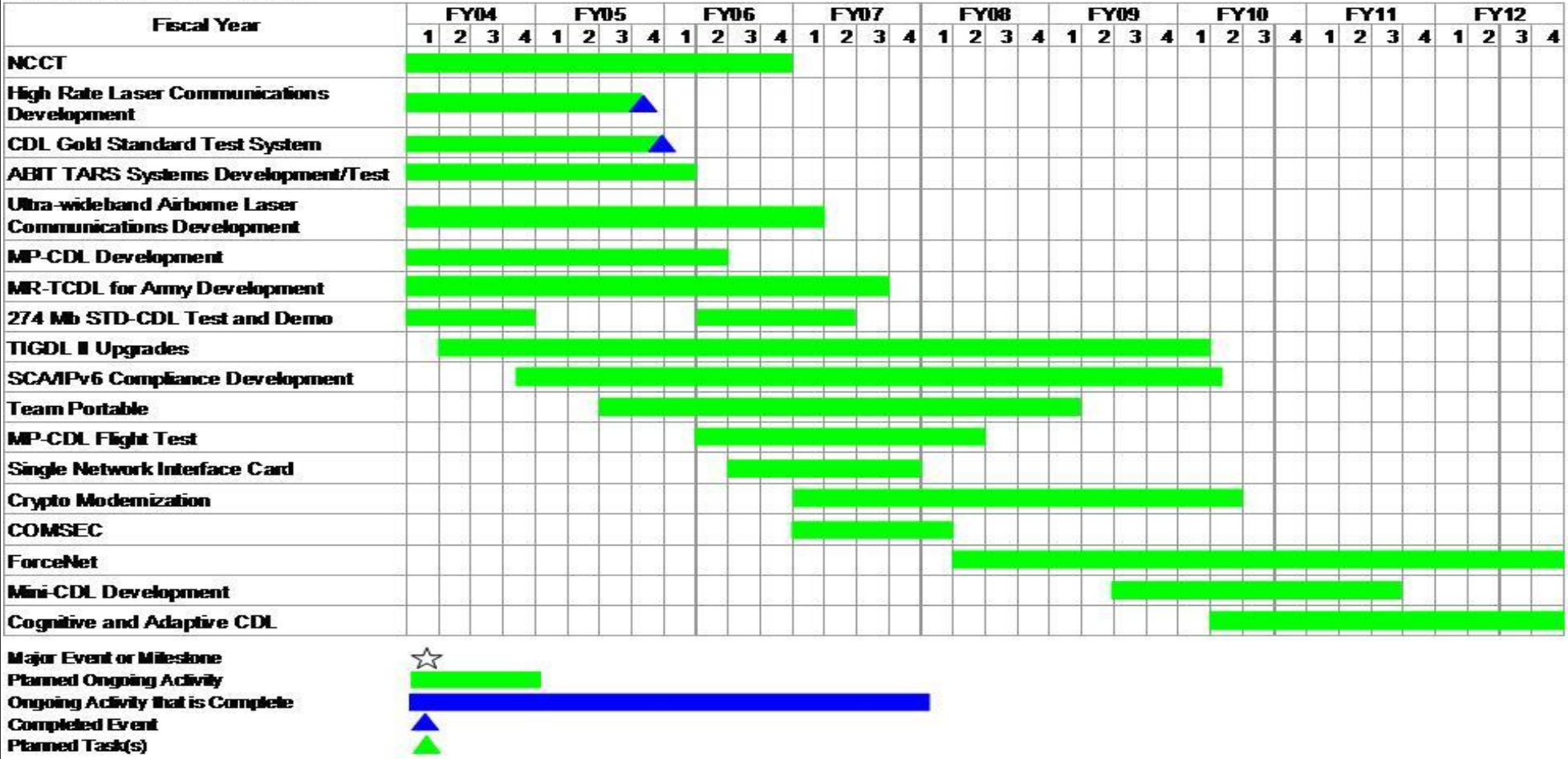


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **4819 Common Data Link (CDL)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) NCCT	1-4Q	1-4Q	
(U) High Data Rate Laser Communications Development	1-4Q		
(U) CDL Gold Standard Test System	1-4Q		
(U) ABIT TARS Systems Development/Test	1-4Q	1Q	
(U) Ultra-wideband Airborne Laser Communications Development	1-4Q	1-4Q	1Q
(U) MP-CDL Development	1-4Q	1-2Q	
(U) MR-TCDL for Army Development	1-4Q	1-4Q	1-3Q
(U) 274 Mbp STD-CDL Test and Demo		2-4Q	1-2Q
(U) TIGDL II Upgrades	1-4Q	1-4Q	1-4Q
(U) SCA/IPv6 Compliance Development	1-4Q	1-4Q	1-4Q
(U) Team Portable	3-4Q	1-4Q	1-4Q
(U) COMSEC			1-4Q
(U) MP-CDL Flight Test		2-4Q	1-4Q
(U) Single Network Interface Card		3-4Q	1-4Q
(U) Crypto Modernizaton			1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems

PROJECT NUMBER AND TITLE: 4882 Compass Bright

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4882 Compass Bright	2.105	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) Beginning in FY06, all funding for Compass Bright is transferred from PE 0305206F, Project 674882, to the new PE 0304260F Airborne SIGINT Enterprise

(U) A. Mission Description and Budget Item Justification

The Compass Bright program develops, demonstrates, and rapidly transitions advanced Air Force-specific signal intelligence (SIGINT) and radio frequency (RF) measurement and signature intelligence (MASINT) capabilities against emerging and future target signals. It is the only USAF program that pursues basic SIGINT research.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue Compass Bright development projects in the signal intelligence (SIGINT) and radio frequency (RF) and measurement and signature intelligence (MASINT) areas	1.822		
(U) Mission Support, Program Management Activities	0.283		
(U)			
(U) Total Cost	2.105	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0304260F, Project 5185 - Compass Bright Airborne SIGINT Development		0.392	8.157	8.366	8.596	8.829	9.011	Continuing	TBD

(U) Beginning in FY06, all funding for Compass Bright is transferred from PE 0305206F, Project 674882, to the new PE 0304260F Airborne SIGINT Enterprise

(U) D. Acquisition Strategy

On-going Compass Bright technology development and demonstration contracts will continue through existing laboratory relationships and other existing contractual vehicles with future development projects emphasizing full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

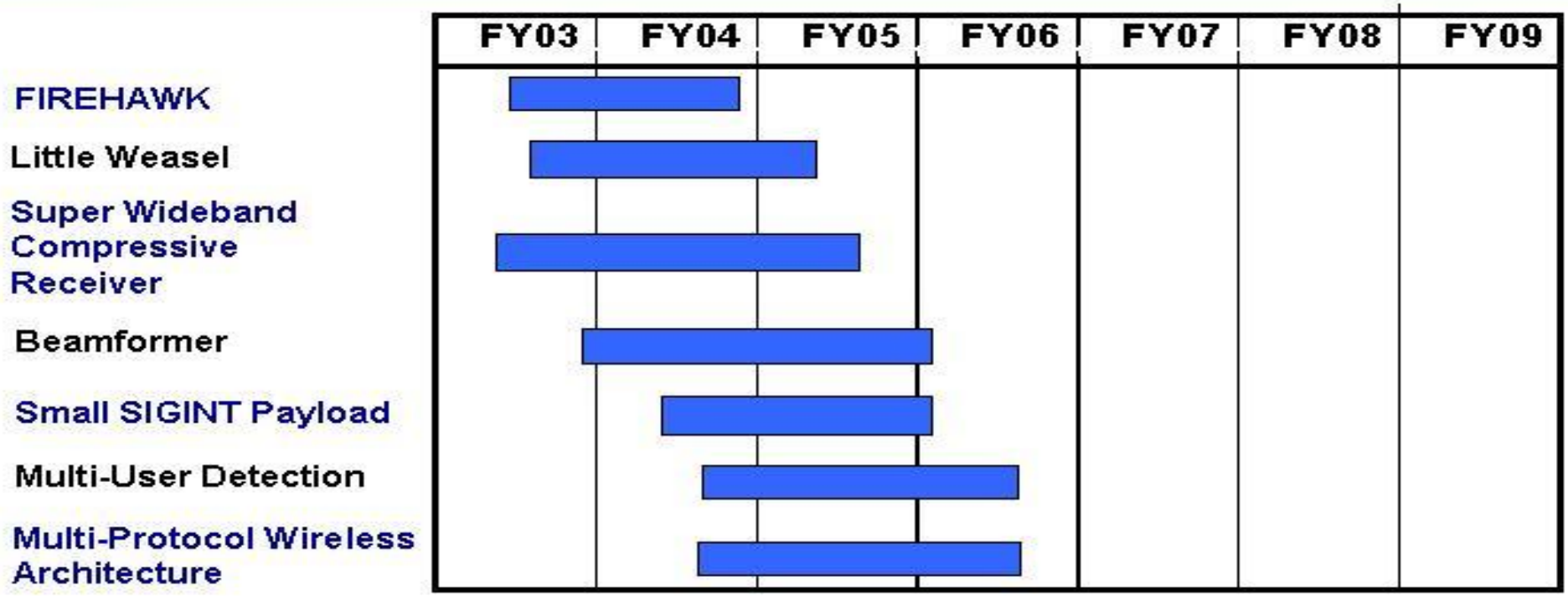
PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **4882 Compass Bright**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	TBD	AFRL		1.822							1.822	
Subtotal Product Development			0.000	1.822		0.000		0.000		0.000	1.822	0.000
Remarks:												
(U) Management												
ASC/RAJ				0.283							0.283	
Subtotal Management			0.000	0.283		0.000		0.000		0.000	0.283	0.000
Remarks:												
(U) Total Cost			0.000	2.105		0.000		0.000		0.000	2.105	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 4882 Compass Bright

COMPASS BRIGHT Project Schedules



Note1: COMPASS BRIGHT Projects are 1-2 years in duration, thus no outyear projects are shown

1

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 4882 Compass Bright

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) FY06 Proposal Call	3Q		
(U) SUAVE-A Demo	4Q		
(U) Superwide Band Compressive Receiver Flt Test	3Q		
(U) Beamformer Flt Test	3Q		
(U) Multi-User Detection Demo		2Q	
(U) Multi-Protocol Wireless Architecture Demo		2Q	

No new projects will be started in FY05 due to funding cut

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 5038 Network Centric Collaborative Targeting	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5038	Network Centric Collaborative Targeting	8.101	0.952	0.000	0.000	0.000	0.000	0.000	0.000	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project completes the Network Centric Collaborative Targeting (NCCT) Advanced Concept Technology Demonstration (ACTD). NCCT transitions from ACTD to formal Air Force program status in FY06. NCCT development and fielding efforts fall under PE 35221F.

NCCT uses machine-to-machine interfaces and Internet Protocol connectivity to horizontally integrate Battle Management/Command and Control (BM/C2)/Intelligence, Surveillance, and Reconnaissance (ISR) platforms and provide timely detection, identification, and geo-location of high priority targets to combatant commanders and their forces. NCCT will develop and deploy the capability to share data, coordinate sensor activity, and provide rapidly correlated results between dissimilar collection platforms and decision-making nodes. NCCT will develop and refresh core technology required for network-centric interactions, develop platform interfaces system program offices, and field NCCT functionality.

NCCT Core Technology develops machine-to-machine technology to horizontally integrate dissimilar BM C2/ISR assets to include, but not limited to, Rivet Joint, Joint Surveillance Target Attack Radar System (Joint STARS), Airborne Warning and Control System (AWACS), Deployable Common Ground Station (DCGS)/U2, Falconer Air and Space Operations Center (AOC), national systems and Army Guardrail. NCCT Core Technology includes, but is not limited to, network messages and formats, correlation software and data rules of interaction, and data guards. Core technology also supports the Systems Integration Lab used to develop and test NCCT network centric performance.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)			
(U) Complete development of NCCT core technology such as NCCT Network Controller, NCCT Communications Equipment, and NCCT Operations Interface for the ACTD.	4.551	0.952	
(U) Platform Integration	2.600	0.000	
(U) Indirect Engineering Support	0.250	0.000	
(U) Test and Evaluation	0.200	0.000	
(U) Management	0.500	0.000	
(U) Total Cost	8.101	0.952	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5038 Network Centric Collaborative Targeting**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	RC-135 PE 0305207F	1.000	0.100						0.000	2.100
(U)	CDL PE 0305206F (Project 4819)	1.000	1.000						0.000	2.000
(U)	OSD PE 0603750D	1.000	1.000						0.000	2.000
(U)	Army Guardrail PE 0203744A	1.000	1.000						0.000	2.000
(U)	Other APPN									

The ACTD includes participating platforms as shown above. United Kingdom Nimrod is also participating in the ACTD with their own funds.

(U) D. Acquisition Strategy

ASC/BSSG, Big Safari Systems Group at Wright Patterson AFB, manages the Cost Plus Fixed Fee contract used to develop NCCT core technology and oversee system demonstration while individual platform program offices (Rivet Joint, Joint STARS, AWACS, Air Force DCGS, Airborne Overhead Introperability Office, Senior Scout, UK Nimrod and Army Guardrail) manage and contract directly for Platform Interface Module development and integration on their platforms.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **5038 Network Centric Collaborative Targeting**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
L-3 ComCept, Inc.	CPFF	Prime Contractor/Rockwall, TX		4.551	Oct-04	0.952	Nov-05			0.000	5.503	TBD
Platform Specific Contractors	Various	Platform Integration/ Various		2.600	Oct-04	0.000				0.000	2.600	TBD
Subtotal Product Development			0.000	7.151		0.952		0.000		0.000	8.103	TBD
Remarks:												
(U) Support												
Various Contractors	Various	Indirect engineering support to ACTD/Various locations		0.250	Mar-05	0.000				0.000	0.250	TBD
Subtotal Support			0.000	0.250		0.000		0.000		0.000	0.250	TBD
Remarks:												
(U) Test & Evaluation												
Various	Various	Military Utility Assessment/Various locations		0.200	Nov-04	0.000				0.000	0.200	TBD
Subtotal Test & Evaluation			0.000	0.200		0.000		0.000		0.000	0.200	TBD
Remarks:												
(U) Management												
ASC/BSSG		System Program Office/Dayton, OH		0.500	Jan-05	0.000				0.000	0.500	TBD
Subtotal Management			0.000	0.500		0.000		0.000		0.000	0.500	TBD
Remarks:												
(U) Total Cost			0.000	8.101		0.952		0.000		0.000	9.053	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305206F Airborne Reconnaissance Systems**	**5038 Network Centric Collaborative Targeting**

	Task Name	2006				2007				2008			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1	Core Technology Development and Refinement												
										as of 19 Jan 2006			

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5038 Network Centric Collaborative Targeting**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Core Technology Development	1-4Q	1-4Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 5092 JTC/SIL MUSE	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5092 JTC/SIL MUSE	1.931	1.750	1.497	1.738	1.649	1.586	1.533	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Joint Technology Center/Systems Integration Laboratory (JTC/SIL) is a center of technical excellence to support all Unmanned Air Vehicles (UAV) programs within the services. The mission includes Service-specific and Joint UAV and Intelligence Surveillance Reconnaissance (ISR) programs throughout DoD. The JTC/SIL provides a Government test bed for rapid prototyping, technology insertion and transition, systems engineering, modeling/simulation, training and Command Control Communications Computers and Intelligence (C4I) optimization. The cornerstone of its diverse tool set is the Multiple Unified Simulation Environment (MUSE), which is the Department's simulation/training system of choice for ISR systems, sensors, and platforms. The MUSE is also known as the Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) in its Air Force application.

The Services and Warfighting Commanders have a requirement for the capability to train with a system that provides a real-time simulation environment containing multiple intelligence systems that can be integrated with larger force-on-force simulations. The MUSE creates a realistic operational environment which supports the ability to assess military utility, architecture and Concept of Operations (CONOPS) development, Tactics, Techniques, and Procedures (TTP) development and refinement, the conduct of emerging concepts experimentation and C4I optimization within warfighting exercises and experiments. The MUSE/AFSERS is the only capability within the Department that allows all Services to train with UAV and ISR assets in a Joint training environment. The MUSE also creates a realistic operational environment that supports an embedded training capability for multiple Program Managers. These tools help to minimize acquisition and life cycle cost and schedule impacts.

The MUSE is currently in use within all services and unified commands simulating PREDATOR, GLOBAL HAWK, HUNTER, Shadow 200 and PIONEER UAVs, national and commercial satellite collectors, P-3 and the U-2. During warfighting exercises, the JTC/SIL integrates realistic high-fidelity imagery simulations, emulating the C4I construct. For those assets normally not available for training, the JTC/SIL provides surrogate systems and interfaces. Distributed training environments, virtually linking participants from various locations worldwide, are routinely supported within the MUSE architecture. The MUSE/AFSERS is also used as a Mission Rehearsal Tool for current on-going combat operations.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Laboratory sustainment	0.367	0.367	0.367
(U) Air Force Synthetic Environment for Reconnaissance and Surveillance (AFSERS) development	1.064	0.883	0.630
(U) Maintenance, Licenses and equipment purchases	0.500	0.500	0.500
(U) Total Cost	1.931	1.750	1.497

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE 5092 JTC/SIL MUSE

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other									

The program receives approximately $2.3 per year from the Army (PE 0305204A) and $1.7M per year from the Navy (PE P0305204N) thru FY2009.

(U) D. Acquisition Strategy

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

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305206F Airborne Reconnaissance Systems**

PROJECT NUMBER AND TITLE: **5092 JTC/SIL MUSE**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
JTC/SIL	MIPR	Redstone Arsenal, Huntsville, AL		1.931	Nov-05	1.750	Nov-06	1.497	Nov-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	1.931		1.750		1.497		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	1.931		1.750		1.497		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305206F Airborne Reconnaissance Systems	PROJECT NUMBER AND TITLE: 5092 JTC/SIL MUSE

PE 35206F, Airborne Reconnaissance Systems
BPAC 5092, JTC/SIL

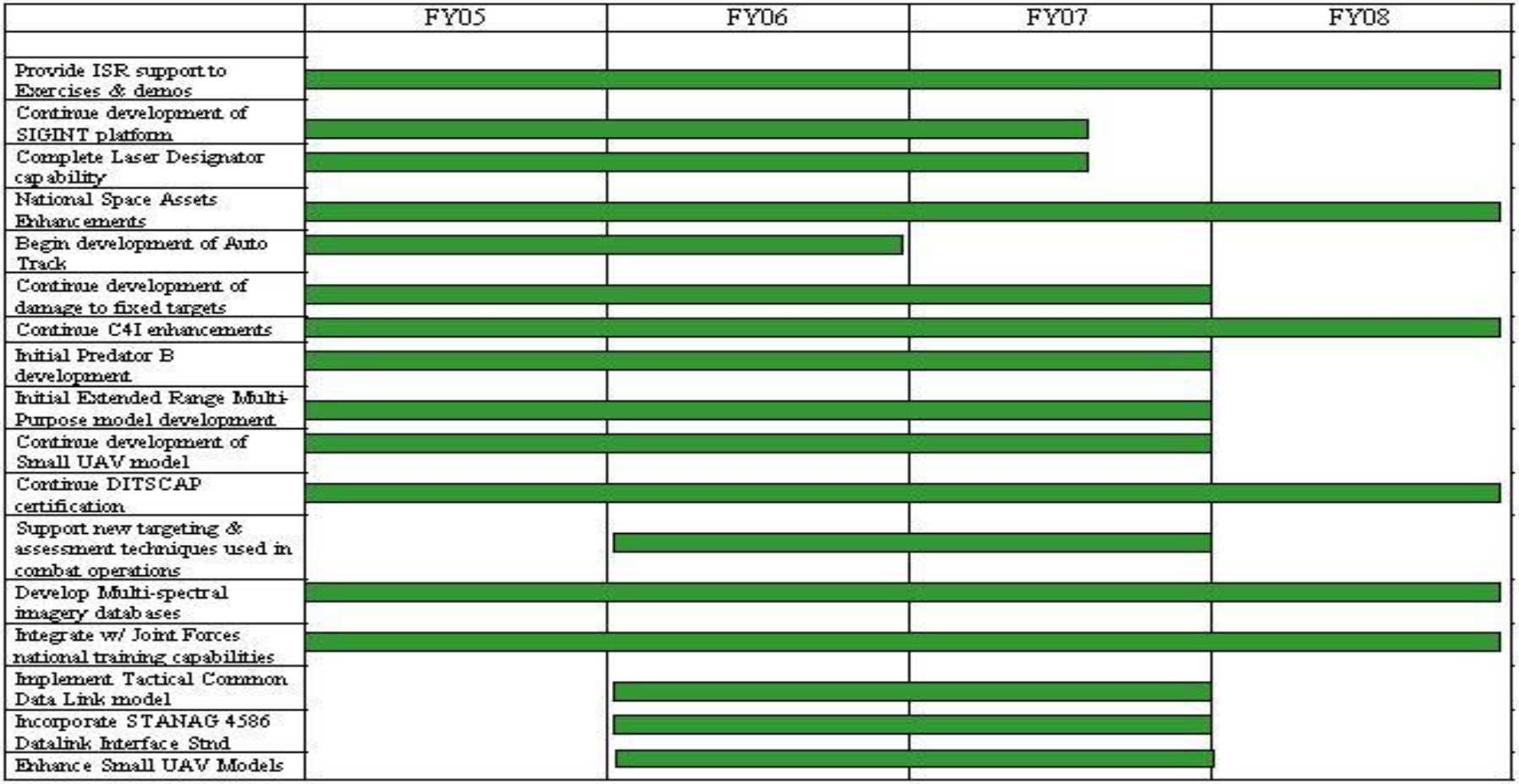


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305206F Airborne Reconnaissance Systems**	PROJECT NUMBER AND TITLE **5092 JTC/SIL MUSE**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) MIPR dollars to Redstone Arsenal, Huntsville, AL	1Q	1Q	1Q

PE NUMBER: 0305207F
PE TITLE: Manned Reconnaissance System

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305207F Manned Reconnaissance System

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	23.364	18.074	10.132	12.864	13.100	13.404	13.630	Continuing	TBD
4754 COBRA BALL	23.364	18.074	10.132	12.864	13.100	13.404	13.630	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

(U) The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

(U) 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.

(U) These activities are managed by the Air Force through the BIG SAFARI Systems Group, Reconnaissance System Wing, Aeronautical Systems Center, Air Force Materiel Command. BIG SAFARI manages engineering, ground and support system modifications, integration, flight testing, product assurance, acceptance testing, logistics, and training activities. Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY11 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

(U) 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 and find affordable solutions.

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

(U) Budget Activity Justification
This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	13.283	8.101	12.379
(U)	Current PBR/President's Budget	23.364	18.074	10.132
(U)	Total Adjustments	10.081	9.973	
(U)	Congressional Program Reductions		-0.064	
	Congressional Rescissions	-0.209	-0.263	
	Congressional Increases	8.500	10.300	
	Reprogrammings	1.790		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY05 Congressional Adds include: $2M for a Light Weight SIGINT System (LITES) technology demonstration; $1M for a COMBAT SENT Tactical ELINT System Modernization improvement risk reduction study; $2.1M for COBRA BALL Long Wave Infrared Mid-Course Data Collection Capability study; $1.1M for a COBRA BALL Hi-Res E/O Signature Analysis Study, and $2.3M for Collaborative Information Operations technology demonstration.

FY06 Congressional Adds include: $1.7M for a COMBAT SENT Tactical ELINT System Modernization study; $3.0M for RIVET JOINT Reachback; $3.1M for Apertures for Modern Threat Environments; $2.5M for RC-135 Processing Forward Network (transferred from Title IX, RDT&E, D-W)

In FY06, $8.4M was transferred from PE 0305207F, Project 4754 (COBRA BALL) to PE 0303601F (MILSATCOM terminals), Project 2487 (MILSATCOM terminals) for RC-135 communications terminal development for FAB-T (long-haul communications).

In FY07 $2.4M was transferred from PE 0305207F, Project 4754 (COBRA BALL) for the same purposes as in FY06.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305207F Manned Reconnaissance System	PROJECT NUMBER AND TITLE: 4754 COBRA BALL	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4754 COBRA BALL	23.364	18.074	10.132	12.864	13.100	13.404	13.630	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) The RC-135 Operational Systems Development and enhancement activities project supports design studies, engineering analysis, non-recurring engineering, and other efforts associated with the integration and modification of the RC-135 and its mission systems - both air and ground. Extensive utilization of commercial-off the-shelf (COTS) based solutions allows rapid fielding of needed capabilities through continuous technology refresh cycles and vanishing-vendor logistics mitigation efforts.

(U) 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.

(U) These activities are managed by the Air Force through the BIG SAFARI Systems Group, Reconnaissance System Wing, Aeronautical Systems Center, Air Force Materiel Command. BIG SAFARI manages engineering, ground and support system modifications, integration, flight testing, product assurance, acceptance testing, logistics, and training activities. Aircraft, aircraft sensor systems, and associated ground support system modifications planned for FY06-FY11 include support for three distinct RIVET JOINT configurations [Baselines 8, 9 & 10], two distinct COMBAT SENT configurations [Baselines 3 & 4] and three distinct COBRA BALL configurations [Baselines 2, 3 & 4]. SEE CLASSIFIED Congressional budget exhibits.

(U) 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 and find affordable solutions.

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

(U) Budget Activity Justification
This program effort is equivalent to RDT&E budget activity 7, Operational Systems Development, because it involves Air Force R&D necessary to field essential operational capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continues Non-Recurring Engineering (NRE) for the Airborne Extremely High Frequency Communications system to be added to the RC-135 fleet.	5.000		
(U) Continues Non-Recurring Engineering (NRE) for the development and installation of improved mission sensor elements - see classified submission.	9.864	7.774	10.132

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System	PROJECT NUMBER AND TITLE 4754 COBRA BALL

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

		FY 2005	FY 2006	FY 2007
(U)	Congressional Add: Lightweight SIGINT System demonstration	2.000		
(U)	Congressional Add: COMBAT SENT Tactical ELINT System modernization study	1.000	1.700	
(U)	Congressional Add: COBRA BALL Long Wave IR Mid-course data collection capability study	2.100		
(U)	Congressional Add: COBRA BALL Hi-res E/O signature analysis study	1.100		
(U)	Congressional Add: Collaborative information operations technology demonstration	2.300		
(U)	Congressional Add: RIVET JOINT Reachback		3.000	
(U)	Congressional Add: Apertures for Modern Threat Environments		3.100	
(U)	Congressional Add: RC-135 Processing Forward Network		2.500	
(U)	Total Cost	23.364	18.074	10.132

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	PE 0305207F, APAF	118.702	118.454	134.831	270.673	154.665	158.596	281.458	Continuing	TBD
(U)	PE 0305207F, OPAF	21.139	20.931	20.401	22.546	23.086	23.666	24.053	Continuing	TBD
(U)	PE 0305207F, O&M	204.977	234.157	239.941	246.936	252.335	256.055	262.081	Continuing	TBD

(U) D. Acquisition Strategy

The RC-135 RIVET JOINT, COBRA BALL, and COMBAT SENT aircraft are maintained and upgraded by the BIG SAFARI Program Office through an evolutionary acquisition strategy.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305207F Manned Reconnaissance System**

PROJECT NUMBER AND TITLE: **4754 COBRA BALL**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
L-3 Communications	CPFF/CPIF /FFP	L-3 Com, Greenville TX		23.364	Nov-04	18.074	Nov-05	10.132	Nov-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	23.364		18.074		10.132		Continuing	TBD	TBD
Remarks: All activity is based around the Programmed Depot Maintenance (PDM) airframe schedule which includes multiple contracts and organizations with overlapping and continuous periods of performance.												
(U) Total Cost			0.000	23.364		18.074		10.132		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305207F Manned Reconnaissance System	PROJECT NUMBER AND TITLE 4754 COBRA BALL

Manned Reconnaissance Program

PB 07

	FY05	FY06	FY07	FY08	FY09	FY10	FY11
	*Cobra Ball Hi Res EO	*Combat Sent TAC ELINT Modernization					
	*Cobra Ball LWIR	*Rivet Joint Reachback					
	*Combat Sent TAC ELINT	*Apertures for Modern Threats					
	*Collaborative Info Ops	*Processing Forward Network					
	AEHF NRE	AEHF NRE					
**	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors	Mission Sensors
	$23.37M	$18.07M	$10.13M	$12.86M	$13.10M	$13.40M	$13.63M

* Congressional Adds

** See CLASSIFIED for detailed breakout

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305207F Manned Reconnaissance System**	PROJECT NUMBER AND TITLE **4754 COBRA BALL**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) COBRA BALL Hi Res E/O	1-4Q		
(U) COBRA BALL LWIR Study	1-4Q		
(U) COMBAT SENT TAC ELINT Modernization study	1-4Q	1-4Q	
(U) Collaborative INFO Operations	1-4Q	1-4Q	1-4Q
(U) AEHF FAB-T terminal NRE development	1-4Q		
(U) Transfer AEHF FAB-T terminal development effort to ESC		4Q	
(U) Transfer mission sensor efforts* to PE-0304260		4Q	
(U) Initiate mission support systems efforts			1Q
(U) * Classified Mission Systems Development	1-4Q	1-4Q	1-4Q

* See Classified Budget Submission for further breakout

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PE NUMBER: 0305208F
PE TITLE: Distributed Common Ground Systems

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD
4826	Common Imagery Ground / Surface Systems	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery (DCGS-I) architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing and managing the DCGS Integration Backbone (DIB) for all the Services to provide interoperability at the data services level.

AF DCGS provides the Air Force ground/surface systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at numbered and Air National Guard/ Air Force locations, to support the Joint Task Force commander and the Air and Space Operations Center (AOC). The CONUS-based systems are capable of reach back operations via data link relay and satellite.

AF DCGS provides critical data and significant support for Time Critical Targeting (TCT) operations. This support will be enhanced with the planned integration of software tools and system integration to the AOC and transformation of AF DCGS to a net-centric, service based architecture. By converting from a stovepipe system of systems to the integrated AF DCGS Intelligence, Surveillance, and Reconnaissance (ISR) management capability will provide the Joint Forces Air Component Commander (JFACC) the capability to:
1) Dynamically visualize and command ISR assets and the information in the AOC
2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TCT process and reduce timelines.
AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary based architecture to a net centric service based system to be as part of the Network Centric Warfare environment and upgrades AF DCGS SIGINT Digital Special Signals Processor (DSSP) for new signals processing. This modernization

effort implemented in Block 10.2 will deliver a netcentric DCGS capability for the Air Force. Block 10.2 will spiral by technologies and tools into its archecture to provide increased cababilities and meet user operational needs. These spirals will integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS, transformation will begin DIB/technology integration evaluations and develop the required acquision plans and studies/analysis to begin development.

The DIB is fielded with the Block 10.2 upgrade and will be managed to meet emerging DCGS architecture and standards for Joint and Coalition interoperability.

The Common Imagery Processor (CIP) is the common sensor processing element within DCGS-Imagery (DCGS-I) architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts continue to upgrade the CIP baseline to process data from upgraded/new sensors.

Also included in this project is a mobile DCGS-I testbed which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and other modifications. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. This program's operations support and upgrades the Testbed to ensure it will maintain currency with existing interface standards.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	21.232	40.402	169.423
(U)	Current PBR/President's Budget	31.470	34.883	120.777
(U)	Total Adjustments	10.238	-5.519	
(U)	Congressional Program Reductions	-0.307	-5.015	
	Congressional Rescissions	-0.255	-0.504	
	Congressional Increases	8.500		
	Reprogrammings	2.300		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

- Funding decreases between PB and current PBR in FY 06 and FY 07 are for higher Air Force needs.
- AF DCGS has a funding ramp from FY 05 to FY 06 and from FY 06 to FY 07 to support AF DCGS modernization. These funds will transform AF DCGS and related technologies from an existing architecture based on proprietary and legacy systems to an open, web-based, net-centric architecture integrated into the Network Centric Warfare environment.
- In FY 05, AF DCGS received a Congressional increase of $8.5M for Battle Damage Assessment Process Analysis, Systems Engineering Activities and Improved Coalition

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**

Interoperability.

- At AF request, Congress reduced RDT&E funding by $5M and increased O&M funding by $5M in FY 06.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4826	Common Imagery Ground / Surface Systems	31.470	34.883	120.777	110.970	122.065	128.806	50.985	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The DoD Distributed Common Ground/Surface System (DCGS) Program is a cooperative effort between the Services and National Agencies to provide world-wide ground/surface systems capable of receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance sensors/platforms and commercial sources. The DCGS program is developing a family of systems capable of supporting all levels of conflict, interoperable with reconnaissance platforms and sensors, and integrated into the Joint Command, Control, Communication, Computer, and Intelligence (C4I) environment. The program integrates architectures and standards from DCGS Imagery (DCGS-I) architecture for Imagery Intelligence (IMINT), Joint Interoperable Operator Network (JION) for Signals Intelligence (SIGINT), and Joint Airborne Measurement and Signature Intelligence (MASINT) Architecture (JAMA) for MASINT, and all-source analyses to Combat Air Forces and Combatant Commanders. The Air Force has been charged with developing and managing the DCGS Integration Backbone (DIB) for all the Services to provide interoperability at the data services level.

AF DCGS provides the Air Force ground/surface systems capable of tasking intelligence sensors, and receiving, processing, exploiting, and disseminating data from airborne and national reconnaissance platforms and commercial sources. AF DCGS is a 'system of systems' interconnected by a robust communications structure to provide data sharing capabilities between intelligence collectors, exploiters, producers, disseminators, and users. AF DCGS has five core locations: two CONUS based and three OCONUS. Several other AF DCGS systems are distributed among Air Force operational units at numbered and Air National Guard/ Air Force locations, to support the Joint Task Force commander and the Air and Space Operations Center (AOC). The CONUS-based systems are capable of reach back operations via data link relay and satellite.

AF DCGS provides critical data and significant support for Time Critical Targeting (TCT) operations. This support will be enhanced with the planned integration of software tools and system integration to the AOC and transformation of AF DCGS to a net-centric, service based architecture. By converting from a stovepipe system of systems to the integrated AF DCGS Intelligence, Surveillance, and Reconnaissance (ISR) management capability will provide the Joint Forces Air Component Commander (JFACC) the capability to:

1) Dynamically visualize and command ISR assets and the information in the AOC

2) Quickly and effectively synchronize AF DCGS ISR operations, collection capabilities, and information with the AOC's combat objectives to improve the TCT process and reduce timelines.

AF DCGS is also being integrated into the Network Centric Collaborative Targeting (NCCT) network.

Using the DIB, AF DCGS modernization will transform AF DCGS from its existing proprietary based architecture to a net centric service based system to be as part of the Network Centric Warfare environment and upgrades AF DCGS SIGINT Digital Special Signals Processor (DSSP) for new signals processing. This modernization

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE **4826 Common Imagery Ground / Surface Systems**

effort implemented in Block 10.2 will deliver a netcentric DCGS capability for the Air Force. Block 10.2 will spiral by technologies and tools into its archecture to provide increased cabalities and meet user operational needs. These spirals will integrate COTS and GOTS fact-of-life version upgrades to provide current technologies and achieve necessary application and services. Increment 2, the next phase in AF DCGS, transformation will begin DIB/technology integration evaluations and develop the required acquision plans and studies/analysis to begin development.

The DIB is fielded with the Block 10.2 upgrade and will be managed to meet emerging DCGS architecture and standards for Joint and Coalition interoperability.

The Common Imagery Processor (CIP) is the common sensor processing element within DCGS-Imagery (DCGS-I) architecture. The function of the CIP is to accept airborne imagery data, process it into an exploitable image, and output the image to other elements within DCGS-I. Efforts continue to upgrade the CIP baseline to process data from upgraded/new sensors.

Also included in this project is a mobile DCGS-I testbed which is used by Service and Agency program offices to test interoperability interfaces with new sensors, applications, and other modifications. This testbed also supports the integration and testing of DoD DCGS components prior to introduction into the operational environment. This program's operations support and upgrades the Testbed to ensure it will maintain currency with existing interface standards.

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

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	Continue evolving DCGS architectures and standards for commonality and interoperability across intelligence disciplines to include NATO interoperability and management of DCGS Infrastructure Integrated Process Team (IPT) for USD(I)	1.562	2.138	2.320
(U)	Continue DCGS-I testbed development and upgrades.	1.375	1.478	6.550
(U)	Continue evolving CIP and its associated architecture to keep pace with growing sensor baseline of new and upgraded sensors. Continue investigation and implementation of advanced processing tools.	7.246	9.247	10.528
(U)	Continue the Adaptive Link Formatter (ALF) development and related sensor modifications to the ground station.	2.100		
(U)	Continue commercial imagery integration.	0.745	2.600	2.700
(U)	Continue DCGS Block 10.2 upgrades. Upgrade DCGS Integrated Backbone (DIB) and Block 10.2 to provide required tools required for DCGS support to the commander, improve integration with the AOC.	6.952	12.018	44.355
(U)	Continue development efforts for Increment 2, integrate advance technologies with the DIB to accelerate integration of advanced Mulit-Int exploitaton and fussion tools.	0.000	3.617	14.000
(U)	Improve DIB Interoperability			1.000
(U)	DIB Management and Migration			7.500
(U)	Continue integration of MASINT and Multiple Intelligence (Multi-INT) exploitation technology capabilities into	3.000		5.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE 4826 Common Imagery Ground / Surface Systems

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

		FY 2005	FY 2006	FY 2007
	DCGS.			
(U)	Communications architecture upgrade effort.		3.785	26.824
(U)	Enterprise Engineering Support and Improved Coalition Interoperability	7.500		
(U)	Conduct Battle Damage Assessment Process Analysis study.	0.990		
(U)	Total Cost	31.470	34.883	120.777

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) OPAF (PE 0305208F)	115.985	151.493	195.723	178.806	222.600	150.086	169.402		TBD

(U) D. Acquisition Strategy

The Air Force uses an evolutionary acquisition approach with blocks (increments) and spirals to develop, field, and upgrade the AF DCGS weapon system and contracts for the improved capabilities through full and open competition to the maximum extent possible.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**

PROJECT NUMBER AND TITLE: **4826 Common Imagery Ground / Surface Systems**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block 10.2 Spiral Upgrades	Multiple	Raytheon, Garland, TX	7.532	4.872	Dec-04	5.865	Dec-05	36.549	Dec-06	Continuing	TBD	TBD
DIB Management and Migration	TBD							7.500	Dec-06	Continuing	TBD	TBD
DIB Interoperability	TBD							1.000	Feb-07	Continuing	TBD	TBD
NCCT/Platform Interface Module for DGIF	Multiple	Raytheon, Falls Church, VA		3.000	Jan-05					0.000	3.000	TBD
Communications Capability Upgrade	TBD	TBD				3.785	Jan-06	26.824	Jan-07	Continuing	TBD	TBD
Common Imagery Processor Software Development	C/CPFF	Northrup Grumman, Baltimore, MD	23.426	8.546	Dec-04	9.383	Dec-05	10.528	Dec-06	Continuing	TBD	TBD
NCCT GCP development	Multiple	Lockheed Martin, San Jose, CA& Littleton, CO	2.599	1.952	Mar-05					0.000	4.551	TBD
NCCT GCP Integration	C/CPAF	General Dynamics, Concord, MA	1.718	0.125	Aug-05					0.000	1.843	TBD
MASINT capabilities into DCGS	Multiple	Riverside Research Institute, Fairfax, VA		3.000	Feb-05		Jan-06	5.000	Jan-07	Continuing	TBD	TBD
Commercial Imagery Integration	Multiple	Par Gov't Systems, Rome NY		0.745	Jan-05	2.600	Jan-06	2.700	Jan-07	Continuing	TBD	TBD
Congress Plus Up C2 Integration for Joint Dynamic Targeting	Multiple	ASI, Alexandria, VA		0.990	Mar-05					0.000	0.990	TBD
Subtotal Product Development			35.275	23.230		21.633		90.101		Continuing	TBD	TBD
Remarks:												
(U) Support												
Other Non-Prime Gov't Contracts			0.604	1.512	Feb-05	10.153	Feb-06	25.548	Feb-07	Continuing	TBD	TBD
SAIC	SS/ IDIQ	McLean, VA	4.344	2.424	Jan-05	2.100	Mar-06	2.750	Mar-07	Continuing	TBD	TBD
Various			15.418	4.304	Oct-04	0.997	Jan-06	2.378	Oct-06	Continuing	TBD	TBD
Subtotal Support			20.366	8.240		13.250		30.676		Continuing	TBD	TBD
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems	

Remarks:

(U) Total Cost	55.641	31.470	34.883	120.777	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305208F Distributed Common Ground Systems	PROJECT NUMBER AND TITLE: 4826 Common Imagery Ground / Surface Systems

AF DCGS Schedule

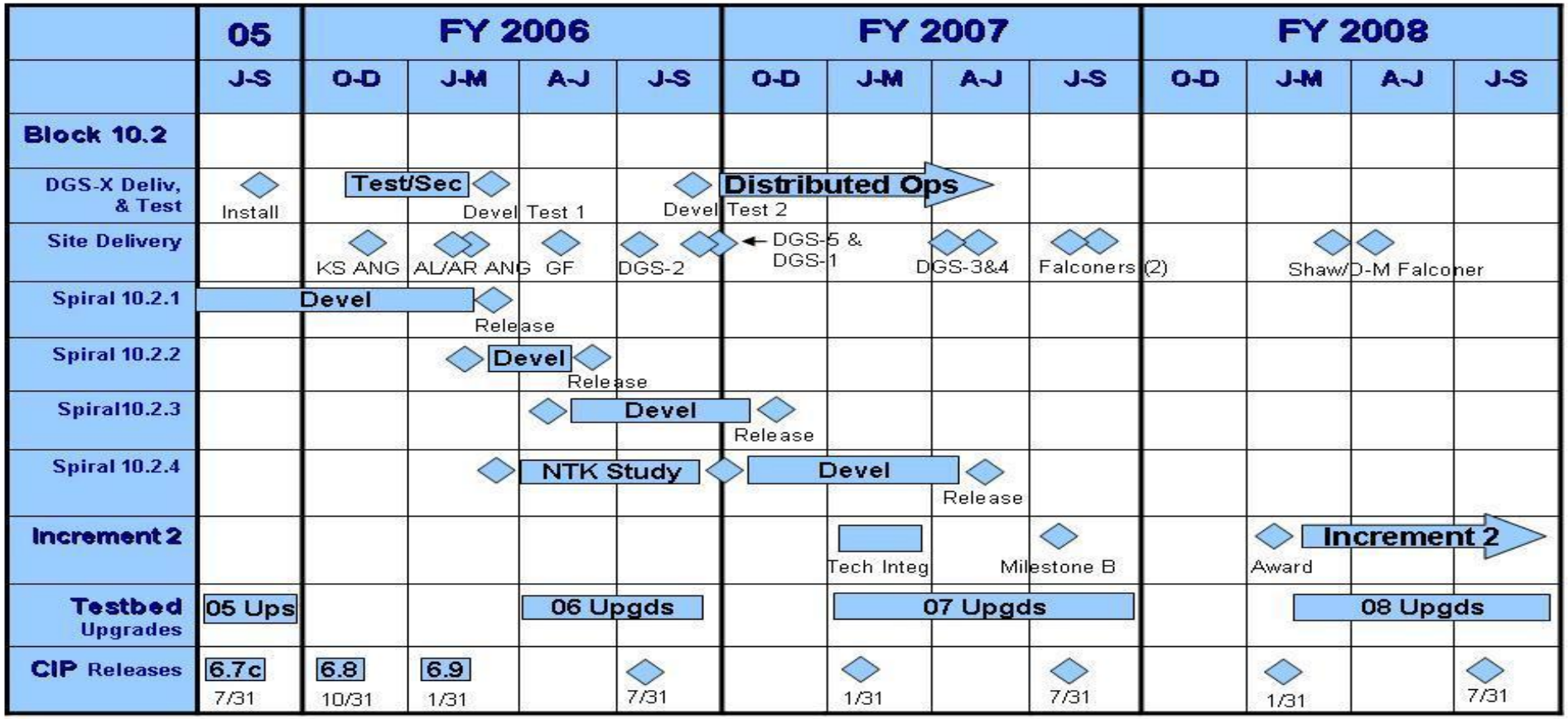

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0305208F Distributed Common Ground Systems**	PROJECT NUMBER AND TITLE: **4826 Common Imagery Ground / Surface Systems**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Block 10.2 Spiral Development	1-4Q	1-4Q	1-3Q
(U) Increment 2 Technology Integration			2Q
(U) Increment 2 Milestone B			4Q
(U) DCGS-I Testbed Upgrades	3-4Q	3-4Q	2-3Q
(U) CIP Version 6.7 Release	4Q		
(U) CIP Version 6.8 Release		1Q	
(U) CIP Version 6.9 Release		2Q	

PE NUMBER: 0305219F
PE TITLE: PREDATOR DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	82.113	64.081	61.466	46.052	37.602	39.402	40.450	Continuing	TBD
5143 Predator	82.113	64.081	61.466	46.052	37.602	39.402	40.450	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The basic MQ-1/MQ-9 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 Predator aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 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 motion imagery throughout the operational theater. Additionally the aircraft is multi-configurable to carry either a synthetic aperture radar (SAR) or Hellfire laser-guided missiles. This program will continue to evolve and upgrade MQ-1 capabilities (to include signals intelligence) to meet emerging requirements and address Reliability and Maintainability (R&M) issues.

The MQ-9 Predator B aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging TSTs as a radar-based attack asset with on-board hard-kill capability (hunter-killer) and also perform ISR TA as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC)) and assess post-strike results. The MQ-9 is in continuing development and will field capability through incremental upgrades. The next step will be to develop and test a "baseline" capable system. The "baseline" development includes both a risk reduction phase, FY04 & FY05 Quick Reaction Capabilities, and a System Development & Demonstration (SDD) phase. Risk reduction started in FY03 and includes system design, drawings, specifications, and initial standardized (MIL-STD-1760) advanced weapons data bus efforts. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability. The baseline capability will include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard "precision" weapons (GBU-12/38); hardware and software upgrades to the ground control station (GCS) for MQ-9 operations; completing airworthiness certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent upgrades will continue to evolve the MQ-9's capabilities to meet new requirements and address R&M issues.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305219F PREDATOR DEVELOPMENT/FIELDING

Approximately 20 Predator B aircraft will be purchased prior to completion of SDD largely through Congressional and OSD funding adds. To maintain a basic operational capability, these aircraft will require reliability/maintainability development to keep them viable for SDD and/or to provide an interim operational combat capability.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recover GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed GCS. The GCS will continue to evolve and upgrade its capabilities to fully support the MQ-1 and MQ-9 aircraft and the missions they perform.

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

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	83.207	61.007	32.125
(U)	Current PBR/President's Budget	82.113	64.081	61.466
(U)	Total Adjustments	-1.094	3.074	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.064	-0.926	
	Congressional Increases		4.000	
	Reprogrammings	-1.030		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

$4M added in FY 06 Appropriation, $2.5M for Small Tactical UAVs for Battlefield Intelligence, Communications, and Atmospheric Data Collection; and $1.5M for additional Predator A capability

Air Force added funds in FY07-FY11 for development related to increasing Predator operational combat orbits as part of the Future Total Force

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5143 Predator	82.113	64.081	61.466	46.052	37.602	39.402	40.450	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The basic MQ-1/MQ-9 system consists of the aircraft, a control station, communications equipment, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The system is designed to be modular and open-ended: mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs.

The MQ-1 Predator aircraft is a single-engine, propeller-driven, remotely piloted aircraft (formerly called unmanned aerial vehicle) designed to operate over-the-horizon at medium altitude for long endurance sorties. The aircraft is designed to provide real-time Intelligence, Surveillance, Reconnaissance, and Target Acquisition (ISR TA), and attack roles to aggressively prosecute Time Sensitive Targets (TST). The MQ-1 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 motion imagery throughout the operational theater. Additionally the aircraft is multi-configurable to carry either a synthetic aperture radar (SAR) or Hellfire laser-guided missiles. This program will continue to evolve and upgrade MQ-1 capabilities (to include signals intelligence) to meet emerging requirements and address Reliability and Maintainability (R&M) issues.

The MQ-9 Predator B aircraft is a single-engine, turbo-prop remotely piloted aircraft designed to operate over-the-horizon at medium-to-high altitude for long endurance sorties. The aircraft is being designed primarily to prosecute critical emerging TSTs as a radar-based attack asset with on-board hard-kill capability (hunter-killer) and also perform ISR TA as a secondary role. In the hunter-killer role, the aircraft will employ fused multi-spectral sensors to automatically find, fix, and track ground targets (Automatic Target Cueing (ATC)) and assess post-strike results. The MQ-9 is in continuing development and will field capability through incremental upgrades. The next step will be to develop and test a "baseline" capable system. The "baseline" development includes both a risk reduction phase, FY04 & FY05 Quick Reaction Capabilities, and a System Development & Demonstration (SDD) phase. Risk reduction started in FY03 and includes system design, drawings, specifications, and initial standardized (MIL-STD-1760) advanced weapons data bus efforts. The SDD effort began in FY05 and includes developing and testing the MQ-9's baseline capability. The baseline capability will include increasing the aircraft's gross take-off weight; enhancing aircraft systems to include integrated redundant avionics, ice detection capability, navigation system upgrades, electrical system upgrades, sensor/stores management computer, MIL-STD-1760 advanced weapons data bus, advanced sensor and weapons payloads, and improved human-machine interface; integrating standard "precision" weapons (GBU-12/38); hardware and software upgrades to the ground control station (GCS) for MQ-9 operations; completing airworthiness certification and accreditation; and producing applicable training devices that emulate aircraft capabilities. Subsequent upgrades will continue to evolve the MQ-9's capabilities to meet new requirements and address R&M issues.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

Approximately 20 Predator B aircraft will be purchased prior to completion of SDD largely through Congressional and OSD funding adds. To maintain a basic operational capability, these aircraft will require reliability/maintainability development to keep them viable for SDD and/or to provide an interim operational combat capability.

The Ground Control Station (GCS) functions as the aircraft cockpit and can control the aircraft either within line-of-sight (LOS) or beyond LOS (BLOS) via a combination of satellite relay and terrestrial communications. The GCS is either mobile to support forward operating locations or fixed at a facility to support Remote Split Operations (RSO). The GCS has the capability to perform mission planning; provide a means for manual and/or autonomous control of multiple aircraft and payloads; allow personnel to launch, recover, and monitor aircraft, payloads, and system communications status; secure data links to receive payload sensor data and command links; monitor threats to the aircraft; display common operation picture; and provide support functions. Additionally, a Launch and Recover GCS (LRGCS) allows for servicing, systems checks, maintaining, launching, and recovering aircraft under LOS control for hand-off to a mobile or fixed GCS. The GCS will continue to evolve and upgrade its capabilities to fully support the MQ-1 and MQ-9 aircraft and the missions they perform.

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

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

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	MQ-9 Risk Reduction & Quick Reaction Capability. Includes initial integration of weapons, engine, power upgrades, and tech data.	30.846	4.000	
(U)	MQ-1/MQ-9 Pre-planned Product Improvement. Includes advanced capabilities (including multiple aircraft control/operations), engine and landing gear upgrades, sensor and radar development/integration, quick reaction capabilities, payload development/integration, weaponization and experimentation, data link upgrades (including encryption and tactical common data link (TCDL)), mission planning capability, simulator/training devices, and ground station and communication equipment development/upgrades.	21.806	9.374	22.226
(U)	MQ-9 System Development and Demonstration (SDD). Includes aircraft/GCS/Communication system improvements, development and integration of follow-on sensors, weapon and payload integration, test and training capability, technical data.	15.621	29.669	28.148
(U)	Continue reliability and maintainability efforts to ensure the continued viability of the MQ-1/MQ-9 aircraft, GCS, and associated communications equipment.	0.500	0.500	0.500
(U)	System Concept Studies	1.500	1.500	1.500
(U)	Developmental and Operational Test support. Includes SATCOM leases	5.400	5.038	2.792
(U)	Simulator/training device	5.000	10.000	5.000
(U)	Field support	1.440	1.500	1.300

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

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

		FY 2005	FY 2006	FY 2007
(U)	Small Tactical UAVs for Battlefield Intelligence, Communications, and Atmospheric Data Collection		2.500	
(U)	Total Cost	82.113	64.081	61.466

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	Aircraft Procurement, AF (PE 0305219F)	320.581	123.896	229.095	426.115	519.470	390.503	311.180	Continuing	TBD
(U)	Aircraft Modification, AF (PE 0305219F)	36.463	29.884	58.255	75.273	104.062	92.396	94.190	Continuing	TBD
(U)	Missile Procurement, AF (PE 0305219F)	34.325	37.856	65.312	65.237	64.707	81.548	37.365	Continuing	TBD

(U) D. Acquisition Strategy

Both the MQ-1 Predator and MQ-9 Predator B systems will be acquired sole-source with General Atomics-ASI as the prime contractor.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305219F PREDATOR DEVELOPMENT/FIELDING**

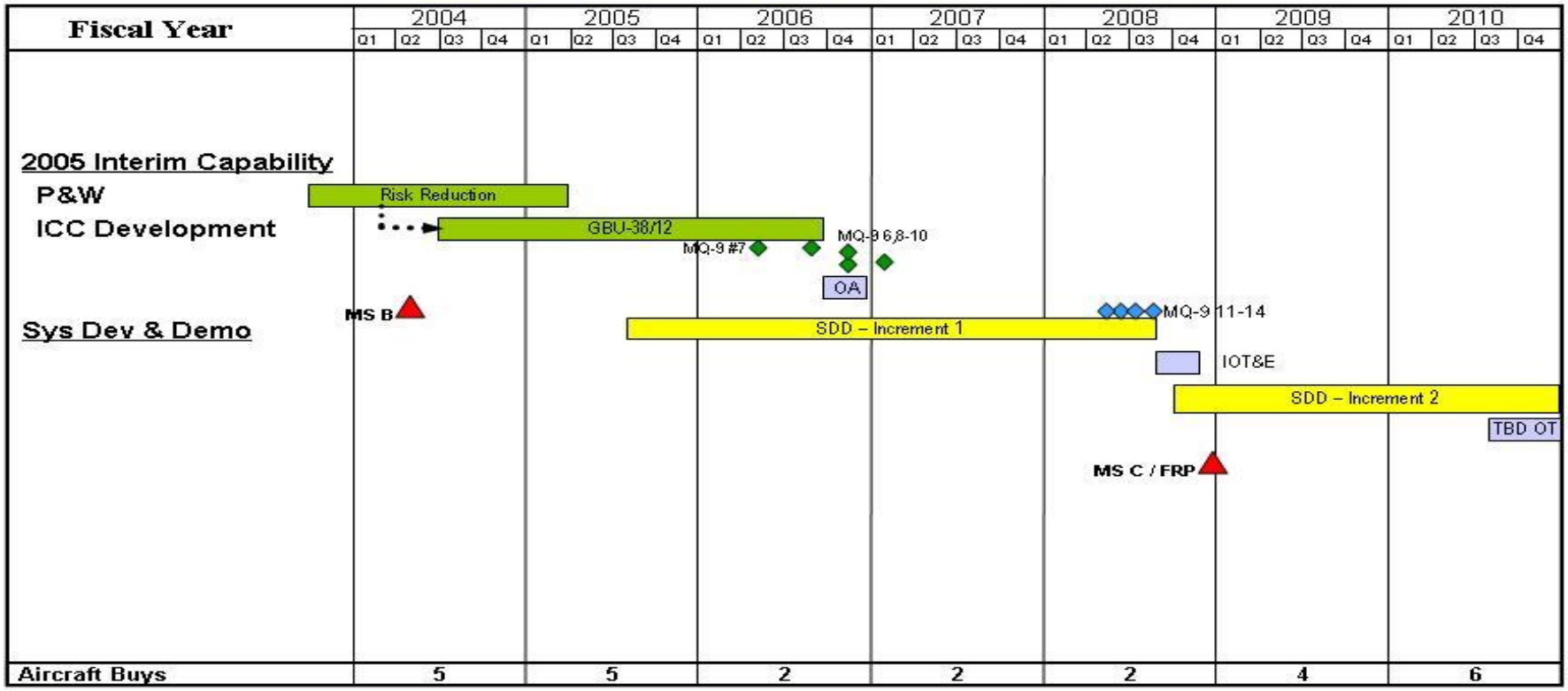
PROJECT NUMBER AND TITLE: **5143 Predator**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
General Atomics ASI (GA-ASI)	SS/CPIF/CPFF	GA-ASI Rancho Bernardo CA		71.097	Feb-05	45.973	Feb-06	52.716	Feb-07	Continuing	TBD	
Navy Crane	MIPR	Raytheon McKinney TX		1.250	Feb-05	1.250	Feb-06	1.250	Feb-07	Continuing	TBD	
ASC/YW	CPFF	Wright-Patterson AFB OH		5.000	Jun-05	10.000	Feb-06	5.000	Feb-07	0.000	20.000	
Subtotal Product Development			0.000	77.347		57.223		58.966		Continuing	TBD	0.000
Remarks:												
(U) Support												
ASC	SS/T&M	Various Wright-Patterson AFB OH		1.500	Feb-05	1.500	Feb-06	1.500	Feb-07	Continuing	TBD	
Subtotal Support			0.000	1.500		1.500		1.500		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Misc	Various	Various		3.266	Feb-05	5.358	Feb-06	1.000	Feb-07	Continuing	TBD	
Subtotal Test & Evaluation			0.000	3.266		5.358		1.000		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	82.113		64.081		61.466		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

MQ-9 Program Plan

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

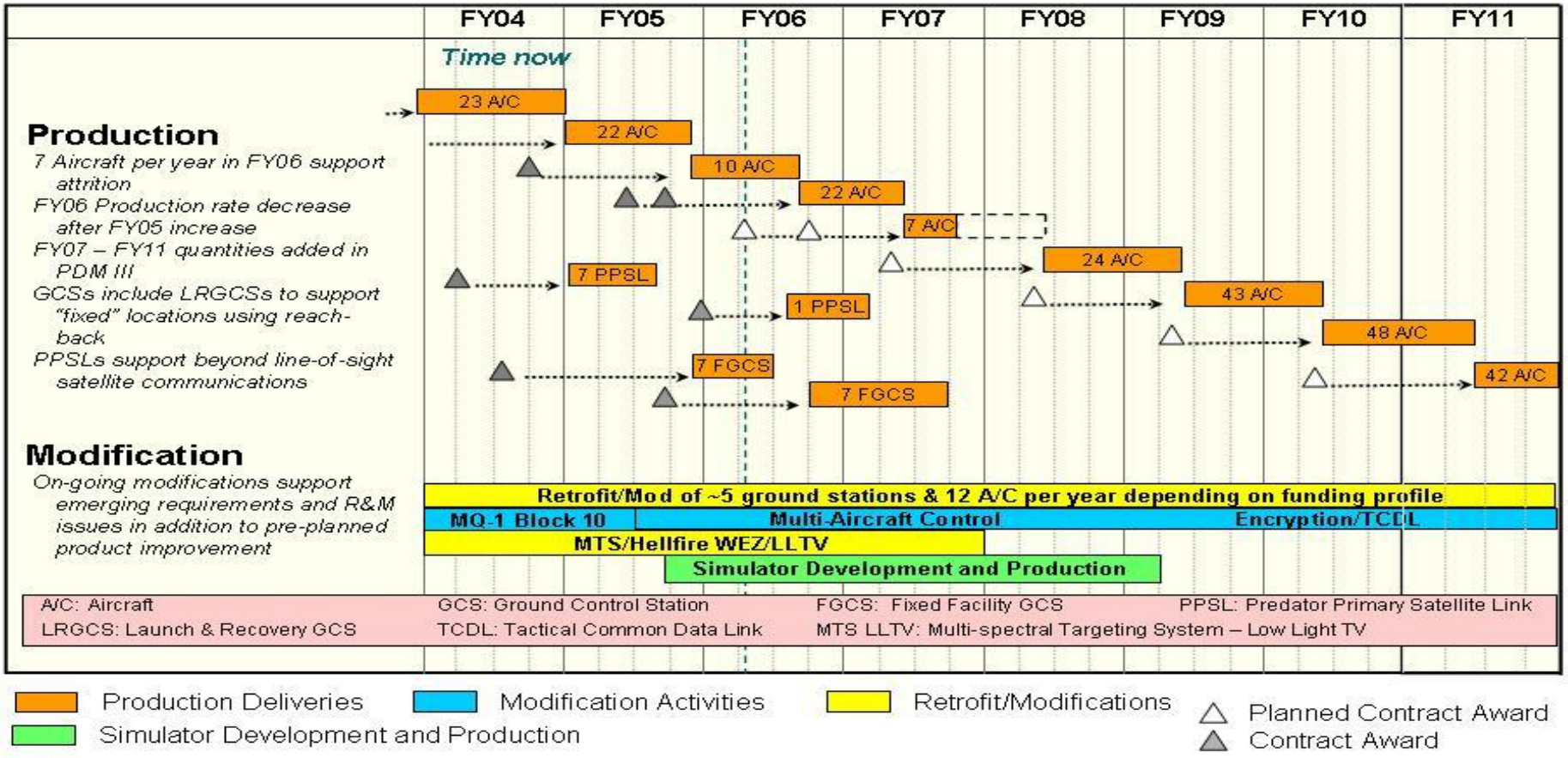


As of: 17 Jan 06

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305219F PREDATOR DEVELOPMENT/FIELDING**	PROJECT NUMBER AND TITLE **5143 Predator**

MQ-1 Predator Schedule

Dominant Air Power: Design for Tomorrow…Deliver Today



As of: 17 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305219F PREDATOR DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5143 Predator

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) MQ-9 Risk Reduction Complete	2Q		
(U) MQ-9 SDD Start	3Q		
(U) MQ-9 05 Quick Reaction Capability Complete		2Q	
(U) MQ-1 Simulator Development Start	3Q		

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PE NUMBER: 0305220F
PE TITLE: GLOBAL HAWK DEVELOPMENT/FIELDING

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	382.557	327.697	247.665	208.507	151.801	146.767	109.335	Continuing	TBD
5144 Global Hawk	382.557	327.697	247.665	208.507	151.801	146.767	109.335	Continuing	TBD

Global Hawk and Predator no longer share the same Program Element (PE). Effective FY05, Global Hawk funding will be in PE 0305220F, project 675144. The new PE was named GLOBAL HAWK DEVELOPMENT/FIELDING. Predator funding moved to PE 0305219F, project 675143. This PE was named PREDATOR DEVELOPMENT/FIELDING. Beginning in FY06, Signals Intelligence (SIGINT) development and integration funding for all platforms, including Global Hawk, transfers to the Airborne SIGINT Enterprise PE 0304260F.

(U) A. Mission Description and Budget Item Justification

The Global Hawk System provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding is developing the highly capable Global Hawk System, which is comprised of an aircraft, a ground segment, and a support segment. The aircraft is a fully autonomous, high altitude, long endurance remotely piloted aircraft (RPA). The RQ-4A is an imagery intelligence-collecting RPA designed to carry 2,000 pounds of payload. The RQ-4B is a multi-intelligence collecting RPA designed to carry a 3,000-pound payload. Funds will also enable integration and testing of improved payload designs, including a Synthetic Aperture Radar (SAR), an Electro-Optical (EO)/Infrared (IR) camera, Signals Intelligence (SIGINT), and the Multi-Platform Radar Technology Insertion Program (MP-RTIP), etc. The user will determine the optimal payload configuration and quantity for each aircraft based on current operational requirements. The Ground Station (GS) includes the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, training, etc., to enable 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.

This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&D to develop a highly capable operational system.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	333.167	308.533	208.729
(U)	Current PBR/President's Budget	382.557	327.697	247.665
(U)	Total Adjustments	49.390	19.164	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.255	-4.736	
	Congressional Increases	39.700	23.900	
	Reprogrammings	9.945		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY05, $39.7M was added to the program via GWOT supplement. $34.7M of the supplemental was executed in the Global Hawk program and $5M was realigned by headquarters Air force and used for research on volumetric radar data processing development. Additionally, $9.945M was reprogrammed to cover the EMD overrun.

The FY06 Appropriations Act transferred $18.2M in Global Hawk Production funding to Global Hawk RDT&E (project number 675144). Additionally, Congress added $1.2M of RDT&E for Night Hunter II development on Global Hawk and $4.5M of RDT&E for growth engine development on Global Hawk

In FY07, $37.0M was added by the Air Force to facilitate a Global Hawk program realignment to meet operational readiness and development requirements. The remaining development program for Global Hawk was restructured for the remaining years to reduce risk while delivering incremental operational capability at the same time. FY2008 through FY2010 are also impacted in the restructure.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5144 Global Hawk	382.557	327.697	247.665	208.507	151.801	146.767	109.335	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

Global Hawk and Predator no longer share the same Program Element (PE). Effective FY05, Global Hawk funding was moved to PE 0305220F, project 675144. The new PE was named GLOBAL HAWK DEVELOPMENT/FIELDING. Predator funding moved to PE 0305219F, project 675143. This PE was named PREDATOR DEVELOPMENT/FIELDING. Beginning in FY06, Signals Intelligence (SIGINT) development and integration funding for all platforms, including Global Hawk, was transferred to the Airborne SIGINT Enterprise PE 0304260F.

(U) A. Mission Description and Budget Item Justification

The Global Hawk System provides high altitude, deep look, long endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios.

This funding is developing the highly capable Global Hawk System, which is comprised of an aircraft, a ground segment, and a support segment. The aircraft is a fully autonomous, high altitude, long endurance remotely piloted aircraft (RPA). The RQ-4A is an imagery intelligence-collecting RPA designed to carry 2,000 pounds of payload. The RQ-4B is a multi-intelligence collecting RPA designed to carry a 3,000-pound payload. Funds will also enable integration and testing of improved payload designs, including a Synthetic Aperture Radar (SAR), an Electro-Optical (EO)/Infrared (IR) camera, Signals Intelligence (SIGINT), and the Multi-Platform Radar Technology Insertion Program (MP-RTIP), etc. The user will determine the optimal payload configuration and quantity for each aircraft based on current operational requirements. The Ground Station (GS) includes the Mission Control Element (MCE) and the Launch and Recovery Element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, training, etc., to enable 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.

This program is budget activity 7, Operational Systems Development, because it utilizes Air Force R&D to develop a highly capable operational system.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue spiral development and related tasks, to satisfy Capabilities Description Document requirements.			
(U) Aircraft	97.696	114.339	79.153
(U) Payloads	16.399	55.809	30.404
(U) Ground Station	13.810	30.923	32.129
(U) Support Segment	13.164	24.310	18.180
(U) Program Management	27.790	5.846	6.545
(U) Systems Engineering	16.900	16.700	17.980
(U) Test	23.190	30.800	28.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE 5144 Global Hawk

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Provide government test and evaluation support at Edwards AFB	11.253	10.281	12.930
(U)	Provide government mission support, and other related costs.	13.714	12.853	14.660
(U)	Demonstrations and exercises	0.638		
(U)	Multi-Platform Radar Technology Improvement Program (MP-RTIP) sensor adaptation	33.229	17.613	7.684
(U)	GWOT Supplemental Funding	34.700		
(U)	Volumetric Radar Data Processing development	5.000		
(U)	Fielding Strategy Acceleration	13.000	8.223	
(U)	Continue advanced Airborne Signals Intelligence Program (ASIP) payload modernization for Global Hawk and U-2.*	62.074		
(U)	Total Cost	382.557	327.697	247.665

* ASIP platform integration for Global Hawk is in the spiral development line and for the U-2 it is in PE 0305202F, project 674820.

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E (PE 35205F)									
(U)	AF RDT&E (PE 34260F)		4.958	10.520	10.770	11.018	11.258	11.438	Continuing	TBD
(U)	AF RDT&E (PE 27423F)		5.352	16.064	11.266	15.869	20.179	24.066	Continuing	TBD
(U)	Other APPN									
(U)	AF MILCON	9.911	14.058	78.800						
(U)	AF O&M	60.491	18.869	72.615	84.431	115.703	133.417	137.473	Continuing	TBD
(U)	AF MILPERS	17.777	24.308	29.471	39.065	49.562	55.254	57.018	Continuing	TBD
(U)	Aircraft Procurement, APPN 10 AF (HAE UAV)	359.072	359.608	493.191	519.849	576.361	579.286	609.909	Continuing	TBD
(U)	Aircraft Procurement, APPN 11 AF (HAE UAV)			11.309	23.681	78.566	95.598	64.093	Continuing	TBD
(U)	Other Procurement, 3080 (HAE UAV)	0.263	0.283		0.816					

(U) D. Acquisition Strategy

The Global Hawk program uses a Spiral Development strategy to provide the warfighter with a near-term, combat capability with increased, time-phased capability improvements as technology and risk achieve satisfactory levels.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**

PROJECT NUMBER AND TITLE: **5144 Global Hawk**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Spiral development	SS/CPAF	Northrop Grumman Integrated Systems, San Diego, CA		238.301	Feb-05	286.944	Feb-06	212.391	Feb-07	Continuing	TBD	TBD
SIGINT sensor development	SS CPAF	Northrop Grumman Electronic Systems Laboratory, San Jose, CA		62.074	Feb-05					0.000	62.074	TBD
Ground station development	SS CPAF	Raytheon, Falls Church, VA		12.832	Feb-05					0.000	12.832	TBD
Communications systems develpment	SS CPAF	L-3, Salt Lake City, UT		5.507	Mar-05					0.000	5.507	TBD
MP-RTIP adaptation	SS CPAF	Northrop Grumman Integrated Systems, El Segundo, CA		33.229	Feb-05	17.613	Feb-06	7.684	Feb-07	Continuing	TBD	TBD
Volumetric Radar Data Processing Development				5.000	Oct-05					0.000	5.000	
Subtotal Product Development			0.000	356.943		304.557		220.075		Continuing	TBD	TBD
Remarks:												
(U) Support												
Contractor Program support	SS/CPFF	Northrop Grumman Integrated Systems, San Diego, CA		1.433	Jan-05					0.000	1.433	TBD
Govt. Program support	MIPR	Various Govt Orgs		3.262	Dec-04	2.488	Dec-05	3.299	Dec-06	Continuing	TBD	TBD
Subtotal Support			0.000	4.695		2.488		3.299		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Flight test and Evaluation	PO	AFFTC, Edwards AFB		10.195	Jan-05	10.281	Jan-06	12.930	Jan-07	Continuing	TBD	TBD
Demo & Exercise Support	MIPR / CPFF	Various contractor and		0.638	May-05					0.000	0.638	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING

PROJECT NUMBER AND TITLE: 5144 Global Hawk

			govt orgs										
	Subtotal Test & Evaluation			0.000	10.833		10.281		12.930		Continuing	TBD	TBD
	Remarks:												
(U)	Management												
	A&AS	PR	Dayton, OH		9.146	Mar-05	9.431	Mar-06	10.421	Mar-07	Continuing	TBD	TBD
	Other Govt Orgs	Various	Dayton OH		0.940		0.940		0.940		Continuing	TBD	TBD
	Subtotal Management			0.000	10.086		10.371		11.361		Continuing	TBD	TBD
	Remarks:												
(U)	Total Cost			0.000	382.557		327.697		247.665		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305220F GLOBAL HAWK DEVELOPMENT/FIELDING	PROJECT NUMBER AND TITLE: 5144 Global Hawk

Proposed Program Restructure

U.S. AIR FORCE

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

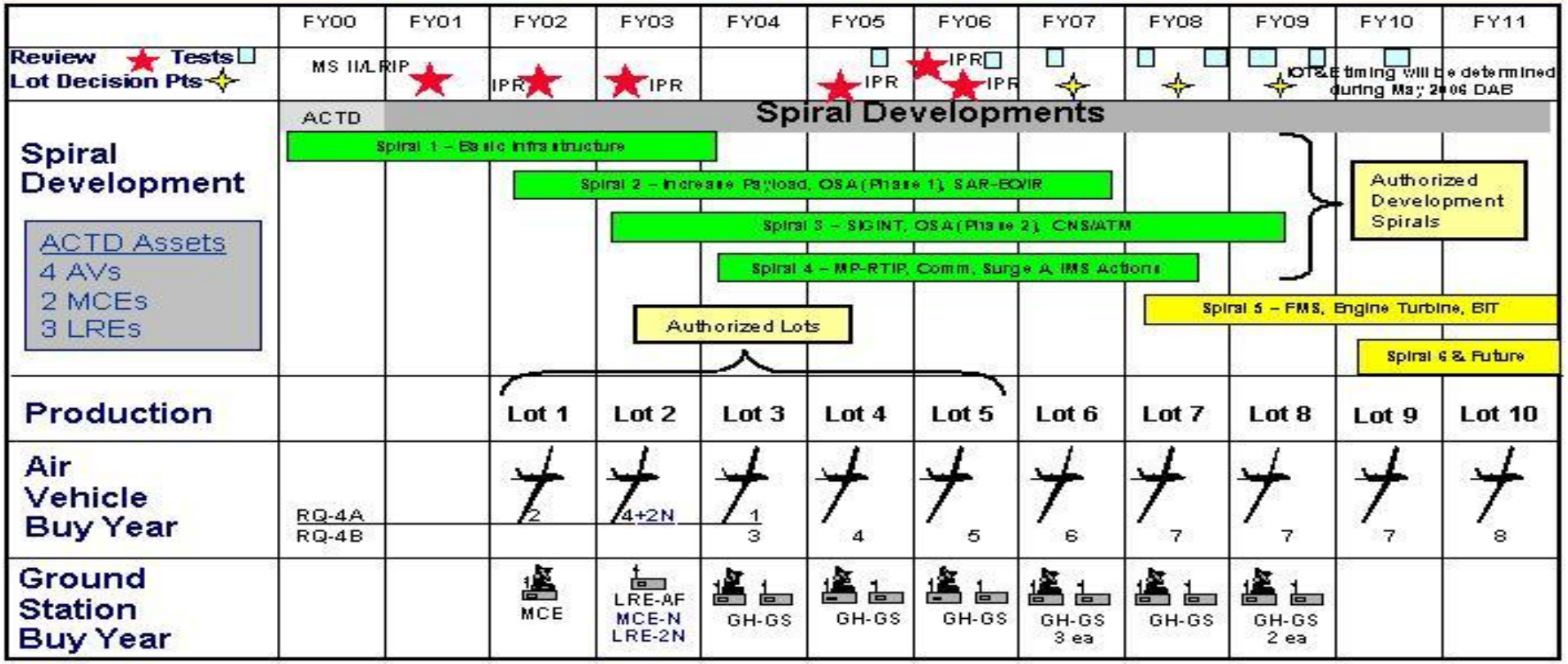

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305220F GLOBAL HAWK DEVELOPMENT/FIELDING**	**5144 Global Hawk**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) SOUTHCOM Demo Initiation	1Q		
(U) Spiral 4 contract definitization award	2Q		
(U) In-progress review	2Q		
(U) Operational Assessment (FOL fielding strategy)	4Q		
(U) In-progress review		1Q	
(U) SIGINT High Band Subsystsem (HBS demonstration)		1Q	
(U) Fuselage Ultimate Load Test (V-tail, composite AFT, metallic fuselage)		2Q	
(U) In-progress review (program rebaseline)		3Q	
(U) Wing Ultimate Load Test		3Q	
(U) Operational Assessment (sensor)		3Q	
(U) MP-RTIP Integration CDR		4Q	
(U) RQ-4B first flight			1Q

PE NUMBER: 0305221F
PE TITLE: Network Centric Collaborative Targeting

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	8.524	8.499	8.811	9.047	8.953	9.232	Continuing	TBD
5197 Core Technology	0.000	8.524	8.499	8.811	9.047	8.953	9.232	Continuing	TBD

In FY 2006, Proj 675197, Network Centric Collaborative Targeting (NCCT) (TIARA), efforts were transferred from PE 0305206F, Airborne Reconnaissance Systems, Proj 675038, NCCT in order to transition NCCT capabilities from an Advanced Concept Technology Demonstration to operational system fielding.

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) uses machine-to-machine interfaces and Internet Protocol connectivity to horizontally integrate Battle Management/Command and Control (BM/C2)/Intelligence, Surveillance, and Reconnaissance (ISR) platforms and provide timely detection, identification, and geo-location of high priority targets to combatant commanders and their forces. NCCT will develop and deploy the capability to share data, coordinate sensor activity, and provide rapidly correlated results between dissimilar collection platforms and decision-making nodes. NCCT will develop and refresh core technology required for network-centric interactions, develop platform interfaces system program offices, and field NCCT functionality.

NCCT Core Technology develops machine-to-machine technology to horizontally integrate dissimilar BM C2/ISR assets to include, but not limited to, Rivet Joint, Joint Surveillance Target Attack Radar System (Joint STARS), Airborne Warning and Control System (AWACS), Deployable Common Ground Station (DCGS)/U2, Falconer Air and Space Operations Center (AOC), national systems and Army Guardrail. NCCT Core Technology includes, but is not limited to, network messages and formats, correlation software and data rules of interaction, and data guards. Core technology also supports the Systems Integration Lab used to develop and test NCCT network centric performance.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget		8.647	8.464
(U)	Current PBR/President's Budget	0.000	8.524	8.499
(U)	Total Adjustments	0.000	-0.123	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.123	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY 2006, Proj 675197, Network Centric Collaborative Targeting (NCCT) (TIARA), efforts were transferred from PE 0305206F, Airborne Reconnaissance Systems, Proj

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305221F Network Centric Collaborative Targeting**

675038, NCCT in order to transition NCCT capabilities from an Advanced Concept & Technology Demonstration (ACTD) to operational system fielding.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305221F Network Centric Collaborative Targeting**	**5197 Core Technology**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5197 Core Technology	0.000	8.524	8.499	8.811	9.047	8.953	9.232	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

This PE has been established to transition NCCT capabilities from ACTD to operational system fielding.

(U) A. Mission Description and Budget Item Justification

Network Centric Collaborative Targeting (NCCT) uses machine-to-machine interfaces and Internet Protocol connectivity to horizontally integrate Battle Management/Command and Control (BM/C2)/Intelligence, Surveillance, and Reconnaissance (ISR) platforms and provide timely detection, identification, and geo-location of high priority targets to combatant commanders and their forces. NCCT will develop and deploy the capability to share data, coordinate sensor activity, and provide rapidly correlated results between dissimilar collection platforms and decision-making nodes. NCCT will develop and refresh core technology required for network-centric interactions, develop platform interfaces system program offices, and field NCCT functionality.

NCCT Core Technology develops machine-to-machine technology to horizontally integrate dissimilar BM C2/ISR assets to include, but not limited to, Rivet Joint, Joint Surveillance Target Attack Radar System (Joint STARS), Airborne Warning and Control System (AWACS), Deployable Common Ground Station (DCGS)/U2, Falconer Air and Space Operations Center (AOC), national systems and Army Guardrail. NCCT Core Technology includes, but is not limited to, network messages and formats, correlation software and data rules of interaction, and data guards. Core technology also supports the Systems Integration Lab used to develop and test NCCT network centric performance.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) NCCT Core Technology Development and Refresh	0.000	8.024	7.999
(U) Management	0.000	0.250	0.250
(U) Indirect Engineering Support	0.000	0.250	0.250
(U) Total Cost	0.000	8.524	8.499

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE35206F BPAC 675038	8.101	0.952							9.053

(U) D. Acquisition Strategy

Award the Sole Source, Cost Plus Fixed Fee contract to incrementally develop and refine NCCT core technology.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305221F Network Centric Collaborative Targeting**

PROJECT NUMBER AND TITLE: **5197 Core Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Core Technology Development	CPFF	L3 ComCept / Rockwall, TX				8.024	Dec-05	7.999	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		8.024		7.999		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Management	Multiple	ASC/BSSG / Dayton, OH				0.250	Nov-05	0.250	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		0.250		0.250		Continuing	TBD	TBD
Remarks:												
(U) Engineering Support												
Indirect Engineering Support	Multiple	ASC/BSSG / Dayton, OH	0.000	0.000		0.250	May-06	0.250	Oct-06	Continuing	TBD	
Subtotal Engineering Support			0.000	0.000		0.250		0.250		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	0.000		8.524		8.499		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305221F Network Centric Collaborative Targeting**	**5197 Core Technology**

	Task Name	2006 Q1	2006 Q2	2006 Q3	2006 Q4	2007 Q1	2007 Q2	2007 Q3	2007 Q4
1	Continued Core Technology Development								
2	Systems Integration Lab Operation								
3	NCCT Interface Control Document Update								
4	NCCT Network Controller Software Release								
5	NCCT Operations Interface Upgrade								
								19-Jan-06	

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305221F Network Centric Collaborative Targeting	PROJECT NUMBER AND TITLE: 5197 Core Technology

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Continued Core Technology Development		1-4Q	1-4Q
(U) Systems Integration Lab Operation		1-4Q	1-4Q
(U) NCCT Interface Control Document Update		3Q	3Q
(U) NCCT Network Controller Software Release		3Q	3Q
(U) NCCT Operations Interface Upgrade		3Q	3Q

PE NUMBER: 0305887F
PE TITLE: Electronic Combat Intelligence Support

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305887F Electronic Combat Intelligence Support

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.923	0.961	5.163	5.335	5.452	5.595	5.675	Continuing	TBD
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	0.923	0.961	5.163	5.335	5.452	5.595	5.675	Continuing	TBD

FY04: Program content and funding transferred from PE 33140F-INFOSEC project 4871-Information Operations Technology, into PE 35887F-Electronic Combat Intel Support project 71OT-Information Operations technology. This alignment better supports the RDT&E effort for information operations.

FY05: Under PE 35887F, the funding and content contained in project, 71OT-Information Operations Technology, transferred to project 0374-Electronic Combat Intel Support, C3 Protection/Multi-Mission, Technology and Support. Project 7IOT will be closed.

(U) A. Mission Description and Budget Item Justification

FY05: Program content and funding transferred from PE 33140F-INFOSEC project 4871-Information Operation Technology, into PE 35887F project 70IOT-IO Technology. This alignment better supports the RDT&E effort for information operations.
FY05: Under PE 35887F, the funding and content in project 7IOT-Information Operations Technology, transferred to project 0374-Electronic Combat Intel Support, C3 Prtoection /Multi-Mission, Technology and Support. Project 7IOT will be closed.

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with AFPD 10-7, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry users and battle labs to set priorities and find synergistic combinations of new technology, doctrine and training. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the Air Force IOCP and other applicable requirements documents.

(U) This program funds studies to leverage current DoD lab efforts. Studies will be deconflicted with and will complement PE's 0208021 Information Warfare Support

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305887F Electronic Combat Intelligence Support

and 0307293 Information Operations Systems and Support. Some aspects of this program will be protected under the PANTHER DEN Special Access Program. Data available upon request.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops, and fields IO technologies.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.923	0.972	0.989
(U)	Current PBR/President's Budget	0.923	0.972	5.223
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

This PE received additional funding beginning in FY07 as a SECAF directed, OSD approved effort in support of current and future PANTHER DEN activities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305887F Electronic Combat Intelligence Support	PROJECT NUMBER AND TITLE: 0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
0374	Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt	0.923	0.961	5.163	5.335	5.452	5.595	5.675	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FY05: Program content and funding transferred from PE 33140F-INFOSEC project 4871-Information Operation Technology, into PE 35887F project 70IOT-IO Technology. This alignment better supports the RDT&E effort for information operations.
FY05: Under PE 35887F, the funding and content in project 7IOT-Information Operations Technology, transferred to project 0374-Electronic Combat Intel Support, C3 Prtoection /Multi-Mission, Technology and Support. Project 7IOT will be closed.

(U) This program expedites Information Superiority (IS) Technology transition from laboratory, industry, and academia to operational platforms via studies, rapid prototyping, technology demonstrations and other RDT&E efforts. Program efforts directly support the AF Information Operations Capabilities Plan (IOCP) and the DoD Information Operations (IO) Roadmap.

(U) The program office investigates and selects the highest potential Information Operations technologies to meet specific shortfalls and deficiencies documented by major commands (MAJCOMs), unified commands, and IO agencies in Mission Area Plans (MAPs) and capabilites documents. In accordance with AFPD 10-7, the IS core capability areas to be considered are influence operations, electronic warfare operations and network warfare operations.

(U) Planned areas of study, prototyping, and demonstration, include but are not limited to, techniques and technologies for defending systems against sophisticated Information Superiority (IS) and computer network attacks. This will be done by exploiting Integrated Air Defense Systems (IADS), Command and Control Systems, and applying the latest advancements in emerging physics, communications, directed energy, electronic sensors, and intelligence to IS.

(U) The program office works directly with labs, industry users and battle labs to set priorities and find synergistic combinations of new technology, doctrine and training. Program efforts will be prioritized and guided by the Information Operations Capabilities Team (IOCT) in support of the Air Force IOCP and other applicable requirements documents.

(U) This program funds studies to leverage current DoD lab efforts. Studies will be deconflicted with and will complement PE's 0208021 Information Warfare Support and 0307293 Information Operations Systems and Support. Some aspects of this program will be protected under the PANTHER DEN Special Access Program. Data available upon request.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops, and fields IO technologies.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

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

		FY 2005	FY 2006	FY 2007
(U)	The IO Technology Program provides security, systems engineering, rapid prototyping, and demonstrations of state-of-the-art IO technologies to meet the warfighters IO requirements. The IO Capabilities Team (IOCT) and the IO Capabilities Plan will be supported through these developmental efforts.	0.923	0.978	5.223
(U)				
(U)				
(U)	Total Cost	0.923	0.978	5.223

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	PE 28021 Information Warfare Support and (future PE) 37293	7.147	15.204	24.717	26.166	26.610	27.580	28.096	Continuing	TBD

(U) D. Acquisition Strategy

All major contracts within this program element are awarded after full and open competition unless other than full and open is justified to the Program Executive Officer (PEO) or Designated Approval Authority (DAA).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305887F Electronic Combat Intelligence Support**

PROJECT NUMBER AND TITLE: **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Security Systems Engineering	CPFF	Lockheed Martin, Hanscom AFB MA		0.050	Jun-05	0.050	Jun-06	0.050	Jun-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.050		0.050		0.050		Continuing	TBD	TBD
Remarks:												
(U) Support												
Security Support	JTSP	Various, Hanscom AFB MA		0.400	Jan-05	0.520	Jan-06	0.558	Jan-07	Continuing	TBD	TBD
Engineering Support	FFRDC	MITRE, Bedford MA		0.175	Oct-04	0.233	Oct-05	0.243	Oct-06	Continuing	TBD	TBD
Subtotal Support			0.000	0.575		0.753		0.801		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Funded Via Platform SPOs								4.216		Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		4.216		Continuing	TBD	TBD
Remarks:												
(U) Management												
Operating Costs		ESC/SRNW, Hanscom AFB MA		0.298	N/A	0.175	N/A	0.156	N/A	Continuing	TBD	TBD
Subtotal Management			0.000	0.298		0.175		0.156		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.923		0.978		5.223		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

PANTHER DEN Schedule

FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11
		THIS PROGRAM'S SCHEDULE IS PROTECTED UNDER A SPECIAL ACCESS PROGRAM CLASSIFICATION					

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305887F Electronic Combat Intelligence Support**	PROJECT NUMBER AND TITLE **0374 Electronic Combat Spt, C3 Protection/Multi-Mission, Technology and Spt**

(U) Schedule Profile

	FY 2005	FY 2006	FY 2007

(U) Program schedules are protected under Special Access Program classification

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PE NUMBER: 0305906F
PE TITLE: NCMC - TW/AA System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	61.701	57.329	50.908	31.785	4.259	8.331	17.619	Continuing	TBD
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	61.701	57.329	50.908	31.785	4.259	8.331	17.619	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Combatant Commanders' Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S addresses all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to extend to meet evolving mission needs (e.g., Space-Based Infrared System, Command and Control Battle Management and Communications, Offensive Counterspace, Airborne Laser, Space-Based Radar, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	64.822	85.222	67.316
(U)	Current PBR/President's Budget	61.701	57.329	50.908
(U)	Total Adjustments	-3.121	-27.893	
(U)	Congressional Program Reductions		-11.063	
	Congressional Rescissions	-0.877	-0.830	
	Congressional Increases			
	Reprogrammings	-0.500	-16.000	
	SBIR/STTR Transfer	-1.744		

(U) Significant Program Changes:

FY06 Congressional Reductions ($11M) and DoD directed budget reductions in FY06/07 ($33M) to support higher priorities.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System	PROJECT NUMBER AND TITLE: 4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4806	Combatant Commanders' Integrated Command and Control System (CCIC2S)	61.701	57.329	50.908	31.785	4.259	8.331	17.619	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Combatant Commanders' Integrated Command and Control System (CCIC2S) provides the future standards-based, interoperable architecture for a North American Aerospace Defense Command/US Strategic Command (NORAD/USSTRATCOM) Battle Management/C4I system of systems that complies with the Network Centric Enterprise Services, Joint Technical Architecture standards and provides for DoD/Joint Command and Control (C2) interoperability. CCIC2S addresses all NORAD and selected USSTRATCOM missions including the Integrated Tactical Warning/Attack Assessment of missile, space, and air threats, and Space Battle Management. CCIC2S will provide NORAD Commander and Combatant Commander USSTRATCOM a C2 system that is interoperable with the NORAD/USSTRATCOM warfighting functions and supporting/supported Combatant Commanders. CCIC2S has the flexibility to enable it to extend to meet evolving mission needs (e.g., Space-Based Infrared System, Command and Control Battle Management and Communications, Offensive Counterspace, Airborne Laser, Space-Based Radar, Computer Network Defense and Information Operations). The CCIC2S operational architecture will allow Combatant Commanders to better monitor world situations, make threat assessments, formulate Courses of Action, and develop force direction for synchronized warfighter operations.

This program element is in Budget Activity 7, Operational System Development, because the projects in this program element support development acquisition programs or upgrades in support of operational systems.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Core C2 services: Continue Enterprise network infrastructure (Core C2) development to support Air, Missile, and Space mission elements.	29.401	25.170	38.344
(U)	Air Mission Development/Test/Delivery: Continue Air mission capability incremental development and deliver when complete supporting Air Mission/Theater Battle Management Core System (TBMCS)/Global Command and Control System (GCCS) integration.	1.347	0.000	0.000
(U)	Missile Mission Development/Test: Continue Missile Warning mission capability incremental development by providing GCCS-based core missile warning capability adaptable to operating locations and interoperable with other National Command Centers. Supports development and delivery of missile monitoring and status tools, theater event displays, and simulated threat environments for improved training capability. Includes software development engineering, and test.	23.155	30.261	10.564
(U)	Space Command and Control (C2) Applications: Continues Combatant Commander's Space C2 applications. It enables the monitoring of resident objects as well as space capabilities and status. Includes delivery of data to Space	7.798	1.898	2.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305906F NCMC - TW/AA System**	PROJECT NUMBER AND TITLE **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

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

		FY 2005	FY 2006	FY 2007
	Surveillance users, detection and processing of space related events.			
(U)	Total Cost	61.701	57.329	50.908

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	OPAF (PE 0305906F, Cheyenne Mountain Complex, P-1 Line Item #42, BA 3)	15.580	18.653	14.904	14.269	18.360	18.817	19.113	Continuing	TBD
(U)	OPAF (PE 0305906F, Spares and Repair Parts, P-1 Line Item #104, BA 5)	0.649	0.670	0.704	0.722	0.739	0.752	0.762	Continuing	TBD

(U) D. Acquisition Strategy

Contract awarded with full and open competition--uses an evolutionary acquisition strategy based on spiral/incremental development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305906F NCMC - TW/AA System**	**4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	CP/AF	Colorado Springs, CO		56.715	Oct-04	52.181	Oct-05	45.553	Oct-06	Continuing	TBD	TBD
		Lockheed Martin (Denver, CO)								0.000	0.000	
Subtotal Product Development			0.000	56.715		52.181		45.553		Continuing	TBD	TBD
Remarks:												
(U) Support												
MITRE	CP/FF	Colorado Springs, CO		2.545	Nov-04	2.319	Nov-05	2.412	Nov-06	Continuing	TBD	TBD
A&AS	CP/FF	various, Colorado Springs, CO		1.326	Apr-05	1.750	Apr-06	1.820	Apr-07	Continuing	TBD	TBD
Program Support	Various	various, Colorado Springs, CO		1.115	Nov-04	1.079	Nov-05	1.123	Nov-06	Continuing	TBD	TBD
Subtotal Support			0.000	4.986		5.148		5.355		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	61.701		57.329		50.908		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305906F NCMC - TW/AA System	PROJECT NUMBER AND TITLE: 4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)

Exhibit R-4 CCIC2S

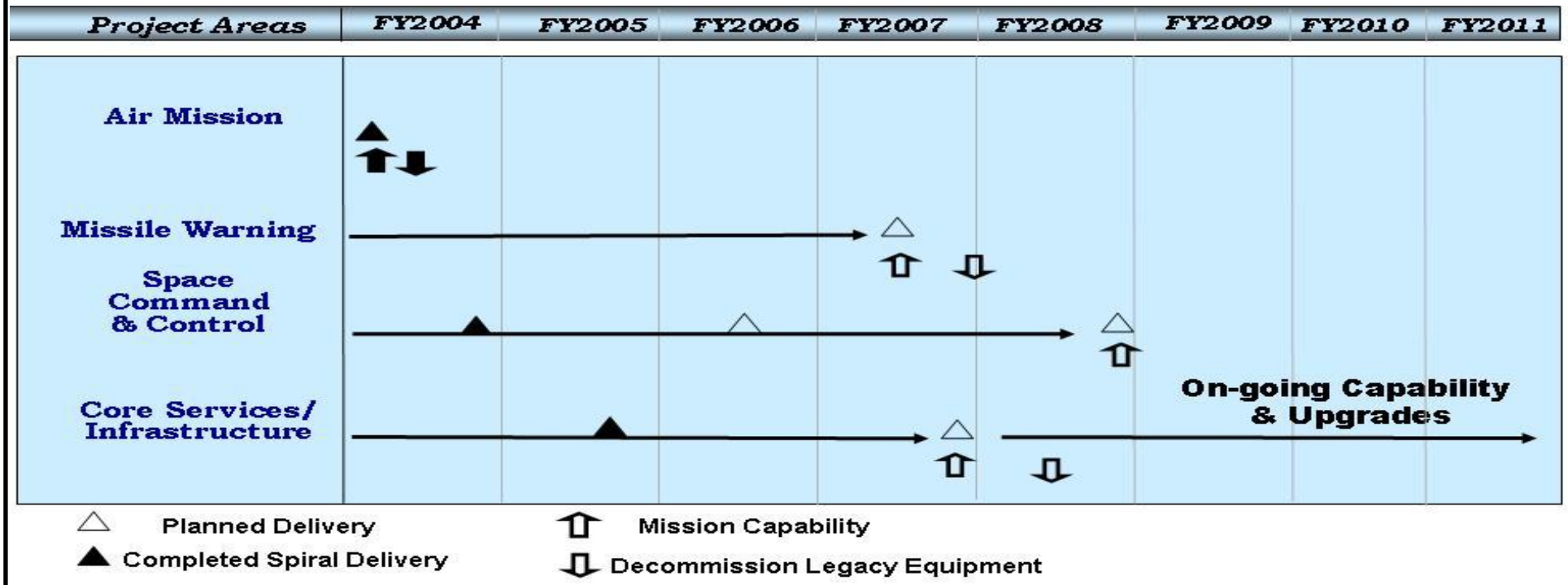

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0305906F NCMC - TW/AA System**	PROJECT NUMBER AND TITLE: **4806 Combatant Commanders' Integrated Command and Control System (CCIC2S)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Missile Warning/Missile Defense Deliveries			2Q
(U) Space Command and Control Deliveries		3Q	
(U) Core Services/Infrastructure Deliveries	3Q		4Q

PE NUMBER: 0305910F
PE TITLE: SPACETRACK

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	129.438	164.190	0.000	0.000	0.000	0.000	0.000	0.000	413.590
4930	Space Based Space Surveillance	76.424	91.913	0.000	0.000	0.000	0.000	0.000	0.000	236.940
5011	Space Situational Awareness Initiatives	10.645	16.076	0.000	0.000	0.000	0.000	0.000	0.000	55.650
A008	Sensor Service Life Extension Programs (Sensor SLEPs)	34.525	25.022	0.000	0.000	0.000	0.000	0.000	0.000	78.323
A009	Orbital Deep Space Imager (ODSI)	7.844	24.179	0.000	0.000	0.000	0.000	0.000	0.000	35.677
A015	Space Fence	0.000	7.000	0.000	0.000	0.000	0.000	0.000	0.000	7.000

In FY 2007 these projects all transferred to PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the Space Situation Awareness construct, with two exceptions: Project 67A008 transferred to PE 0305940F, Space Situation Awareness Operations, for the same reason, and Project 67A009 was terminated in FY 2006 rather than transferred to another PE.

(U) A. Mission Description and Budget Item Justification

The Spacetrack program element funds a worldwide network of electro-optical and radar sensors that conduct surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification and cataloging; satellite attack warning; notification to U.S. forces of satellite flyovers; space treaty monitoring; and technical intelligence gathering. Ongoing modernization efforts are upgrading existing sensors, improving data integration across the sensor network, and developing new network sensors in order to meet current and emerging requirements for Space Situation Awareness (SSA). Spacetrack activities transfer to new SSA program elements in FY 2007 to reflect evolution to the SSA concept.

All development efforts in this program element are in Budget Activity 7, Operational Systems Development, because they develop, field, modify, and integrate sensors within the operational SSA network.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	139.003	151.102	210.563
(U)	Current PBR/President's Budget	129.438	164.190	0.000
(U)	Total Adjustments	-9.565	13.088	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.779	-2.912	
	Congressional Increases		16.000	
	Reprogrammings	-5.000		
	SBIR/STTR Transfer	-3.786		

(U) Significant Program Changes:

FY 2006: Congressional adds of +$7.000M for Space Fence and +$9.000M for Space-Based Space Surveillance

FY 2007: Funding transferred to PE 0305940F and PE 0604425F

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305910F SPACETRACK**	**4930 Space Based Space Surveillance**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4930 Space Based Space Surveillance	76.424	91.913	0.000	0.000	0.000	0.000	0.000	0.000	236.940
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 this effort transferred to Project 65A006, Space Based Space Surveillance, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2005 - FY 2011 schedule for it is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

Building upon the success of the Space-Based Visible technology demonstration, which proved the utility of surveilling orbiting objects from space, the Space-Based Space Surveillance (SBSS) project develops a constellation of optical sensing satellites to find, fix, and track objects in Earth orbit. It will accomplish this via collecting and processing space object identification and satellite metric data, then communicating it to command and control nodes. Migrating surveillance capabilities to space augments existing ground sensors with advanced 24-hour, all-weather object search capabilities that allow detection of smaller targets with greater timeliness, improve orbit characterization accuracy by an order of magnitude, and vastly improve capacity for tracking multiple objects simultaneously. In conjunction with information from other Space Situation Awareness network sensors, the resulting data will enable near-continous detection and tracking of space objects.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Block 10 design, development, and risk reduction	68.862	74.722	0.000
(U) Block 10 launch vehicle integration	0.705	4.273	0.000
(U) Block 20 concept development	0.000	2.000	0.000
(U) Program operations	6.857	10.918	0.000
(U) Total Cost	76.424	91.913	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	0.000	110.558	194.119	202.342	293.515	206.305	Continuing	TBD
(U) Missile Procurement, Air Force (PE 305940F, Space Situation Awareness Operations)	0.000	0.000	0.000	0.000	0.000	0.000	31.406	Continuing	TBD

(U) D. Acquisition Strategy

This system is being acquired via a two-phased approach. Block 10 will develop and field a single pathfinder satellite to replace the capability of the aging

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

Space-Based Visible sensor on the orbiting Midcourse Space Experiment research & development spacecraft. Block 20 will deploy a robust constellation of four satellites incorporating more advanced technologies for worldwide space surveillance. Lessons learned from the former effort will guide development of the latter. Block 10 began as an option on the existing Mission Area Prime Integrating Contract for the space control mission area to expedite fielding but was transformed into its own contract when a competitive award was held for the Block 10 subcontract. The contract for Block 20 will be awarded following a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **4930 Space Based Space Surveillance**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Block 10 design and development	C/CPAF	Northrop Grumman, Redondo Beach, CA	57.367	68.862	Dec-04	74.722	Nov-05	0.000		0.000	200.951	
Technical risk reduction	SS/CPFF	MIT Lincoln Laboratory, Lexington, MA	1.100	0.600	Jan-05	0.600	Jan-06	0.000		0.000	2.300	
Launch vehicle integration	MIPR	Space and Missile Systems Center Det. 12, Kirtland AFB, NM	2.166	0.705	Dec-04	4.273	Nov-05	0.000		0.000	7.144	
Block 20 concept definition studies	Various	Various	0.000	0.000		2.000	Jan-06	0.000		0.000	2.000	
Subtotal Product Development			60.633	70.167		81.595		0.000		0.000	212.395	0.000
Remarks:												
(U) Support												
Program operations	Various	Space and Missile Systems Center, Los Angeles AFB, CA	7.970	6.257	Nov-04	10.318	Oct-05	0.000		0.000	24.545	
Subtotal Support			7.970	6.257		10.318		0.000		0.000	24.545	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable				0.000						0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable				0.000						0.000	0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			68.603	76.424		91.913		0.000		0.000	236.940	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

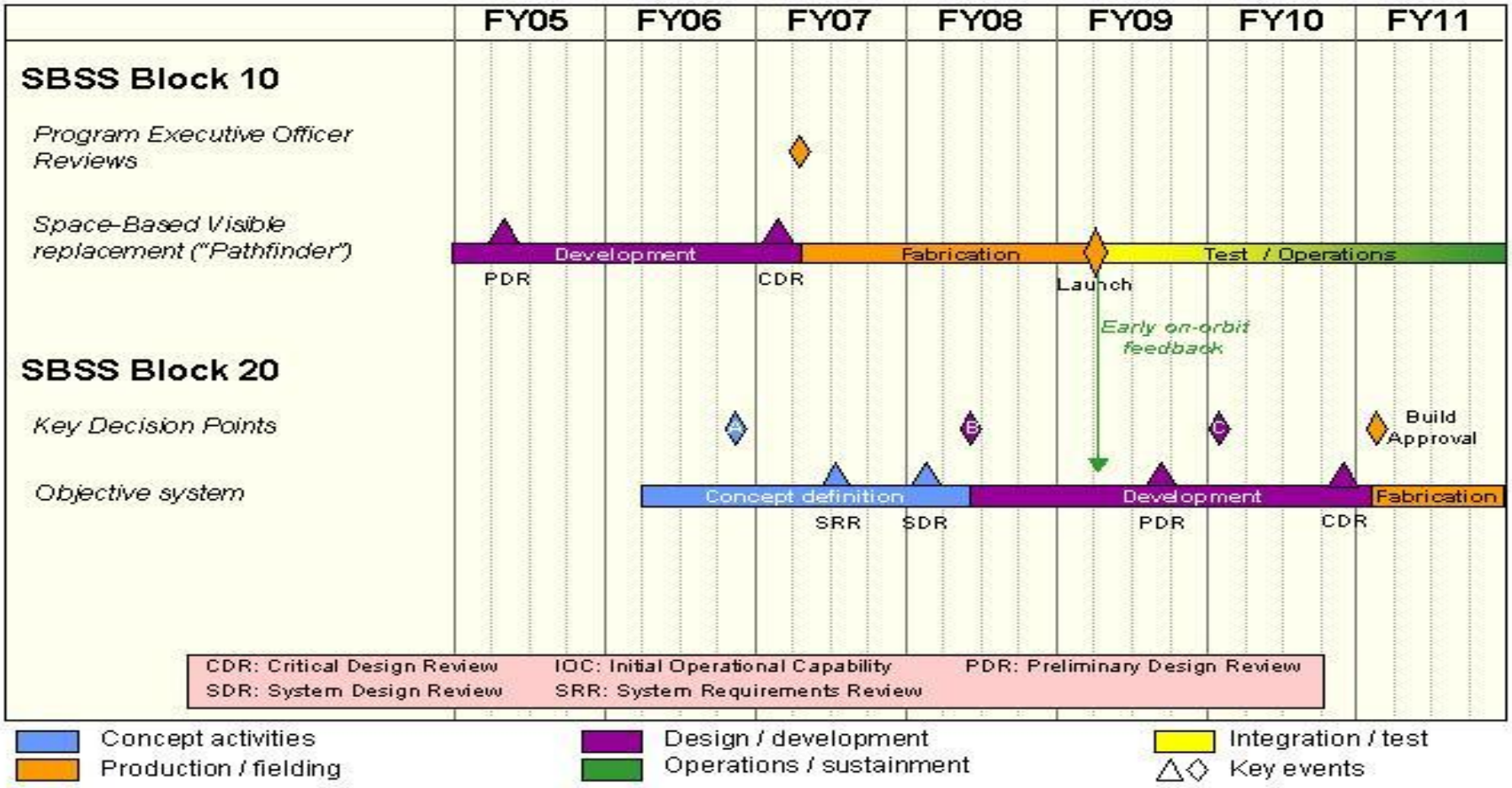

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **4930 Space Based Space Surveillance**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Block 10 Preliminary Design Review	2Q		
(U) Block 20 Key Decision Point A		4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

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

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5011	Space Situational Awareness Initiatives	10.645	16.076	0.000	0.000	0.000	0.000	0.000	0.000	55.650
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 these efforts transferred to Project 65A008, Space Situation Awareness Initiatives, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2005 - FY 2011 schedule for them is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness Initiatives improve the integration of the disparate information components of Space Situation Awareness (SSA) into a single informational picture to better support space command, control, operations, and planning activities with timely data.

The main project initiative, Space Situation Awareness Command and Control (SSA C2), develops software applications to collect, process, fuse, and disseminate intelligence, surveillance, reconnaissance, and environmental data; combines tools developed in these four areas into integrated capabilities for delivery; conducts operational utility evaluations of these using the SSA data fusion testbed; refines and integrates them into space command & control applications; and upgrades the testbed to ensure its ability to evaluate the utility of future applications under operationally-representative conditions. A related Extended Space Sensors Architecture Advanced Concept Technology Demonstration will also develop, test, and demonstrate SSA data fusion capabilities. Successive delivery of SSA C2 capability spirals progressively improves space command and control via more effective correlation and distribution of data collected by the SSA network's various sensors.

This project also encompasses the architecture development and computer modeling efforts of Air Force Space Command's Space Situation Awareness Integration Office (SSAIO), the lead service/system integrator and executive agent for the nation's SSA activities. SSAIO captures SSA capability needs; develops short- and mid-term enterprise architectures; and evaluates satisfaction of capabilities to guide Department of Defense and intelligence community budget formulation, systems integration, and requirements allocation toward improved fulfillment of U.S. SSA needs via greater collaboration and leveraging of community assets.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Intelligence data integration and applications	0.800	2.117	0.000
(U) Surveillance & reconnaissance data integration and applications	5.473	5.679	0.000
(U) Space environmental data integration and applications	1.220	1.129	0.000
(U) Fusion tool development, assessments, requirements development, and technical support	1.752	4.316	0.000
(U) Extended Space Sensors Architecture Advanced Concept Technology Demonstration (ESSA ACTD)	0.000	1.200	0.000
(U) SSA architecture development and modeling activities	1.400	1.635	0.000
(U) Total Cost	10.645	16.076	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	0.000	10.599	8.943	7.407	7.793	7.866	Continuing	TBD

(U) D. Acquisition Strategy

SSA initiatives utilize existing engineering and study contracts awarded and maintained by space planning and development organizations throughout the Department of Defense in order to accomplish required development activities and to obtain infrastructure and technical support. Most activities develop, test, and deliver capabilities or provide products in successive spirals. Operational needs drive the prioritization and selection of particular applications and architecture products for development.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

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

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Intelligence data applications	Various	Various	0.678	0.800	Feb-05	2.117	Oct-05	0.000		0.000	3.595	
Surveillance & reconnaissance data applications	Various	Various	12.258	5.473	Jan-05	5.679	Nov-05	0.000		0.000	23.410	
Space environmental data applications	Various	Various	3.808	1.220	Feb-05	1.129	Dec-05	0.000		0.000	6.157	
ESSA ACTD	SS/CPFF	MIT Lincoln Laboratory, Lexington, MA	0.000	0.000		1.200	Feb-06	0.000		0.000	1.200	
SSA architecture development	Various	Various	2.986	1.400	Feb-05	1.635	Dec-05	0.000		0.000	6.021	
Various (including Eglin, Haystack, and others)	Various	Various	6.744	0.000		0.000		0.000		0.000	6.744	
Subtotal Product Development			26.474	8.893		11.760		0.000		0.000	47.127	0.000
Remarks:												
(U) Support												
Fusion tool development, requirements, and technical support	Various	Electronic Systems Center Det., Peterson AFB, CO	2.455	1.752	Jan-05	4.316	Feb-06	0.000		0.000	8.523	
Subtotal Support			2.455	1.752		4.316		0.000		0.000	8.523	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			28.929	10.645		16.076		0.000		0.000	55.650	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

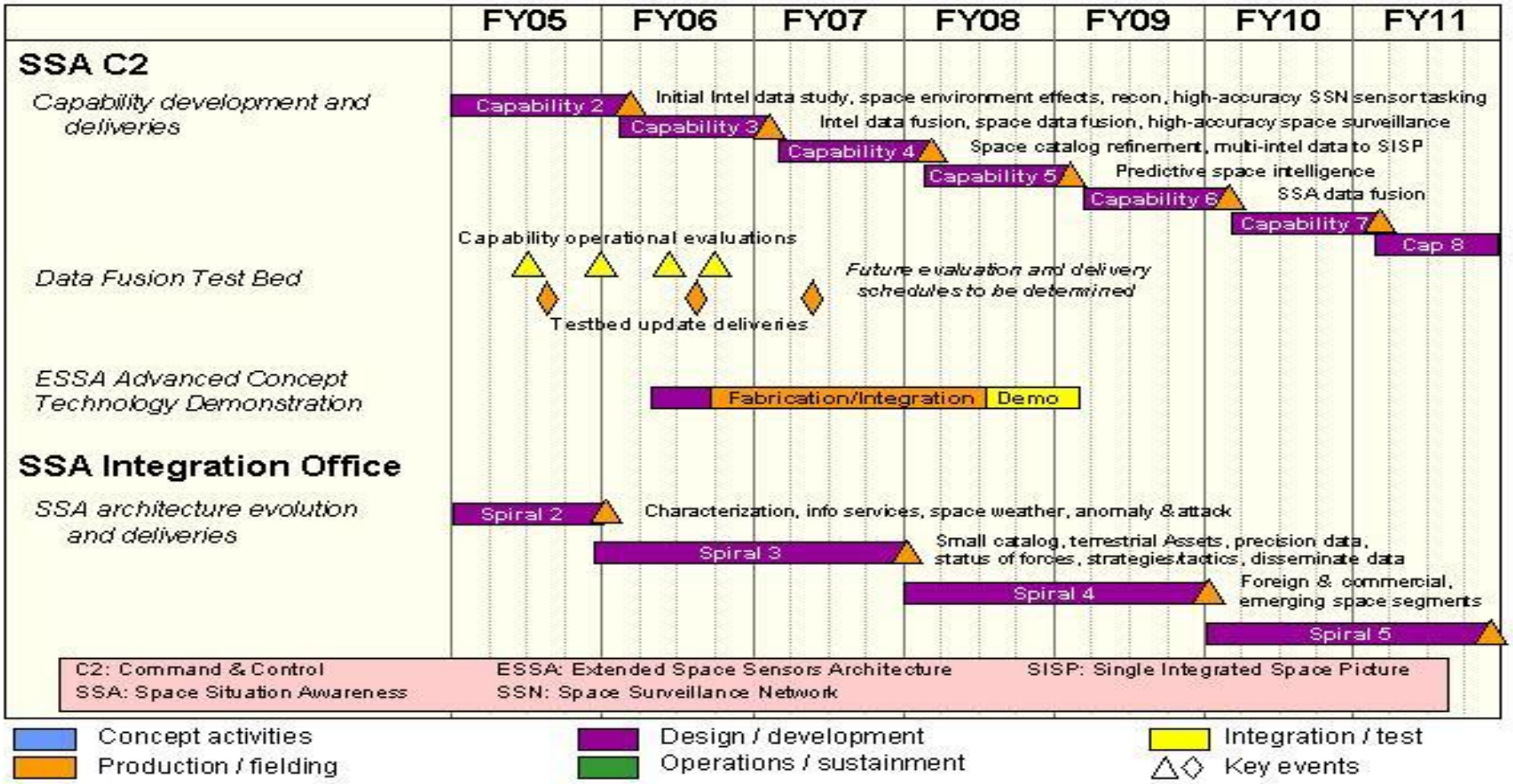

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **5011 Space Situational Awareness Initiatives**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) SSA command & control capability spiral delivery		1Q	
(U) SSA architecture spiral delivery		1Q	
(U) ESSA ACTD commencement		2Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A008	Sensor Service Life Extension Programs (Sensor SLEPs)	34.525	25.022	0.000	0.000	0.000	0.000	0.000	0.000	78.323
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 these efforts transferred to Project 67A017, Sensor Service Life Extension Programs, in PE 0305940F, Space Situation Awareness Operations, to reflect evolution of space surveillance to the new Space Situation Awareness construct. The full FY 2005 - FY 2011 schedule for them is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on funding and activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetime of operational Space Situation Awareness (SSA) sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort will replace its aging, increasingly unsupportable radar processing components and establish a modern software architecture to enable radar operations, sustainment, and technology refreshes through 2028.

The second effort in this project, the Haystack Ultra-Wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides space object identification and metric data to the Air Force to aid SSA operations. The upgrade effort will build a W-band high-power transmitter enabling object imaging with resolution significantly greater than the X-band system's 25-centimeter resolution; it will also replace the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations in an architecture that also supports year-round X-band surveillance for the Air Force. Greater radar resolution is necessary to maintain current levels of space object identification intelligence since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Eglin radar life extension engineering design, development and support	16.717	16.144	0.000
(U) Haystack radar upgrade engineering design, development, and support	12.605	8.878	0.000
(U) Space Fence engineering design, development, and support*	5.203	0.000	0.000
(U) Total Cost	34.525	25.022	0.000

*In FY 2006 Space Fence funding transferred to new Project 67A015, Space Fence, within this program element. See that section of this RDT&E Budget Item Justification for further details on the program.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305940F, Space Situation Awareness Operations)	0.000	0.000	31.401	10.778	0.505	0.264	0.236	0.000	43.184

(U) D. Acquisition Strategy

The Eglin life extension effort utilizes an option on the System Engineering, Sustainment, and Modernization (SENSOR) contract competitively awarded to ITT Industries for sustaining and upgrading various Air Force radars, including the Eglin radar, in February 2002.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the Haystack upgrade effort under a master contract with the Electronics System Center. This effort is classified as applied research under that contract. MIT/LL owns the radar, which it operates as part of its Lincoln Space Surveillance Complex.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Eglin architecture development and life extension	C/CPAF	ITT Industries, Colorado Springs, CO	7.261	14.164	Oct-04	12.785	Oct-05	0.000		0.000	34.210	
Eglin design evaluation	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	1.500	0.100	Feb-05	0.100	Nov-05	0.000		0.000	1.700	
Eglin design evaluation	SS/FP-LOE	MITRE Corporation, Bedford, MA	0.000	0.591	Dec-04	0.000		0.000		0.000	0.591	
Eglin design evaluation	C/FP-LOE	L-3 Titan, Billerica, MA	1.070	0.448	Nov-04	1.093	Dec-05	0.000		0.000	2.611	
Haystack radar upgrade design and build	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	7.750	11.975	Nov-04	8.454	Oct-05	0.000		0.000	28.179	
Haystack design evaluation	C/FP-LOE	L-3 Titan, Billerica, MA	0.256	0.185	Dec-04	0.265	Dec-05	0.000		0.000	0.706	
Haystack design evaluation	Various	Various	0.140	0.215	Mar-05	0.000		0.000		0.000	0.355	
Space Fence requirements development, trade studies, risk mitigation, design, and prototyping*	Various	Various	0.000	4.627	Jun-05	0.000		0.000		0.000	4.627	
Subtotal Product Development			17.977	32.305		22.697		0.000		0.000	72.979	0.000
Remarks: *In FY 2006 Space Fence funding transferred to new Project 67A015, Space Fence, within this program element. See that section of this RDT&E Budget Item Justification for further details on the program.												
(U) Support												
Development review and management	C/FP-LOE	L-3 Titan, Billerica, MA	0.441	0.650	Oct-04	0.890	Dec-05	0.000		0.000	1.981	
Development review and management	Various	Electronic Systems Center, Hanscom AFB, MA	0.358	0.994	Oct-04	1.435	Nov-05	0.000		0.000	2.787	
Space Fence development review and management	Various	Electronic Systems Center, Hanscom AFB, MA	0.000	0.576	Jan-06	0.000		0.000		0.000	0.576	
Subtotal Support			0.799	2.220		2.325		0.000		0.000	5.344	0.000
Remarks:												
(U) Test & Evaluation												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305910F SPACETRACK**	**A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

	Not applicable						0.000	
	Subtotal Test & Evaluation	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Management							
	Not applicable						0.000	
	Subtotal Management	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Remarks:							
(U)	Total Cost	18.776	34.525	25.022	0.000	0.000	78.323	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A008 Sensor Service Life Extension Programs (Sensor SLEPs)**

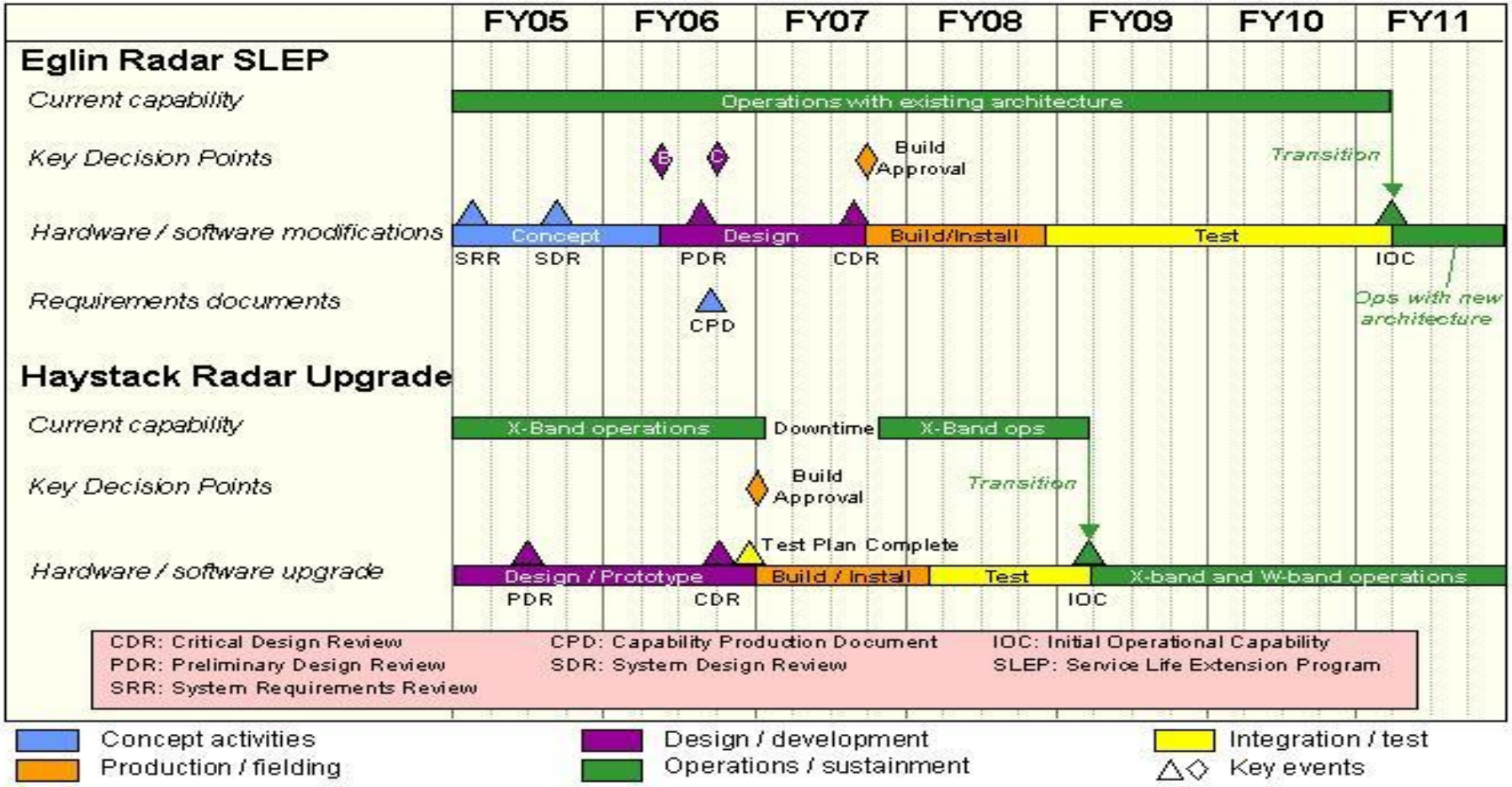

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305910F SPACETRACK	PROJECT NUMBER AND TITLE: A008 Sensor Service Life Extension Programs (Sensor SLEPs)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Eglin System Requirements Review	1Q		
(U) Eglin System Design Review	3Q		
(U) Eglin Key Decision Point B		2Q	
(U) Eglin Prelimary Design Review		3Q	
(U) Eglin Key Decision Point C		3Q	
(U) Haystack Preliminary Design Review	2Q		
(U) Haystack Critical Design Review		4Q	

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: A009 Orbital Deep Space Imager (ODSI)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A009	Orbital Deep Space Imager (ODSI)	7.844	24.179	0.000	0.000	0.000	0.000	0.000	0.000	35.677
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2006 this project was terminated.

(U) A. Mission Description and Budget Item Justification

The Orbital Deep Space Imager (ODSI) effort develops a system to provide imagery of deep space objects for satellite characterization. In concert with other Space Situation Awareness network sensors, ODSI will permit improved knowledge of space activities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Concept definition studies	3.000	0.000	0.000
(U) Pre-Phase A activities	3.076	0.000	0.000
(U) Architecture development	0.208	0.000	0.000
(U) Program operations	1.560	0.000	0.000
(U) Funds directed per classified direction	0.000	24.179	0.000
(U) Total Cost	7.844	24.179	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

ODSI competitively awarded three contracts for concept studies.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A009 Orbital Deep Space Imager (ODSI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Pre-phase A activities and architecture development	SS/CPAF*	Northrop Grumman, Redondo Beach, CA	2.735	3.284	Dec-04	0.000		0.000		0.000	6.019	
Concept definition studies	C/FFP	Lockheed Martin, Denver, CO	0.000	1.000	Jan-05	0.000		0.000		0.000	1.000	
Concept definition studies	C/FFP	Boeing, Seal Beach, CA	0.000	1.000	Jan-05	0.000		0.000		0.000	1.000	
Concept definition studies	C/FFP	Northrop Grumman, Redondo Beach, CA	0.000	1.000	Jan-05	0.000		0.000		0.000	1.000	
Funds directed per classified direction			0.000	0.000		24.179		0.000		0.000	24.179	
Subtotal Product Development			2.735	6.284		24.179		0.000		0.000	33.198	0.000
Remarks: *Utilizes Mission Area Prime Integrating Contract for space control mission area												
(U) Support												
Program operations	Various	Space and Missile Systems Center, Los Angeles AFB, CA	0.919	1.560	Oct-04	0.000		0.000		0.000	2.479	
Subtotal Support			0.919	1.560		0.000		0.000		0.000	2.479	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable			0.000	0.000		0.000		0.000		0.000	0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable				0.000		0.000		0.000		0.000	0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			3.654	7.844		24.179		0.000		0.000	35.677	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A009 Orbital Deep Space Imager (ODSI)**

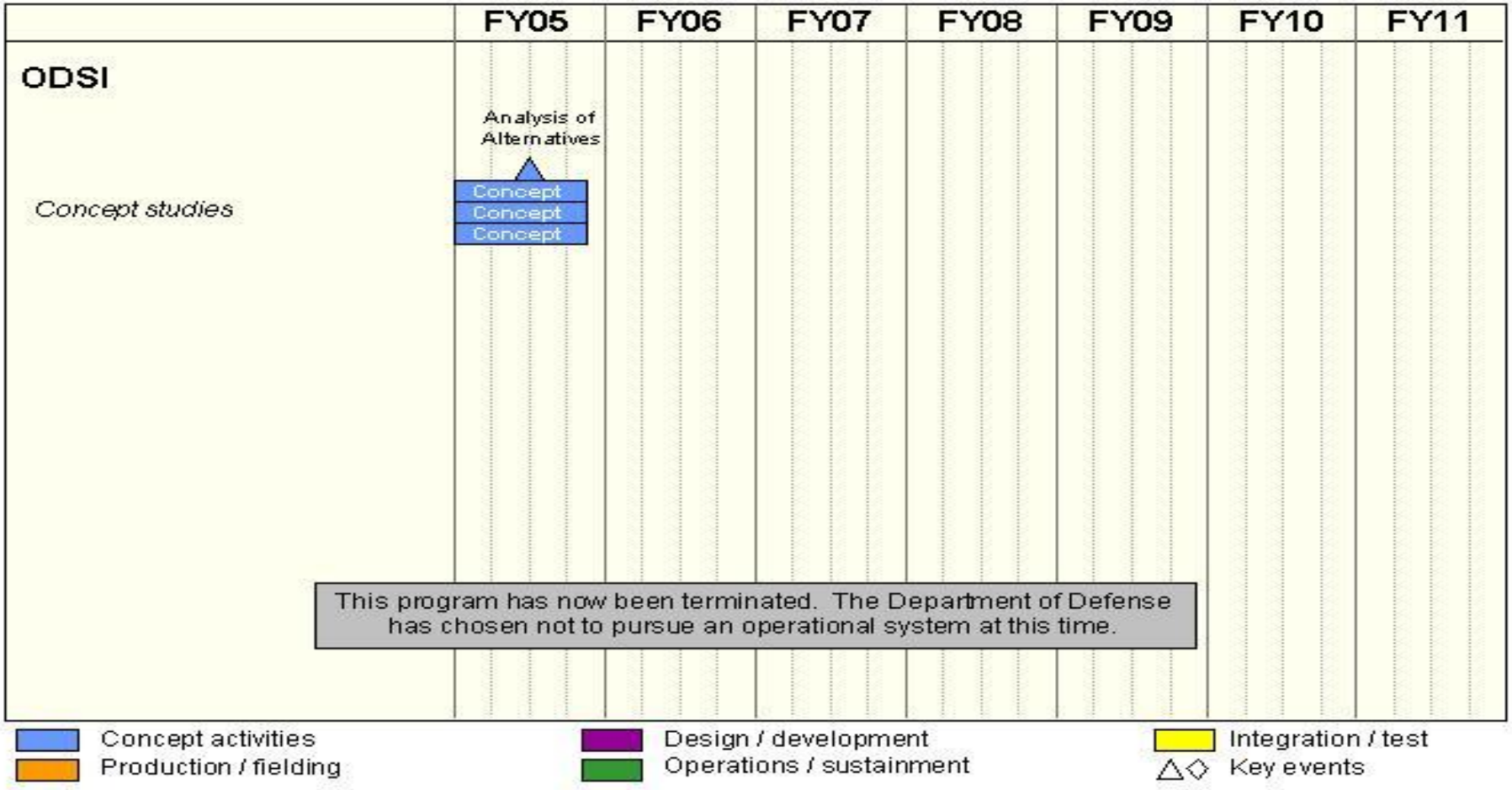

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A009 Orbital Deep Space Imager (ODSI)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Concept definition studies	1-4Q		

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305910F SPACETRACK

PROJECT NUMBER AND TITLE: A015 Space Fence

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A015 Space Fence	0.000	7.000	0.000	0.000	0.000	0.000	0.000	0.000	7.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2005 funding for this effort was in Project 67A008, Sensor Service Life Extension Programs, in this PE. In FY 2006 funding for it transferred to this project in this PE. In FY 2007 this project transferred to Project 65A009, Space Fence, in PE 0604425F, Space Situation Awareness Systems, to reflect evolution of space surveillance to the new Space Situation Awareness construct. However, funding in that project does not begin until FY 2008. The full FY 2005 - FY 2011 schedule for the effort is included here for clarity.

(U) A. Mission Description and Budget Item Justification

The Space Fence effort will develop a new system of ground-based sensors to replace the aging Air Force Space Surveillance System (AFSSS), a Very High Frequency radar operational since 1961. By using a higher radio frequency in conjunction with radar transmitters and receivers co-located at sites dispersed worldwide, the Space Fence will provide global detection of smaller orbiting objects. As a result, it will expand the detection and tracking capacity of the Space Situation Awareness network by an order of magnitude, from 10,000 to 100,000 objects, while working in concert with other network sensors.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Engineering design, development, and support*	0.000	5.257	0.000
(U) Site surveys	0.000	0.140	0.000
(U) Initial design activities	0.000	1.603	0.000
(U) Total Cost	0.000	7.000	0.000

*In FY 2006 Space Fence funding transferred from Project 67A008, Sensor Service Life Extension Programs, within this program element.

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305910F, Spacetrack)*	5.203	0.000	0.000	0.000	0.000	0.000	0.000	0.000	5.203
(U) RDT&E, Air Force (PE 0604425F, Space Situation Awareness Systems)	0.000	0.000	0.000	13.910	75.726	106.530	80.338	Continuing	TBD
(U) Other Procurement, Air Force (PE 0305940F, Space Situation Awareness Operations)	0.000	0.000	0.000	0.000	0.000	0.000	61.742	Continuing	TBD

*FY 2005 funds were executed in Project 67A008, Sensor Service Life Extension Programs, of this program element.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A015 Space Fence**

(U) D. Acquisition Strategy

The Air Force will competitively award a risk reduction contract for the effort in FY 2006. A competitive development contract award will follow several years later after a full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305910F SPACETRACK**

PROJECT NUMBER AND TITLE: **A015 Space Fence**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Industry design tasks	C/FFP	TBD		0.000		1.603	Jun-06	0.000		0.000	1.603	
Site surveys	Various	TBD		0.000		0.140	Aug-06	0.000		0.000	0.140	
Design/development	C/FP-LOE	L-3 Titan, Billerica, MA		0.000		2.135	Apr-06	0.000		0.000	2.135	
Design/development	C/FP-LOE	Tecolote, Goleta, CA		0.000		0.220	Jun-06	0.000		0.000	0.220	
Design evaluation	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA		0.000		0.754	Jul-06	0.000		0.000	0.754	
Design evaluation	SS/FP-LOE	MITRE Corporation, Bedford, MA		0.000		0.766	Jul-06	0.000		0.000	0.766	
Design evaluation	Various	Air Force Space Command, Peterson AFB, CO		0.000		0.367	Sep-06	0.000		0.000	0.367	
Subtotal Product Development			0.000	0.000		5.985		0.000		0.000	5.985	0.000
Remarks:												
(U) Support												
Design review and management	Various	Electronic Systems Command, Hanscom AFB, MA; others	0.000	0.000		1.015	Apr-06	0.000		0.000	1.015	
Subtotal Support			0.000	0.000		1.015		0.000		0.000	1.015	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		7.000		0.000		0.000	7.000	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A015 Space Fence**

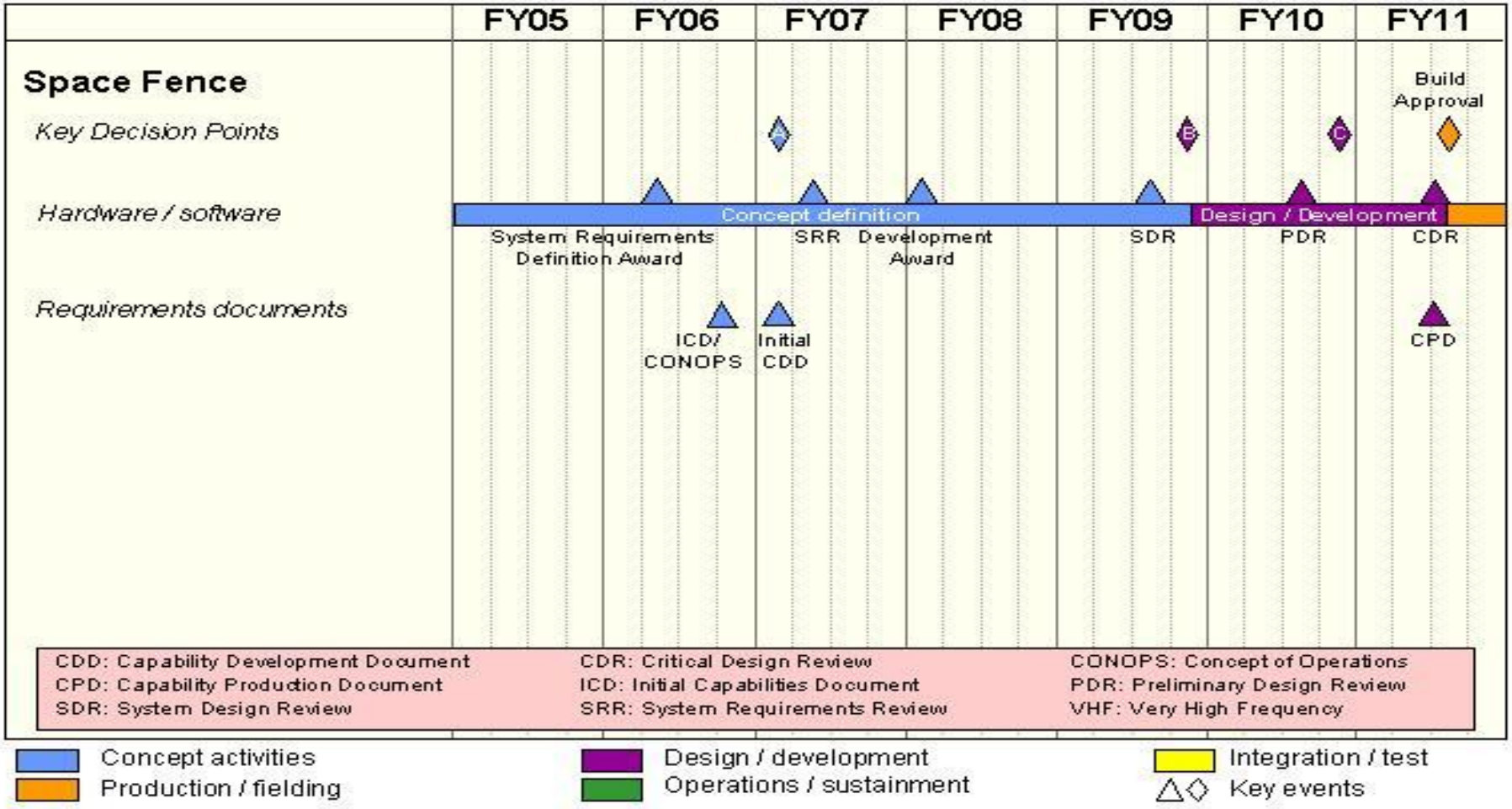

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305910F SPACETRACK**	PROJECT NUMBER AND TITLE **A015 Space Fence**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) System requirements definition contract award*		2Q	
(U) Industry design tasks contract award		3Q	

*Utilizes FY 2005 funding in Project 67A008 of this program element

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PE NUMBER: 0305913F
PE TITLE: NUDET Detection System (Space)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	34.691	32.266	60.281	38.610	41.393	39.429	38.529	Continuing	TBD
2808 Nuc Detonation Det Sys (sensors)	34.691	32.266	60.281	38.610	41.393	39.429	38.529	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Nuclear Detonation (NUDET) Detection System (NDS) provides a worldwide, highly survivable capability to detect, locate, and report any nuclear detonations in the earth's atmosphere or in near space in near-real time. The NDS supports NUDET detection requirements for USNORTHCOM/NORAD (Integrated Tactical Warning and Attack Assessment (ITW/AA)), USSTRATCOM (Nuclear Force Management), and 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, Defense Support Program (DSP) satellites (optical, x-rays, and neutron and gamma rays), and Space Based Infrared Systems (SBIRS) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

This NDS program element funds Research and Development of ICADS, GNT, the Space and Atmospheric Burst Reporting System (SABRS), and NDS Analysis Payload (NAP). ICADS provides a fixed ground receiving station. GNT provides a survivable ground receiving station. SABRS is the future neutron/gamma sensor payload on SBIRS satellites to replace the USNDS sensor payload on DSP satellites. NAP improves existing NDS capability and is integrated onto GPS Block IIR satellites 7-8/11-13 and IIRM satellites 1-4. DOE funds EMP sensor research and production. GPS Space & Control (PE 0305165F) funds sensor integration for Block IIF satellites with ground segment development remaining in the NDS PE.

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

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	34.826	32.783	60.494
(U)	Current PBR/President's Budget	34.691	32.266	60.281
(U)	Total Adjustments	-0.135	-0.517	
(U)	Congressional Program Reductions		-0.050	
	Congressional Rescissions	-0.027	-0.467	
	Congressional Increases			
	Reprogrammings	-0.108		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)	PROJECT NUMBER AND TITLE: 2808 Nuc Detonation Det Sys (sensors)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2808 Nuc Detonation Det Sys (sensors)	34.691	32.266	60.281	38.610	41.393	39.429	38.529	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Nuclear Detonation (NUDET) Detection System (NDS) provides a worldwide, highly survivable capability to detect, locate, and report any nuclear detonations in the earth's atmosphere or in near space in near-real time. The NDS supports NUDET detection requirements for USNORTHCOM/NORAD (Integrated Tactical Warning and Attack Assessment (ITW/AA)), USSTRATCOM (Nuclear Force Management), and 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, Defense Support Program (DSP) satellites (optical, x-rays, and neutron and gamma rays), and Space Based Infrared Systems (SBIRS) satellites. The ground segment includes the Integrated Correlation and Display System (ICADS) and the Ground NDS Terminals (GNT).

This NDS program element funds Research and Development of ICADS, GNT, the Space and Atmospheric Burst Reporting System (SABRS), and NDS Analysis Payload (NAP). ICADS provides a fixed ground receiving station. GNT provides a survivable ground receiving station. SABRS is the future neutron/gamma sensor payload on SBIRS satellites to replace the USNDS sensor payload on DSP satellites. NAP improves existing NDS capability and is integrated onto GPS Block IIR satellites 7-8/11-13 and IIRM satellites 1-4. DOE funds EMP sensor research and production. GPS Space & Control (PE 0305165F) funds sensor integration for Block IIF satellites with ground segment development remaining in the NDS PE.

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

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue ICADS and GNT development	24.727	22.565	17.441
(U) Continue NDS sensor on-orbit qualification	2.605	3.463	3.531
(U) Continue Mission and Program support and system studies	4.020	2.386	3.789
(U) Continue Technical Support	3.339	3.852	3.970
(U) Begin SABRS on SBIRS development	0.000	0.000	31.550
(U) Total Cost	34.691	32.266	60.281

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Operations & Maintenance, (PE 0305913F, BA 1, Operating Forces)	7.948	9.638	9.829	10.194	10.416	10.712	10.830	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305913F NUDET Detection System (Space)	PROJECT NUMBER AND TITLE: 2808 Nuc Detonation Det Sys (sensors)	

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

(U) Other Procurement, (PE 0305913F, BA 3 - Electronics and Telecom Equipment, P-63)	7.253	9.270	13.456	16.459	27.812	21.931	10.532	Continuing	TBD
(U) Missile Procurement, (PE 0305913F, BA 5 - Space & Other support, P-23)	0.000	0.000	0.000	0.000	1.253	3.544	4.334	Continuing	TBD

(U) D. Acquisition Strategy

The NDS Acquisition Strategy is to develop, test, troubleshoot, integrate and repair 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 U. S. NDS capability for the GPS Block IIR, IIF, and future generation satellites; funding is sent by Military Interdepartmental Purchase Request (MIPR) from DoD and Department of Energy (DoE) to Sandia and Los Alamos National Laboratories on existing DOE contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305913F NUDET Detection System (Space)**

PROJECT NUMBER AND TITLE: **2808 Nuc Detonation Det Sys (sensors)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ICADS and GNT	MIPR	Department of Energy; Sandia National Laboratory, Albuquerque NM	109.931	24.727	Dec-04	22.565	Dec-05	17.441	Nov-06	Continuing	TBD	
GNT: Intermetrics	CPFF		1.262	0.000		0.000		0.000		0.000	1.262	
SAIC (Intg/Grd Supt)	Time/Matls		5.219	0.000		0.000		0.000		0.000	5.219	
Combined GOSC/NAP: Lockheed Martin	FFP		6.166	0.000		0.000		0.000		0.000	6.166	
W-Sensor: SRI (Stanford Rsch Inst.)	CPFF		0.415	0.000		0.000		0.000		0.000	0.415	
On-orbit sensor testing	MIPR	Department of Energy; Los Alamos National Laboratory, Los Alamos NM, Sandia National Laboratory, Albuquerque NM	10.313	2.605	Nov-04	3.463	Dec-05	3.531	Nov-06	Continuing	TBD	
SABRS on SBIRS	MIPR	Department of Energy; Los Alamos National Laboratory, Los Alamos NM, Sandia National Laboratory, Albuquerque NM	0.000	0.000		0.000		31.550	Nov-06	Continuing	TBD	
Subtotal Product Development			133.306	27.332		26.028		52.522		Continuing	TBD	0.000
Remarks:												
(U) Support												
Mission Support	Various		7.274	3.965		2.327		3.728		Continuing	TBD	
Prog Contractual Spt.	Various		5.185	0.000		0.000		0.000		0.000	5.185	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0305913F NUDET Detection System (Space)**	**2808 Nuc Detonation Det Sys (sensors)**

	Technical Support	Various	11.464	3.339		3.852		3.970		Continuing	TBD	
	Subtotal Support		23.923	7.304		6.179		7.698		Continuing	TBD	0.000
	Remarks:											
(U)	Test & Evaluation											
	17th TS, Schriever AFB CO	Various	0.300	0.055	Jan-05	0.059	Dec-05	0.061	Dec-06	Continuing	TBD	
	Subtotal Test & Evaluation		0.300	0.055		0.059		0.061		Continuing	TBD	0.000
	Remarks:											
(U)	Management											
											0.000	
	Subtotal Management		0.000	0.000		0.000		0.000		0.000	0.000	0.000
	Remarks:											
(U)	Total Cost		157.529	34.691		32.266		60.281		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305913F NUDET Detection System (Space)**	PROJECT NUMBER AND TITLE **2808 Nuc Detonation Det Sys (sensors)**

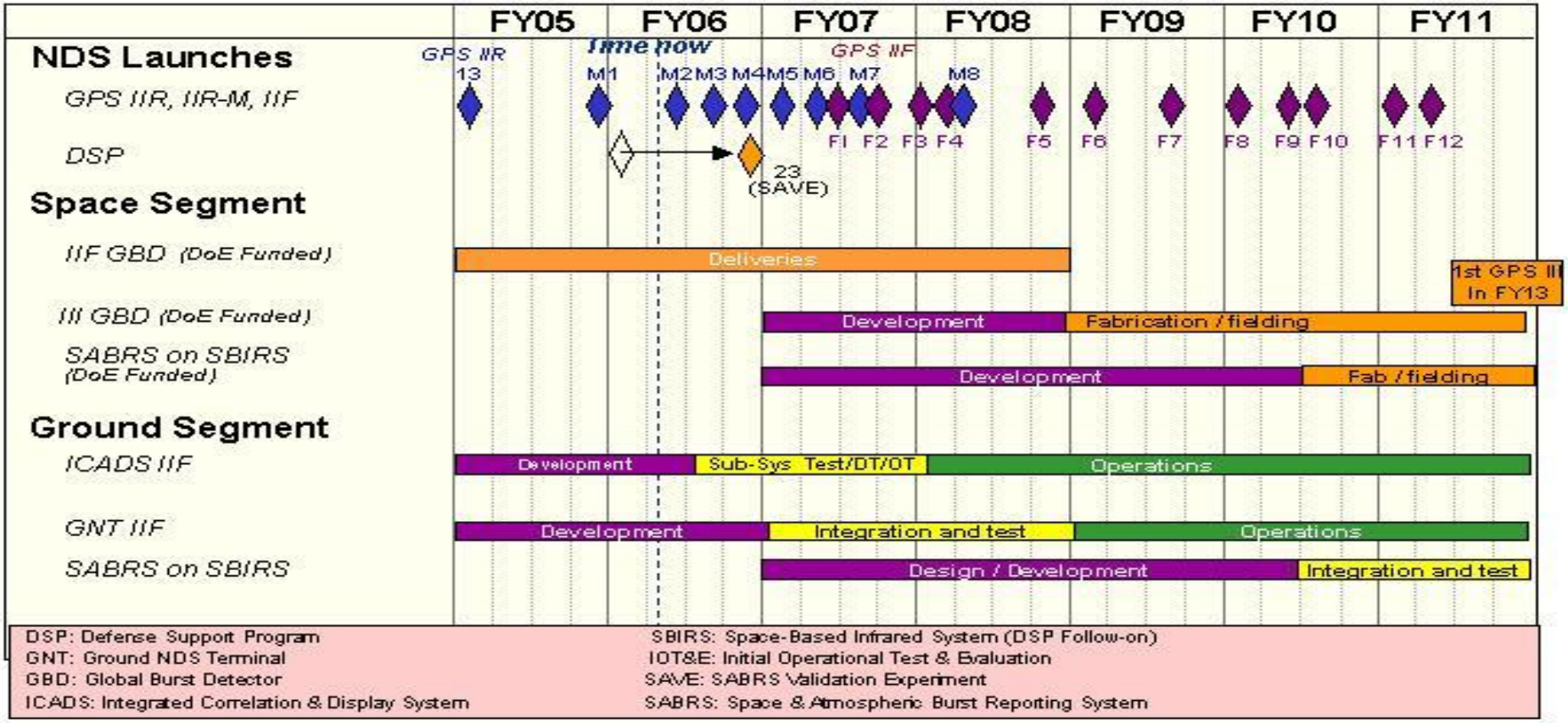

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305913F NUDET Detection System (Space)**	PROJECT NUMBER AND TITLE **2808 Nuc Detonation Det Sys (sensors)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) GPS IIF System Specification Review	3Q		
(U) GPS IIF Phase Review	1Q	1Q	1Q
(U) GPS IIF Phase Review	3Q	3Q	3Q
(U) ICADS IIF Testing	2Q	1Q	
(U) GNT IIF Testing			2Q
(U) SABRS on SBIRS Design/Development			1Q

*Note: GBD and EnRad are funded by DOE

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PE NUMBER: 0305917F
PE TITLE: Space Architect

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305917F Space Architect

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	14.701	12.676	0.000	0.000	0.000	0.000	0.000	0.000	75.834
4746 Space Architect	14.701	12.676	0.000	0.000	0.000	0.000	0.000	0.000	75.834

In FY 2007 these efforts transferred to PE 0305924F, National Security Space Office, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.

(U) A. Mission Description and Budget Item Justification

In May 2004 the National Security Space Architect (NSSA) merged with the National Security Space Integration directorate and the Transformational Communications Office to become the National Security Space Office (NSSO) with expanded roles and responsibilities. NSSO is a joint Department of Defense (DoD) / intelligence community organization that provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities. Approximately half the funding for NSSO resides in this program element; additional funds are provided by the intelligence community.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	12.744	12.878	13.285
(U)	Current PBR/President's Budget	14.701	12.676	0.000
(U)	Total Adjustments	1.957	-0.202	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.020	-0.202	
	Congressional Increases			
	Reprogrammings	2.299		
	SBIR/STTR Transfer	-0.322		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305917F Space Architect**

FY 2005: Below Threshold Reprogrammings to maintain existing support for ongoing architecture development

FY 2007: Funding transferred to PE 0305924F

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305917F Space Architect

PROJECT NUMBER AND TITLE: 4746 Space Architect

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4746 Space Architect	14.701	12.676	0.000	0.000	0.000	0.000	0.000	0.000	75.834
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 this project was transferred to Project 67A016, National Security Space Office, in PE 0305924F, National Security Space Office, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations. The full FY 2005 - FY 2011 schedule for these efforts is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on activities after FY 2006.

(U) A. Mission Description and Budget Item Justification

In May 2004 the National Security Space Architect (NSSA) merged with the National Security Space Integration directorate and the Transformational Communications Office to become the National Security Space Office (NSSO) with expanded roles and responsibilities. NSSO is a joint Department of Defense (DoD) / intelligence community organization that provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities. Approximately half the funding for NSSO resides in this program element; additional funds are provided by the intelligence community.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	NSS Strategy and Capstone Operating Framework development	1.657	1.674	0.000
(U)	NSS Plan development	1.784	1.804	0.000
(U)	NSS Program Assessments	2.868	1.931	0.000
(U)	Space architecture and study development and support	4.461	4.507	0.000
(U)	Architecture transition planning and implementation support	0.637	0.644	0.000
(U)	Enterprise engineering	3.294	2.116	0.000
(U)	Total Cost	14.701	12.676	0.000

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305917F Space Architect	PROJECT NUMBER AND TITLE: 4746 Space Architect

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305924F, National Security Space Office)	0.000	0.000	13.437	14.292	14.430	14.760	15.014	Continuing	TBD
(U) Intelligence community*									

*Provided in classified budget

(U) D. Acquisition Strategy

NSSO is conducting a full and open competition to award a contract for the technical assistance and management support it uses to execute its space architecture, strategy, development, and planning activities. It will also continue to utilize existing contract vehicles maintained by other DoD organizations for supplemental assistance and support, as required.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305917F Space Architect**

PROJECT NUMBER AND TITLE: **4746 Space Architect**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
NSSO architecture/other product development	Various	Various	48.457	14.701	Oct-04	12.676	Oct-05	0.000		0.000	75.834	
Subtotal Product Development			48.457	14.701		12.676		0.000		0.000	75.834	0.000
Remarks:												
(U) Support												
Not applicable											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			48.457	14.701		12.676		0.000		0.000	75.834	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305917F Space Architect	PROJECT NUMBER AND TITLE 4746 Space Architect

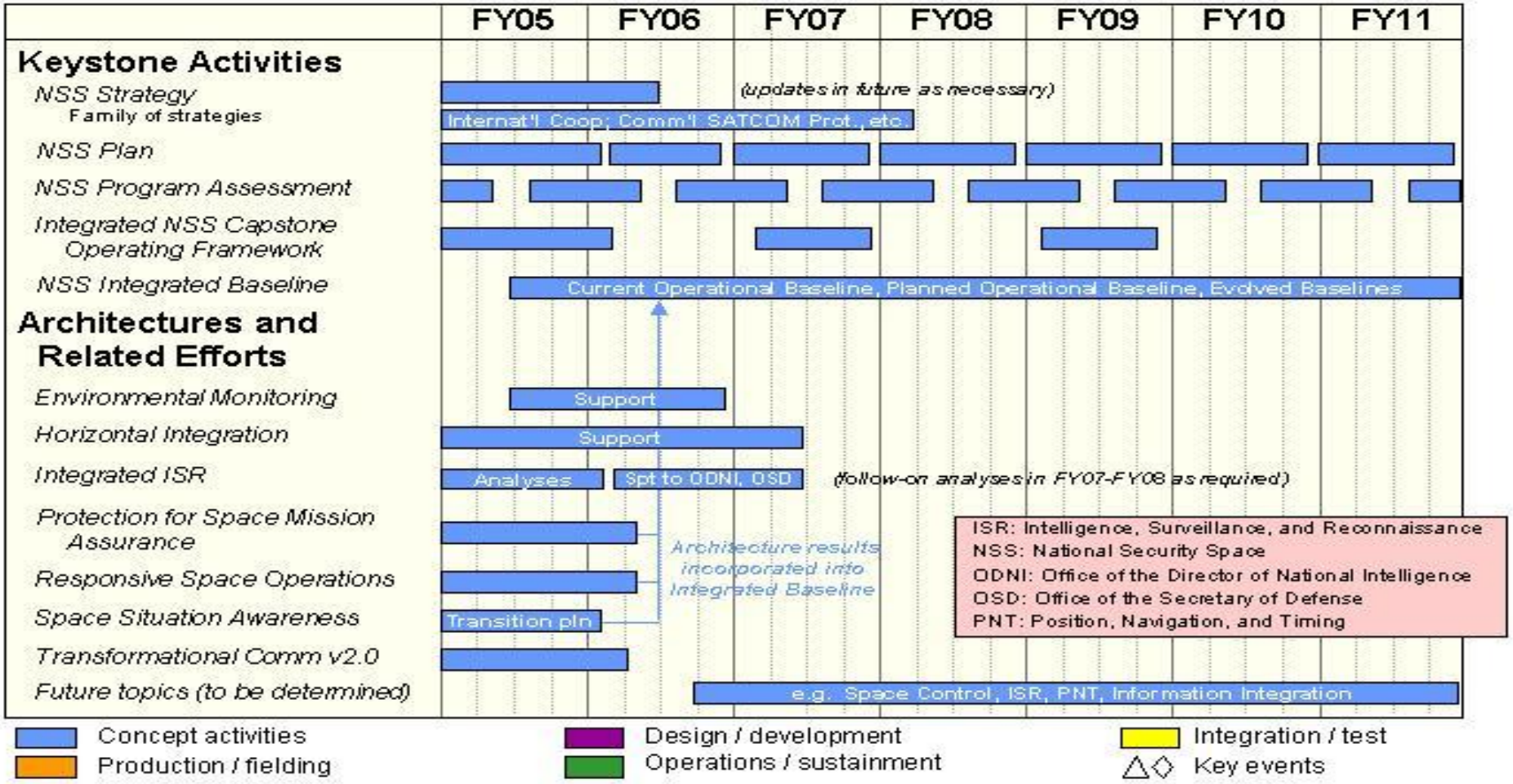

Exhibit R-4a, RDT&E Schedule Detail

DATE: February 2006

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	0305917F Space Architect	4746 Space Architect

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Complete NSS Strategy		2Q	
(U) Complete annual NSS Plan update		1Q	
(U) Complete recurring Integrated NSS Capstone Operating Framework		1Q	
(U) Complete annual NSS Program Assessments	2Q	2Q	
(U) Complete annual NSS Plan update		4Q	
(U) Continue space architecture efforts	1-4Q	1-4Q	

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PE NUMBER: 0305924F
PE TITLE: National Security Space Office

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305924F National Security Space Office

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	13.437	14.292	14.430	14.760	15.014	Continuing	TBD
A016 National Security Space Office	0.000	0.000	13.437	14.292	14.430	14.760	15.014	Continuing	TBD

In FY 2007 this is a new PE. These efforts transferred from PE 0305917F, Space Architect, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations.

(U) A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

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

	FY 2005	FY 2006	FY 2007
(U) Previous President's Budget	0.000	0.000	0.000
(U) Current PBR/President's Budget	0.000	0.000	13.437
(U) Total Adjustments	0.000	0.000	
(U) Congressional Program Reductions			
Congressional Rescissions			
Congressional Increases			
Reprogrammings			
SBIR/STTR Transfer			

(U) Significant Program Changes:
FY 2007: Funds transferred from PE 0305917F

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305924F National Security Space Office**

PROJECT NUMBER AND TITLE: **A016 National Security Space Office**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A016 National Security Space Office	0.000	0.000	13.437	14.292	14.430	14.760	15.014	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 this project transferred from Project 674746, Space Architect, in PE 0305917F, Space Architect, to reflect the name of the office created by the merger of the National Security Space Architect with other organizations. The full FY 2005 - FY 2011 schedule for these efforts is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further details on activities prior to FY 2007.

(U) A. Mission Description and Budget Item Justification

The National Security Space Office (NSSO) provides strategic focus and unity of effort across the National Security Space (NSS) enterprise spanning the military, intelligence, civil, and commercial space sectors. NSSO conducts long-range space strategic planning; develops mid- to long-term space architectures; examines trades between space and non-space solutions to user requirements; assesses defense and intelligence space programs for conformity with policies, planning guidance, and architectural decisions; provides technical enterprise engineering; and conducts analyses of space subjects to guide the activities of NSS organizations. The office reports to both the Under Secretary of the Air Force / DoD Executive Agent for Space and the Director of the National Reconnaissance Office. Through them it also advises the leaders of the military services, intelligence community, U.S. Strategic Command, Office of the Secretary of Defense, and Office of the Director of National Intelligence on space matters. NSSO efforts enable the NSS community to leverage space assets more effectively in support of U.S. national objectives in concert with land, sea, air, and cyberspace capabilities.

This program is in Budget Activity 7, Operational System Development, because its architectures and other activities guide the acquisition, deployment, and integration of operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) NSS Strategy and Capstone Operating Framework development	0.000	0.000	1.727
(U) NSS Plan development	0.000	0.000	1.860
(U) NSS Program Assessments	0.000	0.000	1.993
(U) Space architecture and study development and support	0.000	0.000	4.650
(U) Architecture transition planning and implementation support	0.000	0.000	0.664
(U) Enterprise engineering	0.000	0.000	2.543
(U) Total Cost	0.000	0.000	13.437

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305917F, National Security	14.701	12.676	0.000	0.000	0.000	0.000	0.000	0.000	75.834

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305924F National Security Space Office**	PROJECT NUMBER AND TITLE **A016 National Security Space Office**

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

Space Architect)

(U) D. Acquisition Strategy

NSSO is conducting a full and open competition to award a contract for the technical assistance and management support it uses to execute its space architecture, strategy, development, and planning activities. It will also continue to utilize existing contract vehicles maintained by other DoD organizations for supplemental assistance and support, as required.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305924F National Security Space Office**

PROJECT NUMBER AND TITLE: **A016 National Security Space Office**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
NSSO architecture/other product development	C/CPAF	TBD	0.000	0.000		0.000		10.237	Dec-06	Continuing	TBD	
NSSO architecture/other product development	SS/CPAF	Aerospace Corp., El Segundo, CA	0.000	0.000		0.000		1.300	Nov-06	Continuing	TBD	
NSSO architecture/other product development	Cost (reimbursable)	MITRE, Bedford, MA	0.000	0.000		0.000		1.900	Oct-06	Continuing	TBD	
Subtotal Product Development			0.000	0.000		0.000		13.437		Continuing	TBD	0.000
Remarks:												
(U) Support												
Not applicable											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		13.437		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305924F National Security Space Office**	PROJECT NUMBER AND TITLE **A016 National Security Space Office**

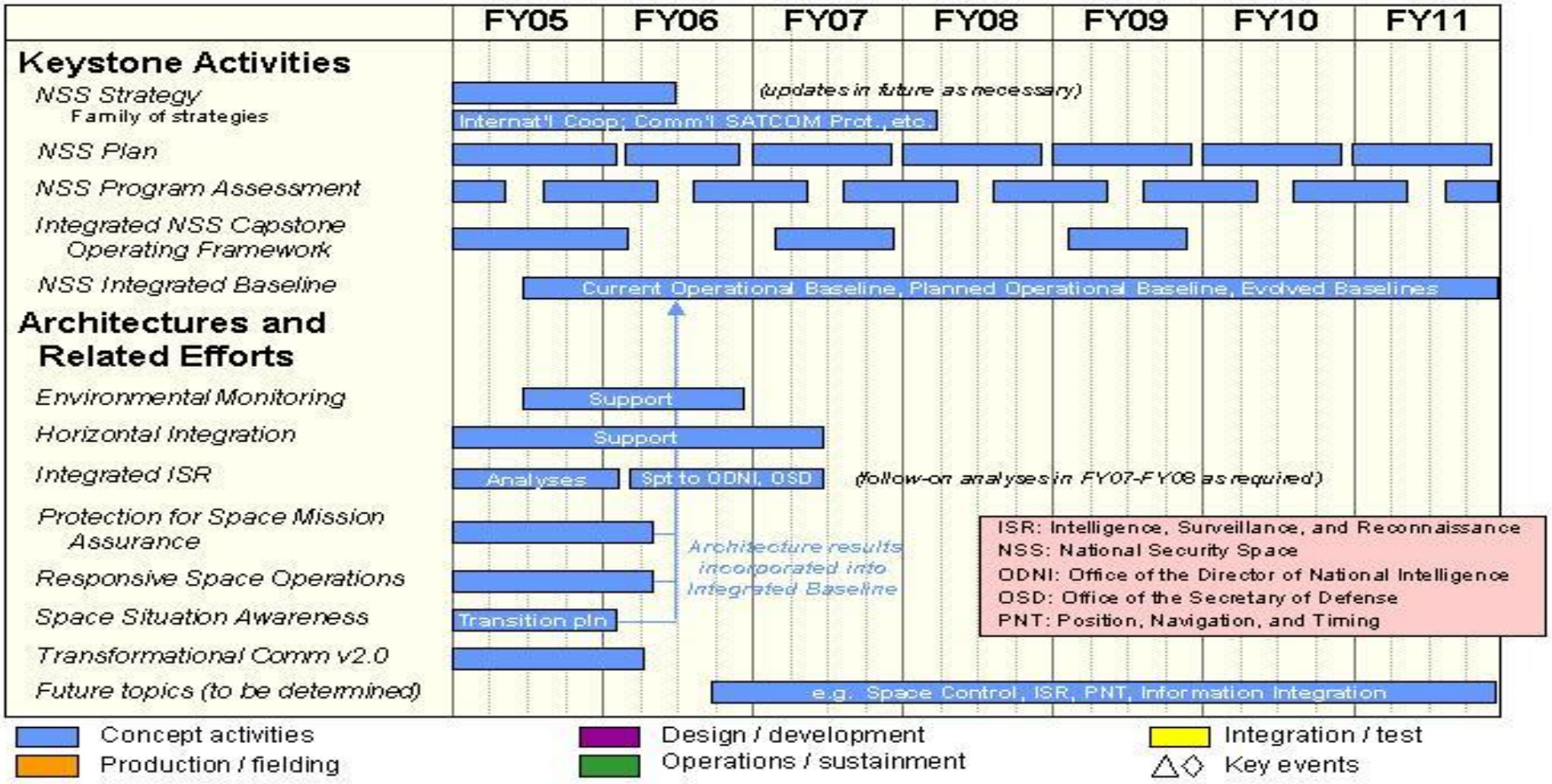

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305924F National Security Space Office**	PROJECT NUMBER AND TITLE **A016 National Security Space Office**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Complete annual NSS Program Assessment			2Q
(U) Complete annual NSS Plan			4Q
(U) Complete recurring Integrated NSS Capstone Operating Framework update			4Q
(U) Continue space architecture efforts			1-4Q

PE NUMBER: 0305940F
PE TITLE: Space Situation Awareness Operations

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0305940F Space Situation Awareness Operations

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	0.000	31.401	10.778	0.505	0.264	0.236	0.000	43.184
A017	Sensor Service Life Extension Programs	0.000	0.000	31.401	10.778	0.505	0.264	0.236	0.000	43.184

In FY 2007 this is a new PE. This project transferred from PE 0305910F, Spacetrack, to reflect evolution of space surveillance to the new Space Situation Awareness construct.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improves information integration across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetime of operational SSA sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort will replace its aging, increasingly unsupportable radar processing components and establish a modern software architecture to enable radar operations, sustainment, and technology refreshes through 2028.

The second effort in this project, the Haystack Ultra-Wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides space object identification and metric data to the Air Force to aid SSA operations. The upgrade effort will build a W-band high-power transmitter enabling object imaging with resolution significantly greater than the X-band system's 25-centimeter resolution; it will also replace the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations in an architecture that also supports year-round X-band surveillance for the Air Force. Greater radar resolution is necessary to maintain current levels of space object identification intelligence since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305940F Space Situation Awareness Operations**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	0.000	0.000
(U)	Current PBR/President's Budget	0.000	0.000	31.401
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY 2007: Funding transferred from PE 0305910F

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0305940F Space Situation Awareness Operations	PROJECT NUMBER AND TITLE: A017 Sensor Service Life Extension Programs	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
A017	Sensor Service Life Extension Programs	0.000	0.000	31.401	10.778	0.505	0.264	0.236	0.000	43.184
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2007 this project transferred from Project 67A008, Sensor Service Life Extension Programs, in PE 0305910F, Spacetrack, to reflect the evolution of space surveillance to the Space Situation Awareness construct. The full FY 2005 - FY 2011 schedule for this project is included here for clarity, but refer to the RDT&E Budget Item Justification for that PE for further information on pre-FY 2007 activities.

(U) A. Mission Description and Budget Item Justification

Space Situation Awareness (SSA) is knowledge of all aspects of space related to operations. The foundation for space control, it encompasses intelligence on adversary space operations; surveillance of all space objects and activities; detailed reconnaissance of specific space assets; monitoring space environmental conditions; monitoring cooperative space assets; and conducting integrated command, control, communications, processing, analysis, dissemination, and archiving activities. This program element fields, upgrades, operates, and sustains Air Force sensors within the SSA network while companion program element 0604425F, Space Situation Awareness Systems, develops new network sensors and improves information integration across the network. Activities funded in this program element focus on surveillance of objects in Earth orbit to aid tasks including satellite tracking; space object identification, tracking, and cataloging; satellite attack warning; notification of satellite flyovers to U.S. forces; space treaty monitoring; and technical intelligence gathering.

The Sensor Service Life Extension Programs (SLEPs) project funds efforts to upgrade and extend the lifetime of operational SSA sensors. The first of these, the Eglin SLEP, extends the lifetime of the one-of-a-kind AN/FPS-85 phased array radar at Eglin Air Force Base, Florida, dedicated to finding and tracking near Earth and deep space objects. Operational since 1968, this radar is the SSA network's largest tracker of objects in the manned flight region, and it tracks over half the objects in the Air Force space object catalog. The SLEP effort will replace its aging, increasingly unsupportable radar processing components and establish a modern software architecture to enable radar operations, sustainment, and technology refreshes through 2028.

The second effort in this project, the Haystack Ultra-Wideband Satellite Imaging Radar, upgrades the X-band Haystack radar at the Lincoln Space Surveillance Complex in Westford, Massachusetts. Haystack provides space object identification and metric data to the Air Force to aid SSA operations. The upgrade effort will build a W-band high-power transmitter enabling object imaging with resolution significantly greater than the X-band system's 25-centimeter resolution; it will also replace the existing antenna and processing equipment with more modern hardware and software compatible with W-band operations in an architecture that also supports year-round X-band surveillance for the Air Force. Greater radar resolution is necessary to maintain current levels of space object identification intelligence since satellites are becoming smaller than ever, making X-band characterization of them increasingly difficult.

Both these efforts are in Budget Activity 7, Operational System Development, because they develop modifications for operational SSA sensors.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305940F Space Situation Awareness Operations	PROJECT NUMBER AND TITLE A017 Sensor Service Life Extension Programs

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

		FY 2005	FY 2006	FY 2007
(U)	Eglin radar life extension engineering design, development, and support	0.000	0.000	24.825
(U)	Haystack radar upgrade engineering design, development, and support	0.000	0.000	6.576
(U)	Total Cost	0.000	0.000	31.401

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) RDT&E, Air Force (PE 0305190F, Spacetrack)	29.322	25.022	0.000	0.000	0.000	0.000	0.000	0.000	77.037

(U) D. Acquisition Strategy

The Eglin life extension effort utilizes an option on the System Engineering, Sustainment, and Modernization (SENSOR) contract competitively awarded to ITT Industries for sustaining and upgrading various Air Force radars, including the Eglin radar, in February 2002.

The Massachusetts Institute of Technology's Lincoln Laboratory (MIT/LL), a non-profit Federally-Funded Research & Development Center, performs the Haystack upgrade effort under a master contract with the Electronics System Center. This effort is classified as applied research under that contract. MIT/LL owns the radar, which it operates as part of its Lincoln Space Surveillance Complex.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0305940F Space Situation Awareness Operations**

PROJECT NUMBER AND TITLE: **A017 Sensor Service Life Extension Programs**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Eglin architecture development and life extension	C/CPAF	ITT Industries, Colorado Springs, CO	0.000	0.000		0.000		20.645	Nov-06	7.949	28.594	
Eglin design evaluation	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	0.000	0.000		0.000		0.100	Nov-06	0.100	0.200	
Eglin design evaluation	C/FP-LOE	L-3 Titan, Billerica, MA	0.000	0.000		0.000		1.705	Nov-06	0.620	2.325	
Haystack radar upgrade design and build	SS/FP-LOE	MIT Lincoln Laboratory, Lexington, MA	0.000	0.000		0.000		6.141	Nov-06	1.371	7.512	
Haystack design evaluation	C/FP-LOE	L-3 Titan, Billerica, MA	0.000	0.000		0.000		0.275	Nov-06	0.225	0.500	
Subtotal Product Development			0.000	0.000		0.000		28.866		10.265	39.131	0.000
Remarks:												
(U) Support												
Development review and management	C/FP-LOE	L-3 Titan, Billerica, MA	0.000	0.000		0.000		0.643	Nov-06	0.793	1.436	
Development review and management	Various	Electronic Systems Center, Hanscom AFB, MA	0.000	0.000		0.000		1.892	Nov-06	0.725	2.617	
Subtotal Support			0.000	0.000		0.000		2.535		1.518	4.053	0.000
Remarks:												
(U) Test & Evaluation												
Not applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		31.401		11.783	43.184	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0305940F Space Situation Awareness Operations	PROJECT NUMBER AND TITLE A017 Sensor Service Life Extension Programs

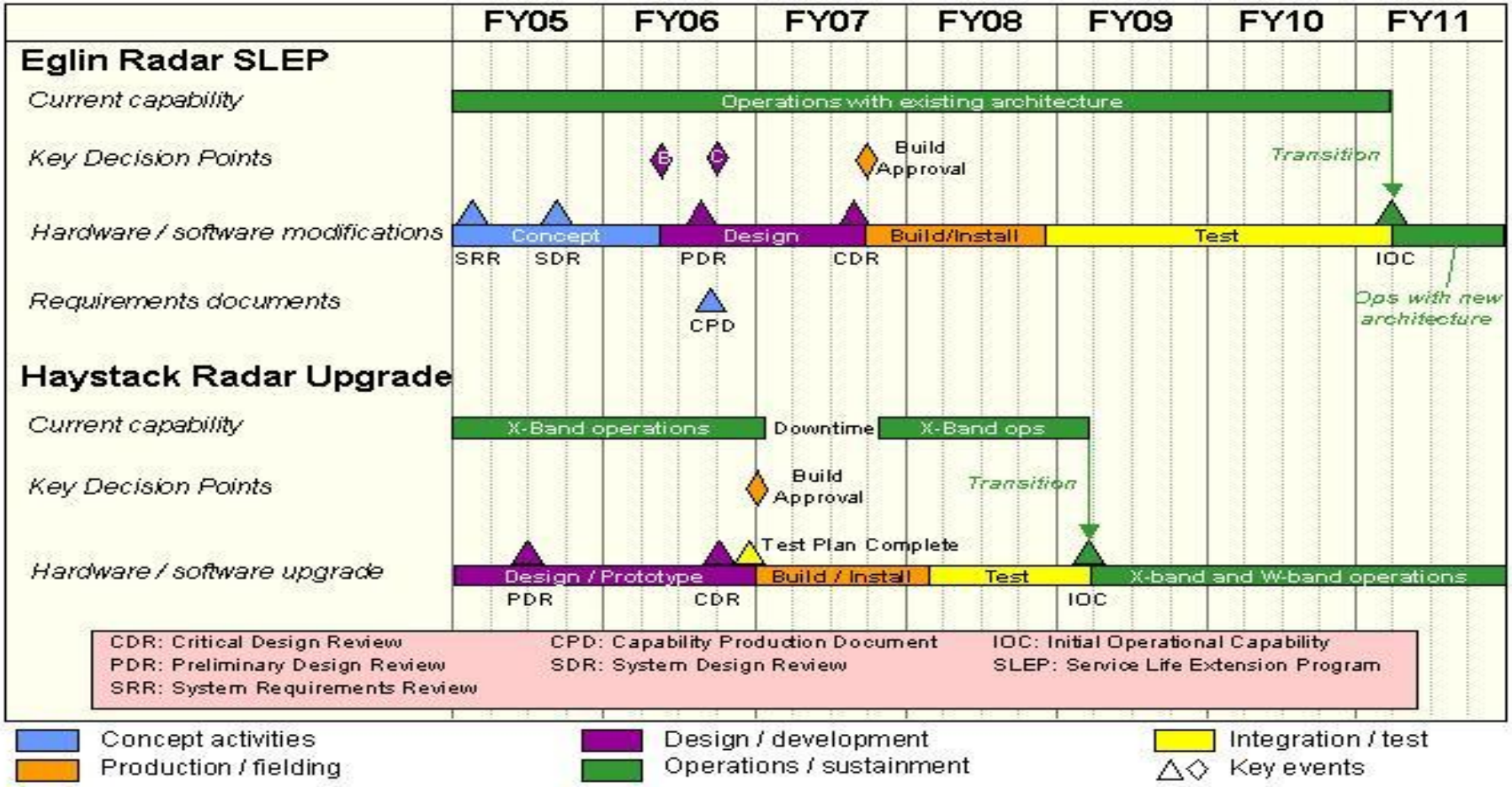

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0305940F Space Situation Awareness Operations**	PROJECT NUMBER AND TITLE **A017 Sensor Service Life Extension Programs**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Eglin life extension Critical Design Review			3Q
(U) Eglin life extension Build Approval decision			3Q
(U) Haystack upgrade Build Approval decision			1Q
(U) Haystack W-band antenna installation			2Q
(U) Haystack W-band antenna subsystem calibration and testing			3-4Q

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PE NUMBER: 0307141F
PE TITLE: NASS, IO TECH INTEGRATION & TOOL DEV

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	13.100	14.965	15.449	15.605	15.766	15.811	15.768	Continuing	TBD
4871 Information Operations Technology	13.100	14.965	15.449	15.605	15.766	15.811	15.768	Continuing	TBD

In FY 2005, contents from PE 33140G, were transferred to PE 37141F, NASS IO Technology Integration and Tool Development, Project 4871 in order to fulfill an OSD program decision which moved funds from the National Security Agency (NSA) to US Strategic Command (USSTRATCOM). The Air Force is the Executive Agent for this RDT&E program.

(U) A. Mission Description and Budget Item Justification

(U) The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

(U) JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. The JFCC-NW accomplishes its mission via the systems engineering, testing and development of four primary integrative functions; Toolbox Operations System, Tool Assurance, Toolbox Portal/Forum, and CNO Product Capability Development. Further detail is classified and can be provided upon request.

(U) JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrate and synchronize effort with USSTRATCOM Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

(U) The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	13.100	15.182	15.386
(U)	Current PBR/President's Budget	13.100	14.965	15.449
(U)	Total Adjustments	0.000	-0.217	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.217	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV

PROJECT NUMBER AND TITLE: 4871 Information Operations Technology

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4871	Information Operations Technology	13.100	14.965	15.449	15.605	15.766	15.811	15.768	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

(U) The Joint Functional Component Command Network Warfare (JFCC-NW) responsibilities include planning, integrating, and coordinating computer network warfare capabilities; operational and tactical level planning and day-to-day employment of assigned and attached Computer Network Attack (CNA) forces; integration of CNA forces with Computer Network Defense (CND) forces and planning and coordination of network attack capabilities that have trans-regional effects or that directly support national objectives; providing CNA support for assigned missions; and CNA planning and integration in support of other combatant commanders as directed.

(U) JFCC-NW RDT&E funds research, development, testing and systems modifications of the technologies and capabilities that allow USSTRATCOM to plan, faciliate coordination and integration, deconflict, and synchronize DoD Computer Network Operations (CNO). This program also provides the ability for other Combatant Commanders CNO planning. The JFCC-NW accomplishes its mission via the systems engineering, testing and development of four primary integrative functions; Toolbox Operations System, Tool Assurance, Toolbox Portal/Forum, and CNO Product Capability Development. Further detail is classified and can be provided upon request.

(U) JFCC-NW provides support for headquarters USSTRATCOM and other geographic and functional combatant commanders exercise, wargames, and experimentation requirements. Integrate and synchronize effort with USSTRATCOM Training and Exercise Division Support headquarters development of network warfare military utility assessments, research, and development efforts, and advocacy of capability needs for the Joint Capabilities Integration Development System (JCIDS) process.

(U) The JFCC-NW also supports the Information Operations (IO) community by providing a cadre of experts on CNA technology and its use; renders technical assistance in the development, review and coordination of CNA plans and operations.

(U) This program is Budget Activity 7, Operational System Development, because it studies, develops and fields IO technologies

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Further research, testing, modifications and evaluation of the Toolbox Operational System, Tool Assurance, Toolbox Portal/Forum and other CNO Product Capability Development will be done to meet USSTRATCOM requirements	13.100	14.965	15.449
(U)				
(U)				
(U)	Total Cost	13.100	14.965	15.449

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0307141F NASS, IO TECH INTEGRATION & TOOL DEV**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Joint HQ Information Operations, Operations and Maintenance, AF PE 37141F		9.985	8.854	10.250	10.858	11.105	10.959		

(U) D. Acquisition Strategy

Contracts will be awarded on open and fair competition. variations of both Fixed Price (FFP) and Cost Plus (CP) contracting vehicles will be use. FP will represent approximately 20% of the total contracting actions.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0307141F NASS, IO TECH INTEGRATION & TOOL DEV**

PROJECT NUMBER AND TITLE: **4871 Information Operations Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) J8 Capability Development												
BEACONING	T&M	AFRL		0.320	Dec-05						0.320	
ICEFAKER	T&M	AFWIC		1.500	Dec-05						1.500	
FIRESTORM	T&M	NSA/CES		0.410	Dec-05						0.410	
BLUELASSEN I	T&M	NSA/CES		0.224	Dec-05						0.224	
Java	CPFF	AFRL		1.659	Dec-05						1.659	
Enhance Guardian Angel	CPFF	AFRL				1.690	Jan-06				1.690	
BLUELASSEN II	T&M	NSA/CES				0.370	May-06				0.370	
Port Study	T&M	NSA/CES				0.200	Jan-06				0.200	
SCADA	T&M	NSA/CES				0.830	Jan-06				0.830	
Intelligent Propagation	CPFF	AFRL				0.860	Jan-06				0.860	
Anti Forensic Capabilities	CPFF	AFRL				0.540	Jan-06				0.540	
Tool Development	T&M	ManTech/NSA				0.653	Jan-06				0.653	
CIPB	CPFF	NTOC/NSA				0.680	Jan-06				0.680	
Metada	T&M	Inc/NSA				0.565	Jan-06				0.565	
CNO Projects to be awarded								7.213			7.213	
											0.000	
Subtotal J8 Capability Development			0.000	4.113		6.388		7.213		0.000	17.714	0.000
Remarks:												
(U) J4/J6 Infrastructure / IT												
SAIC	CPFF	NSA		1.228	Dec-04						1.228	
Titan System Corp	T&M	NSA		0.350	Dec-04						0.350	
Miscellaneous H/W and S/W	T&M	NSA		0.100	Oct-04						0.100	
Contract to be awarded				1.589	Sep-05			0.600			2.189	
											0.000	
Subtotal J4/J6 Infrastructure / IT			0.000	3.267		0.000		0.600		0.000	3.867	0.000
Remarks:												
(U) J8 Capabilities Assessment												
Northrop Grumman-TASC	T&M	NGIT-TASC/ NSA		0.390	Dec-04						0.390	
											0.000	
Subtotal J8 Capabilities Assessment			0.000	0.390		0.000		0.000		0.000	0.390	0.000
Remarks:												
(U) J8 Tool Assurance												
CNO Test & Evaluation	CPFF	BAH/NSA		2.335	Dec-04	2.656	Dec-05				4.991	
Configuration Management	CPFF	BAH/NSA				0.220	Dec-05				0.220	
NW Risk Assessment & Migration	CPFF	BAH/NSA				2.101	Dec-05				2.101	
NW Technical Assurance	CPAF	CSC/NSA		2.995	Dec-04	3.100	Dec-05				6.095	
Network Warfare Lab redesign/upgrades	FF	TBD				0.500	Feb-06				0.500	

Exhibit R-3, RDT&E Project Cost Analysis			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0307141F NASS, IO TECH INTEGRATION & TOOL DEV	PROJECT NUMBER AND TITLE: 4871 Information Operations Technology	

	Contracts to be awarded				7.636		7.636	
							0.000	
	Subtotal J8 Tool Assurance	0.000	5.330	8.577	7.636	0.000	21.543	0.000
	Remarks:							
(U)	Total Cost	0.000	13.100	14.965	15.449	0.000	43.514	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0307141F NASS, IO TECH INTEGRATION & TOOL DEV**	PROJECT NUMBER AND TITLE **4871 Information Operations Technology**

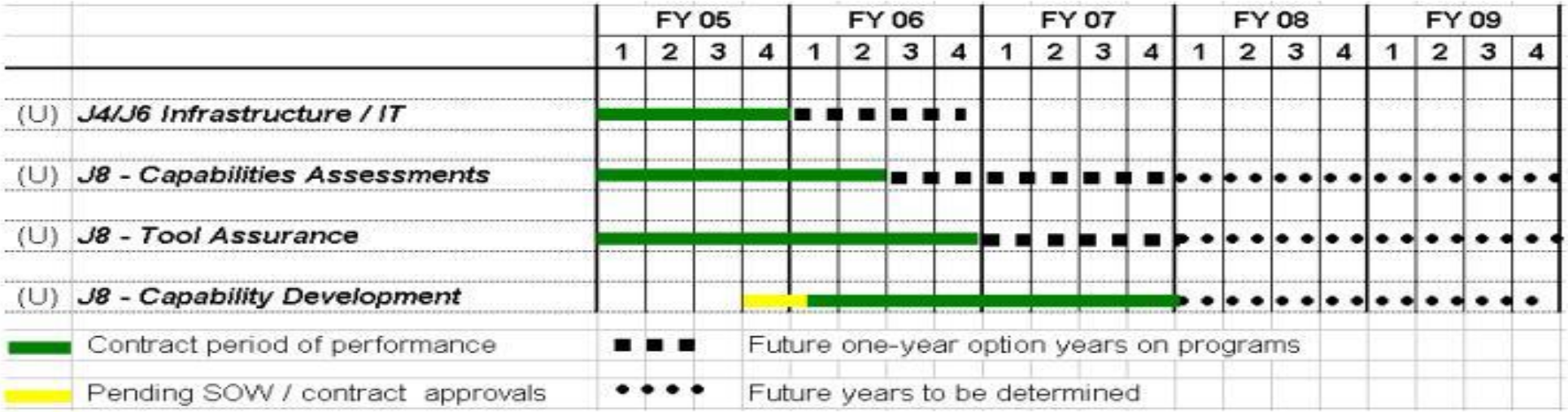

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0307141F NASS, IO TECH INTEGRATION & TOOL DEV**	**4871 Information Operations Technology**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) J4/J6 Infrastructure / IT	1-4Q	1-2Q	
(U) J8 Capability Assessment	1-4Q	1-4Q	1-4Q
(U) J8 Tool Assurance	1-4Q	1-4Q	1-4Q
(U) J82 Capability Development	4Q	1-4Q	1-4Q

PE NUMBER: 0308699F
PE TITLE: Shared Early Warning System

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0308699F Shared Early Warning System

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	3.183	3.235	2.999	3.020	2.913	2.882	2.829	Continuing	TBD
4838 Shared Early Warning System	3.183	3.235	2.999	3.020	2.913	2.882	2.829	Continuing	TBD

FY 07 Reductions due to higher USAF/DOD priorities.

(U) A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. SEWS was established in December 1998 as a formal DoD program with the Air Force as the lead service. It is centrally managed to eliminate the previous ad hoc approach. The SEWS provides Theater Combatant Commanders and foreign nation partners direct operational benefit. Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. SEWS is comprised of: program management by the System Program Office (including the use of Federally Funded Research & Development Centers (FFRDC) and Systems Engineering and Technical Assistance (SETA) contractors); design, development, and acquisition of a common SEWS architecture; design, development, and test of a Joint Data Exchange Center (JDEC) in Moscow, Russia; development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System information; and site preparation for additional systems, as required.

This program is in Budget Activity 7 - Operational System Development, because it supports work on currently operating systems and/or upgrades still in engineering development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	3.345	3.295	3.357
(U)	Current PBR/President's Budget	3.183	3.235	2.999
(U)	Total Adjustments	-0.162	-0.060	
(U)	Congressional Program Reductions		-0.028	
	Congressional Rescissions	-0.162	-0.032	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0308699F Shared Early Warning System

PROJECT NUMBER AND TITLE: 4838 Shared Early Warning System

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4838 Shared Early Warning System	3.183	3.235	2.999	3.020	2.913	2.882	2.829	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Shared Early Warning System (SEWS) is the result of Presidential foreign policy initiatives beginning in 1996. SEWS was established in December 1998 as a formal DoD program with the Air Force as the lead service. It is centrally managed to eliminate the previous ad hoc approach. The SEWS provides Theater Combatant Commanders and foreign nation partners direct operational benefit. Foreign partner arrangements are negotiated with individual countries on a bilateral basis to provide selected region-specific missile warning information. SEWS is comprised of: program management by the System Program Office (including the use of Federally Funded Research & Development Centers (FFRDC) and Systems Engineering and Technical Assistance (SETA) contractors); design, development, and acquisition of a common SEWS architecture; design, development, and test of a Joint Data Exchange Center (JDEC) in Moscow, Russia; development of a multi-lingual, web-based infrastructure to provide Pre-Launch Notification System information; and site preparation for additional systems, as required.

This program is in Budget Activity 7 - Operational System Development, because it supports work on currently operating systems and/or upgrades still in engineering development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) Continue SEWS design, development, and test efforts to include but not be limited to: SEWS common architecture, SEWS initiatives as identified by theater commanders, a JDEC system planned to be installed in Moscow, and a Pre-Launch Notification System.	3.183	3.235	2.999
(U) Total Cost	3.183	3.235	2.999

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
(U) OPAF (PE 0308699F, Comm Elect Mods, P-1 Line Item #75, BA 3)	0.285	1.508	0.291	0.298	0.252	0.241	0.318	Continuing	TBD
(U) Operations and Maintenance AF	7.471	8.333	7.456	8.403	8.502	8.826	8.843	Continuing	TBD

Note: Fiscal year 2006 provides for major technological refresh of the SEWS system.

(U) D. Acquisition Strategy

The acquisition strategy builds on existing capabilities, using evolutionary acquisition and spiral development, to modernize and sustain SEWS.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0308699F Shared Early Warning System**

PROJECT NUMBER AND TITLE: **4838 Shared Early Warning System**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin	C/CPAF	Colorado Springs, CO	9.822	1.607	Oct-04	1.323	Jan-06	1.181	Oct-06	Continuing	TBD	TBD
Navy	MIPR	San Diego, CA	0.533	0.335	Jul-05	0.256	Feb-06	0.300	Jan-07	Continuing	TBD	TBD
Various Ctrs/Gov Agencies	MIPR	Colorado Springs, CO	3.547	0.020	Dec-04	0.393	Jan-06	0.406	Jan-07	Continuing	TBD	TBD
Subtotal Product Development			13.902	1.962		1.972		1.887		Continuing	TBD	TBD
Remarks:												
(U) Support												
MITRE	SS/CPFF	Colorado Springs, CO	2.763	0.505	Nov-04	0.525	Nov-05	0.568	Oct-06	Continuing	TBD	TBD
A&AS	C/T&M	Colorado Springs, CO	4.478	0.710	Dec-04	0.732	Dec-05	0.538	Dec-06	Continuing	TBD	TBD
PMA	N/A	Colorado Springs, CO	1.137	0.006	Oct-04	0.006	Oct-05	0.006	Oct-06	Continuing	TBD	TBD
Subtotal Support			8.378	1.221		1.263		1.112		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			22.280	3.183		3.235		2.999		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0308699F Shared Early Warning System**	PROJECT NUMBER AND TITLE **4838 Shared Early Warning System**

Exhibit R-4 SEWS

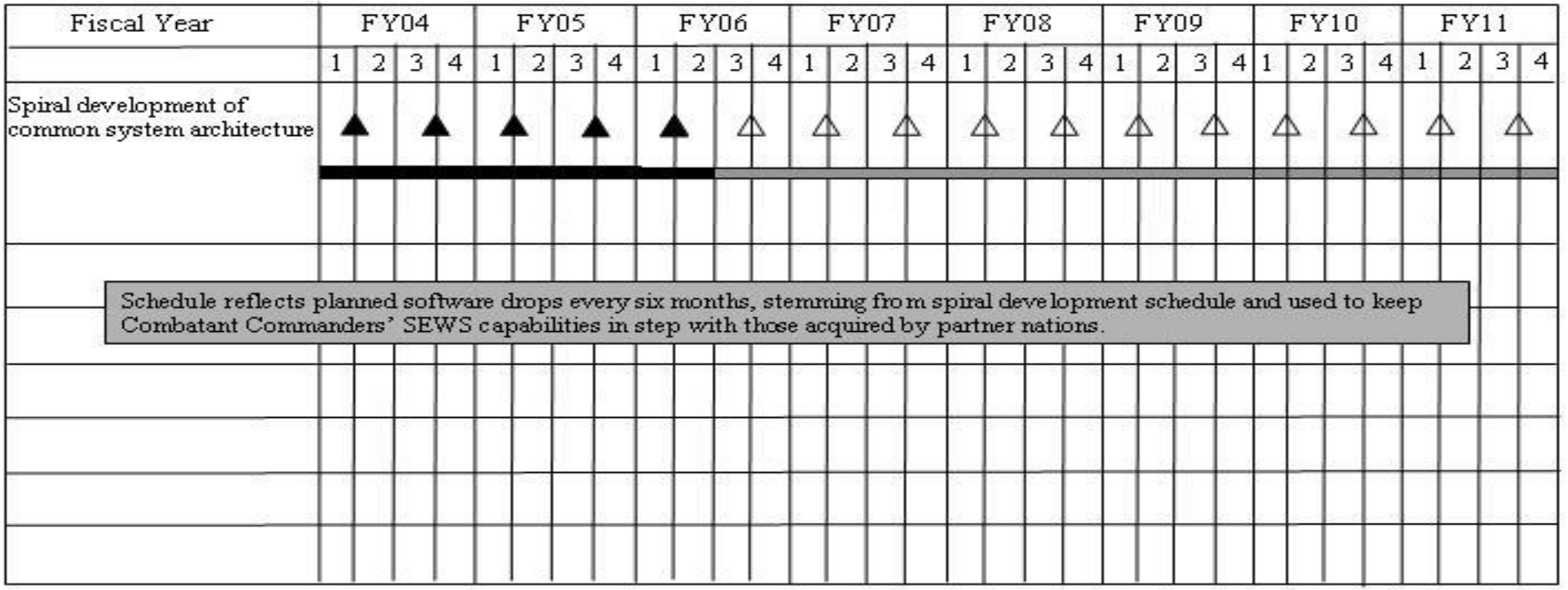

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0308699F Shared Early Warning System**	PROJECT NUMBER AND TITLE **4838 Shared Early Warning System**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Spiral development of common system architecture	1,3Q	1,3Q	1,3Q

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PE NUMBER: 0401115F
PE TITLE: C-130 AIRLIFT SQUADRONS

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	158.716	232.173	248.283	173.701	89.417	39.497	0.000	Continuing	TBD
4885	Avionics Modernization Program (AMP)	158.716	232.173	248.283	173.701	89.417	39.497	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM)] and the C-130 Broad Area Review requirements on the AF's 434 C/AC/EC/HC/LC/MC-130s that are not being replaced with new C/EC/WC-130Js. These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's 434 C/AC/EC/HC/LC/MC-130s complete access to the CNS/ATM international air space. Also, AMP and USSOCOM's Common Architecture for Penetration (CAAP) have been combined to eliminate any duplication of effort in these avionics programs.

USAF's C-130 fleet consists of 14 different mission design series (MDS) to be modified by the AMP. Within each of these MDSs are multiple variants (C-130H2, etc.) to be modified by AMP. These different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program).

Shown here are RDT&E funds for C-130 AMP. SOCOM's AC/MC-130s will have additional CAAP equipment installed that will be funded in MFP-11. These SOCOM funds are not shown here.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 variant or group of variants will require a specific kit development and test. Then, each will proceed through development and production serially. This waterfall approach will result in an orderly development and production sequencing for the 14 different C-130 MDSs.

Development activities continue to focus on two areas: AMP's architecture and kit development for the first Combat Delivery aircraft (C-130H2) and the first Special Mission aircraft (MC-130H), as well as software development of the SOF AMP and Common Avionics Architecture for Penetration (CAAP) capabilities.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C/AC /EC/HC/ LC/MC-130 fleets of aircraft.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	150.242	233.028	217.602
(U)	Current PBR/President's Budget	158.716	232.173	248.283
(U)	Total Adjustments	8.474	-0.855	
(U)	Congressional Program Reductions	-1.457		
	Congressional Rescissions			
	Congressional Increases	2.000		
	Reprogrammings	11.999	-0.855	
	SBIR/STTR Transfer	-4.068		
(U)	Significant Program Changes:			
	None			

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE: 4885 Avionics Modernization Program (AMP)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4885	Avionics Modernization Program (AMP)	158.716	232.173	248.283	173.701	89.417	39.497	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The C-130 Avionics Modernization Program (AMP) consolidates and installs the mandated AF Navigation/Safety mods, the Global Air Traffic Management (GATM) systems [now referred to as Communications Navigation Surveillance/Air Traffic Management [CNS/ATM)] and the C-130 Broad Area Review requirements on the AF's 434 C/AC/EC/HC/LC/MC-130s that are not being replaced with new C/EC/WC-130Js. These mandated mods are incorporated with various other Reliability, Maintainability, and Sustainability (RM&S) upgrades to include: replacement of the radars, compasses, dual autopilots, dual flight management systems and HF/UHF/VHF data links. AMP will allow the AF's 434 C/AC/EC/HC/LC/MC-130s complete access to the CNS/ATM international air space. Also, AMP and USSOCOM's Common Architecture for Penetration (CAAP) have been combined to eliminate any duplication of effort in these avionics programs.

USAF's C-130 fleet consists of 14 different mission design series (MDS) to be modified by the AMP. Within each of these MDSs are multiple variants (C-130H2, etc.) to be modified by AMP. These different models and cockpit configurations create significant logistics support and aircrew training inefficiencies. Also, these differences greatly complicate aircrew and aircraft interoperability at forward operating locations. C-130 AMP standardizes the cockpit configurations and avionics suites for these different variants into a single cockpit configuration by installing a core avionics package, thus eliminating many of these significant logistics, interoperability, and training problems. (Note: C/EC/WC-130J are not included in AMP program).

Shown here are RDT&E funds for C-130 AMP. SOCOM's AC/MC-130s will have additional CAAP equipment installed that will be funded in MFP-11. These SOCOM funds are not shown here.

The Boeing Company was awarded the AMP contract on 30 July 01. Each C-130 variant or group of variants will require a specific kit development and test. Then, each will proceed through development and production serially. This waterfall approach will result in an orderly development and production sequencing for the 14 different C-130 MDSs.

Development activities continue to focus on two areas: AMP's architecture and kit development for the first Combat Delivery aircraft (C-130H2) and the first Special Mission aircraft (MC-130H), as well as software development of the SOF AMP and Common Avionics Architecture for Penetration (CAAP) capabilities.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 03. The ECP rebaselined the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program for up to 2 years.

C-130 Avionics Modernization Program (AMP): This project is in Budget Activity 7, Operational Systems Development as it is a major avionics and cockpit configuration modernization to the AF's C/AC /EC/HC/ LC/MC-130 fleets of aircraft.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE 4885 Avionics Modernization Program (AMP)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Detailed design work continues for both Group A(wiring, racks, etc) and B (computers, instrumentation, etc.) equipment for the C/AC/EC/HC/LC/MC-130 fleets. Coding and unit testing for the software integration facility continues.	134.000	184.000	148.000
(U)	Engineering Change Orders (ECO), Govt Furnished Parts and Information (GFP/GFI), and Award Fee.	6.302	22.894	30.371
(U)	Developmental Test and Evaluation.	9.073	14.354	12.326
(U)	Training System development upgrades.	0.000	0.000	46.599
(U)	Program office support (A&AS, TDY, training and supplies).	9.341	10.925	10.987
(U)	Total Cost	158.716	232.173	248.283

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	AF RDT&E									
(U)	Other APPN									
(U)	PE 0401115F, 3010, C-130 AMP, BP1100		50.559	87.667	188.030	357.686	427.400	417.693	1,325.150	2,854.185

(U) D. Acquisition Strategy

The C-130 AMP contract was awarded 30 July 2001. This is a Cost-Plus Award Fee contract to develop and install AMP kits for the first group of aircraft within the AF's AC/C/EC/HC/LC/MC-130 fleet. Kit installation for the majority of the 434 aircraft will be competitively bid at a future date.

Revisions to the AF training system is an option under the AMP contract, which will modify the various Training Programs and Weapons Systems Trainers to the AMP configuration.

A Restructure Engineering Change Proposal (ECP) 1302 was awarded to Boeing 20 Aug 2003. The ECP rebaselines the program due to funding reductions in FYs 03/04 which resulted in delays in System Development and Demonstration program by up to 2 years.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401115F C-130 AIRLIFT SQUADRONS**

PROJECT NUMBER AND TITLE: **4885 Avionics Modernization Program (AMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing, Long Beach, CA	CPAF			140.302	Dec-04	206.894	Dec-06	224.970	Dec-06	269.675	841.841	
Subtotal Product Development			0.000	140.302		206.894		224.970		269.675	841.841	0.000
Remarks: Note: Funds shown here contain System Design & Development, ECO, Training System Upgrades and the Award Fee.												
(U) Support												
Program Support Office	N/A			9.341		10.925		10.987		14.016	45.269	
Subtotal Support			0.000	9.341		10.925		10.987		14.016	45.269	0.000
Remarks: Award Dates vary throughout the year depending on activity (TDY, Training, Contractor Support)												
(U) Test & Evaluation												
Various				9.073	Jan-05	14.354	Jan-07	12.326	Jan-07	18.924	54.677	
Subtotal Test & Evaluation			0.000	9.073		14.354		12.326		18.924	54.677	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	158.716		232.173		248.283		302.615	941.787	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401115F C-130 AIRLIFT SQUADRONS	PROJECT NUMBER AND TITLE: 4885 Avionics Modernization Program (AMP)

C-130 AMP Schedule – 2 Dec 05

Version 2q

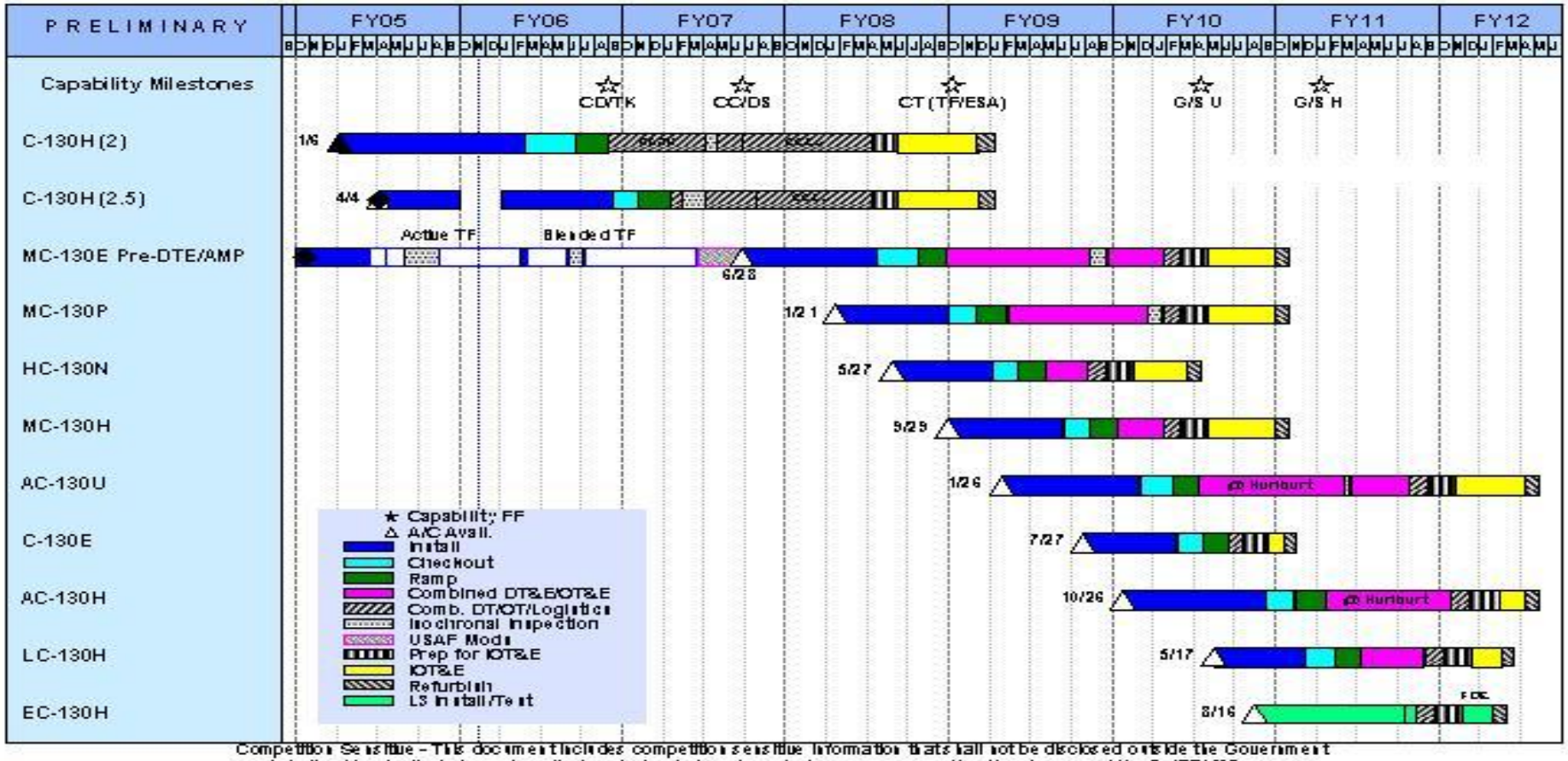

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401115F C-130 AIRLIFT SQUADRONS**	PROJECT NUMBER AND TITLE **4885 Avionics Modernization Program (AMP)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Core Preliminary Design Review (PDR)		3Q	
(U) C-130 SOF/AMP PDR		3Q	
(U) AMP Hardware Concept Design Review (CDR)	4Q		
(U) AMP Software CDR	4Q		
(U) C-130H2 First Flight		4Q	
(U) M/SC/LRIP Decision		2Q	

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PE NUMBER: 0401119F
PE TITLE: C-5 Airlift Squadrons

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	311.508	223.252	150.209	51.691	0.000	0.000	0.000	0.000	1,686.630
4495	Avionics Modernization Program	33.327	0.000	0.000	0.000	0.000	0.000	0.000	0.000	392.041
4835	Reliability Enhancement & Reengining Program	278.181	223.252	150.209	51.691	0.000	0.000	0.000	0.000	1,294.589

(U) A. Mission Description and Budget Item Justification

674495: Avionics Modernization Program (AMP): Phase I of an Air Force planned two-phase modernization effort for the C-5 [Phase II is the Reliability Enhancement and Re-engining Program (RERP)]. AMP implements communication, navigation, surveillance/air traffic management (CNS/ATM) [formerly, Global Air Traffic Management (GATM)] and navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs Deputy Secretary of Defense (DepSecDef) directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements will be incorporated into the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress towards free flight capability. The AWFCS portion of AMP replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities will also be incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. Two AMP RDT&E test articles were funded in FY99 for installation and flight test in FY02/03/04/05. AMP's first flight occurred in Dec 02. The final software build completed in August 05, and operational testing is scheduled to complete in May 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, which is Phase II of the C-5 modernization program. The C-5 modernization program was approved in FY04 to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

674835: Reliability Enhancement and Re-engining Program (RERP): Phase II of an Air Force planned two-phase modernization effort for the C-5 (Phase I is the Avionics Modernization Program (AMP)). RERP is a comprehensive modernization effort to improve aircraft reliability, maintainability and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability) while reducing total ownership costs (TOC). This effort centers around replacing TF39 engines with a more reliable, commercially Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to communication, navigation, surveillance/air traffic management (CNS/ATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrics, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. Three RDT&E test articles were funded in FY04 for installation and flight test in FY05/06/07. RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air-vehicle Critical Design Review (CDR) completed in Mar 04. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP. The C-5 modernization program was approved in FY04

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**

to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. As described above, RERP includes a new start effort for avionics capability required for modernization, but which may not be complete at the end of AMP development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	332.982	226.479	150.209
(U)	Current PBR/President's Budget	311.508	223.252	150.209
(U)	Total Adjustments	-21.474	-3.227	
(U)	Congressional Program Reductions		-2.247	
	Congressional Rescissions	-3.186	-0.980	
	Congressional Increases			
	Reprogrammings	-9.299		
	SBIR/STTR Transfer	-8.989		

(U) Significant Program Changes:

FY07 PB:

FY06 has been reduced by $3.3M. This funding reduction was made as a result of Congressional actions.

FY07:

FY07 has been increased $0.6M since the FY06 PB submittal. Increase is a result of changes in inflation factors.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4495 Avionics Modernization Program

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4495	Avionics Modernization Program	33.327	0.000	0.000	0.000	0.000	0.000	0.000	0.000	392.041
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

674495: Avionics Modernization Program (AMP): Phase I of an Air Force planned two-phase modernization effort for the C-5. It implements communication, navigation, surveillance/air traffic management (CNS/ATM) [formerly, Global Air Traffic Management (GATM)] and navigation/safety capability and the All Weather Flight Control System (AWFCS). It installs Deputy Secretary of Defense (DepSecDef) directed navigation/safety equipment: Terrain Awareness and Warning System (TAWS) and Traffic Alert and Collision Avoidance System (TCAS), reducing the threat of controlled flight into terrain and mid-air collisions. CNS/ATM capability requirements will be incorporated into the aircraft to meet current and future International Civil Aviation Organization (ICAO)/Federal Aviation Administration (FAA) requirements and to progress towards free flight capability. The AWFCS portion of AMP replaces low reliability line replaceable units (LRUs) in the automatic flight control system and replaces aging, non-supportable mechanical instruments in the engine and flight systems. Connectivity to mobility command and control capabilities will also be incorporated in the AMP design. The TCAS portion was accelerated ahead of the rest of the AMP mod and was completed 31 Oct 02. Two AMP RDT&E test articles were funded in FY99 for installation and flight test in FY02/03/04/05. AMP's first flight occurred in Dec 02. The final software build completed August 05, and operational testing is scheduled to complete in May 06. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP, which is Phase II of the C-5 modernization program. The C-5 modernization program was approved in FY04 to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) System Engineering/Program Management	4.547		
(U) AMP Kit Design/Development/Contractor Test	21.787		
(U) Prototype Fabrication/Install	3.797		
(U) Mission Support	0.534		
(U) Government Flight Test Cost	2.662		
(U) Total Cost	33.327	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) Aircraft Procurement, AF, BA-5,	98.907	71.199	50.426	28.188	4.197			412.885	877.300

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4495 Avionics Modernization Program**

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

	C-5 Mods, Avionics Modernization Program, BP-11								
(U)	Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-16								
(U)	Aircraft Procurement, AF, BA-5, C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)	27.661	143.615	440.378	642.424	778.338	884.283	6,842.840	9,759.539

(U) D. Acquisition Strategy

Avionics Modernization Program: Program acquisition strategy establishes a single integrating contractor (Lockheed Martin Aeronautics Company) to modify and qualify integrated Commercial Off-the-Shelf (COTS) line replaceable units (LRUs) and software to meet C-5 performance and communication, navigation, surveillance/air traffic management (CNS/ATM) requirements; update existing C-5 engineering and technical data; develop interface control specifications based on performance requirements; prototype the new system; and support flight testing. AMP contract awarded to the Lockheed Martin/Honeywell team on 22 January 1999. $9.7M in FY99 procurement was added in the FY00 PB to accelerate Traffic Alert and Collision Avoidance System (TCAS) installations ahead of the rest of AMP. The AMP modification is planned for the entire C-5 fleet.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401119F C-5 Airlift Squadrons**

PROJECT NUMBER AND TITLE: **4495 Avionics Modernization Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin Aeronautics Co	CPAF		318.394	30.131	Oct-04	0.000		0.000		0.000	348.525	274.000
N/A											0.000	
Subtotal Product Development			318.394	30.131		0.000		0.000		0.000	348.525	274.000
Remarks:												
(U) Support												
WR-ALC/LT			9.079	0.000							9.079	9.079
C5SG			14.369	0.534							14.903	14.903
N/A											0.000	
Subtotal Support			23.448	0.534		0.000		0.000		0.000	23.982	23.982
Remarks:												
(U) Test & Evaluation												
418 Test Squadron		Edwards AFB	16.872	2.662							19.534	19.534
N/A											0.000	
Subtotal Test & Evaluation			16.872	2.662		0.000		0.000		0.000	19.534	19.534
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			358.714	33.327		0.000		0.000		0.000	392.041	317.516

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4495 Avionics Modernization Program

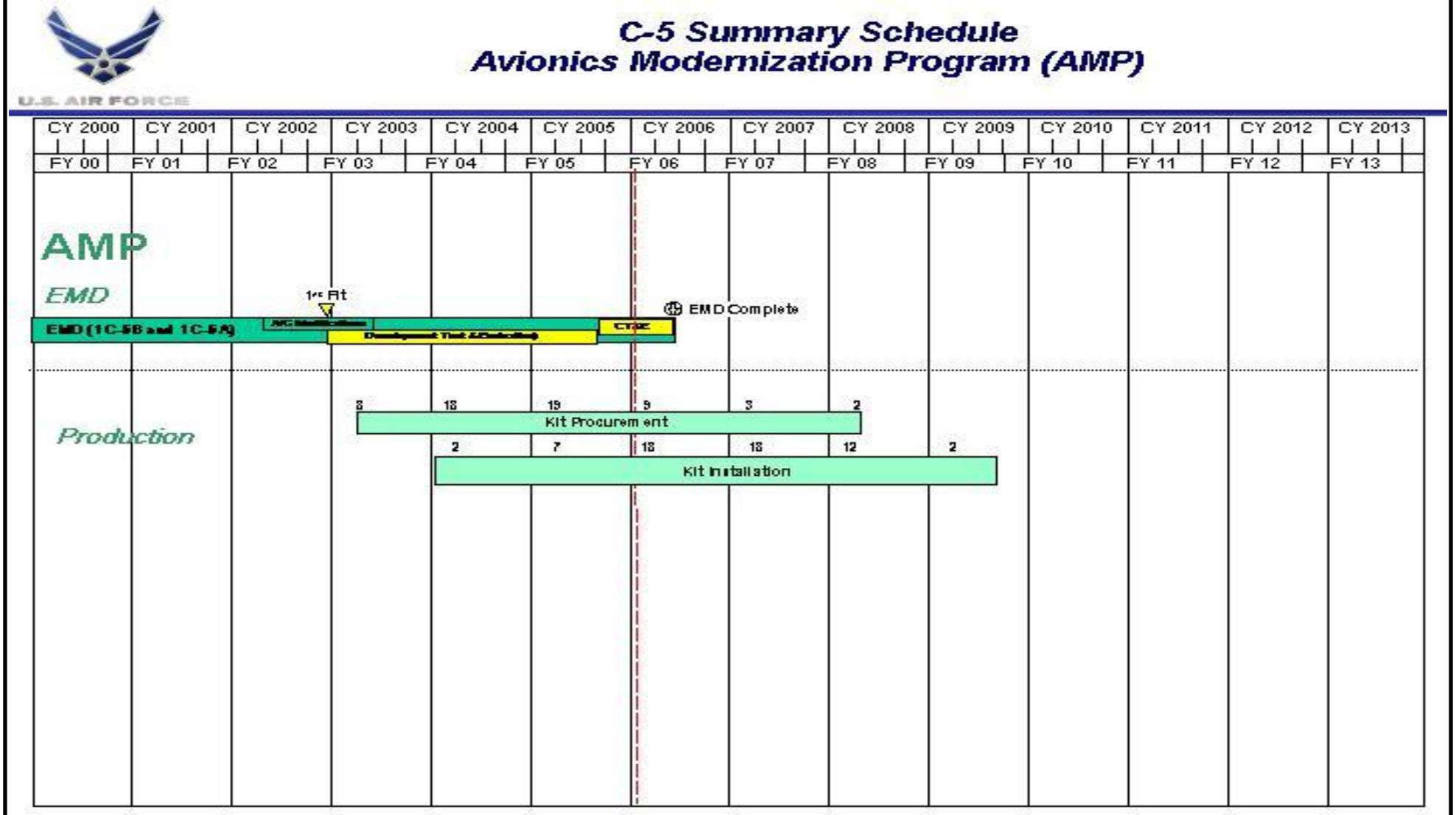


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401119F C-5 Airlift Squadrons**	PROJECT NUMBER AND TITLE **4495 Avionics Modernization Program**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AMP Flight Test Start (FY05/4)	4Q		
(U) AMP Flight Test Complete (FY06/3)		3Q	

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401119F C-5 Airlift Squadrons**

PROJECT NUMBER AND TITLE: **4835 Reliability Enhancement & Reengining Program**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4835	Reliability Enhancement & Reengining Program	278.181	223.252	150.209	51.691	0.000	0.000	0.000	0.000	1,294.589
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

674835: Reliability Enhancement and Re-engining Program (RERP): Phase II of an Air Force planned two-phase modernization effort for the C-5. It improves aircraft reliability, maintainability and availability. RERP will enable the C-5 to achieve wartime mission requirements by increasing fleet availability (mission capable rate, departure reliability) while reducing total ownership costs (TOC). This effort centers around replacing TF39 engines with a more reliable, commercially Off-the-Shelf (COTS) turbofan engine with increased takeoff thrust and stage three noise compliance. These new engines (along with new pylons, wing attach fittings and upgrades, and thrust reversers) increase payload capability and access to Global Air Traffic Management (GATM) airspace. The modification also decreases aircraft time to climb, increases engine-out climb gradient for takeoff, improves transportation system throughput, and decreases engine removals. Additionally, numerous other system modifications will be performed (e.g., auxiliary power units, electrics, hydraulics, fuel system, fire suppression system, pressurization/air conditioning system, landing gear, and airframe) to increase fleet availability and reduce TOC. Three RDT&E test articles were funded in FY04 for installation and flight test in FY05/06/07. RERP's Preliminary Design Review (PDR) completed in Jan 03 and the Air-vehicle Critical Design Review (CDR) completed in Mar 04. Avionics capability required for modernization that is not complete at the end of AMP development will be captured and funded in RERP. The C-5 modernization program was approved in FY04 to use the contractor supported weapon system (CSWS) support concept. Initial spares in support of CSWS will be purchased with 3010, BP11 funds instead of 3010, BP16 funds. This project is comprised of low technical risk efforts supporting fielded weapons systems and, therefore, was assigned to Budget Activity 7, Operational Systems Development. As described above, RERP includes a new start effort for avionics capability required for modernization, but which may not be complete at the end of AMP development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Systems Engineering/Program Management	18.541	15.263	10.086
(U) RERP Design/Development/Contractor Test	145.676	116.797	77.181
(U) Prototype Fabrication/Install	100.649	67.025	44.292
(U) Mission Support	8.103	14.067	11.450
(U) Government Test Support	5.212	5.600	7.200
(U) Aircrew & Maintenance Trainer	0.000	4.500	0.000
(U) Total Cost	278.181	223.252	150.209

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) Aircraft Procurement,AF, BA-5,C-5 Mods, Reliability Enhancement and Re-engining Program, BP-11 (to include Advance Procurement)		27.661	143.615	440.378	642.424	778.338	884.283	6,842.840	2,922.699
(U) Aircraft Procurement, AF, BA-5, C-5 Mods, Avionics Modernization Program, BP-11	98.907	71.199	50.426	28.188	4.197			412.885	877.300

(U) D. Acquisition Strategy

Reliability Enhancement and Re-engining Program (RERP): The approved FY02 acquisition strategy called for the modification of the entire C-5 aircraft fleet starting with the 50 B-models first. System Development & Demonstration (SDD) includes 1 C-5A and 2 C-5Bs. The program acquisition strategy is to consider every opportunity to use commercially available components and processes to modernize C-5 products and processes to meet or exceed required system performance and support, so as to renew the weapon system until 2040. The program acquisition strategy also seeks to construct a government/industry partnership to identify solutions, assign responsibility, and execute to achieve AMC requirements. Fleet availability, ownership cost, and system performance will be used to balance solutions against program cost. Lockheed Martin Aeronautics Co has been selected as the prime contractor through a sole source arrangement. Lockheed has selected General Electric (Powerplant), Goodrich (Pylon), and Honeywell (Avionics) as the major subcontractors. In FY05, the acquisition strategy was modified, moving Milestone C to Dec 06, and inserting an Air Force Review Board in Dec 07. Milestone C will provide approval to procure Lot 1 material and hardware, and the Air Force Review Board will provide approval to install Lot 1 material and hardware.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401119F C-5 Airlift Squadrons**

PROJECT NUMBER AND TITLE: **4835 Reliability Enhancement & Reengining Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Lockheed Martin Aeronautics Co (Pre-EMD)	FFP		46.738							0.000	46.738	46.738
Lockheed Martin Aeronautics Co (SDD)	CPAF		514.596	264.866	Oct-04	199.085	Oct-05	131.559	Oct-06	29.541	1,139.647	1,139.647
											0.000	
Subtotal Product Development			561.334	264.866		199.085		131.559		29.541	1,186.385	1,186.385
Remarks:												
(U) Support												
330 SASG/LT			6.770	3.023		5.442		4.705		1.125	21.065	21.065
C5SG			11.722	5.080		8.625		6.745		2.125	34.297	34.297
N/A											0.000	
Subtotal Support			18.492	8.103		14.067		11.450		3.250	55.362	55.362
Remarks:												
(U) Test & Evaluation												
418 Test Squadron (Edwards AFB)			11.430	5.212		5.600		7.200		3.500	32.942	32.942
N/A											0.000	
Subtotal Test & Evaluation			11.430	5.212		5.600		7.200		3.500	32.942	32.942
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Aircrew & Maintenance Trainer												
						4.500				15.400	19.900	19.900
Subtotal Aircrew & Maintenance Trainer			0.000	0.000		4.500		0.000		15.400	19.900	19.900
Remarks:												
(U) Total Cost			591.256	278.181		223.252		150.209		51.692	1,294.589	1,294.589

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

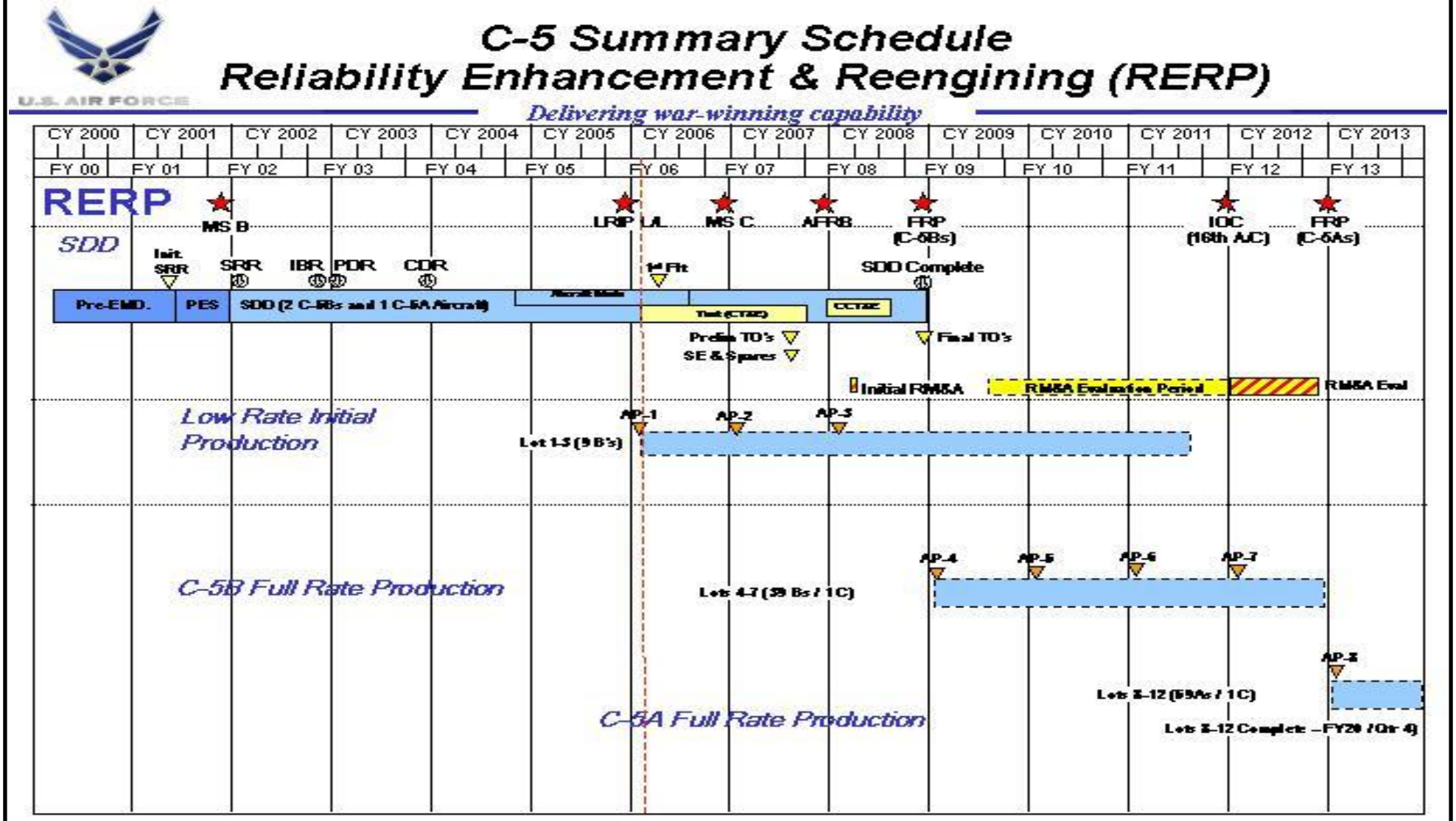


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401119F C-5 Airlift Squadrons	PROJECT NUMBER AND TITLE: 4835 Reliability Enhancement & Reengining Program

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) First Prototype Flight (FY06/3)		3Q	
(U) Milestone C (FY07/1)			1Q

PE NUMBER: 0401130F
PE TITLE: C-17 Aircraft

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401130F C-17 Aircraft

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	195.042	164.781	173.781	167.973	195.072	176.692	166.863	Continuing	TBD
2569 C-17 Aircraft	195.042	164.781	173.781	167.973	195.072	176.692	166.863	Continuing	TBD

FY02 and later funds for LAIRCM were ZBTed to PE 41134F.

(U) A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national 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. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is budget activity 7, Operational System Development, because the program has completed Milestone III and is continuing performance improvements to increase the operational capability of the C-17 through programmed modifications.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	194.819	165.762	173.251
(U)	Current PBR/President's Budget	195.042	164.781	173.781
(U)	Total Adjustments	0.223	-0.981	
(U)	Congressional Program Reductions	-1.777		
	Congressional Rescissions		-2.381	
	Congressional Increases	2.000	1.400	
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY06/07 increases are for several new projects, including Airdrop Improvements and Identification Friend/Foe (IFF) Communication, Navigation, Surveillance and Air Traffic Management (CNS/ATM) Mode Select Enhanced Surveillance (Mode S EHS).

The FY03 National Defense Authorization Act (NDAA) language directed T&E centers to charge only direct costs beginning FY06; this reduction in FY06-FY11 is a result of the ZBT transferring indirect dollars from the customer accounts to PE 65807F, T&E Support.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401130F C-17 Aircraft

PROJECT NUMBER AND TITLE: 2569 C-17 Aircraft

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2569 C-17 Aircraft	195.042	164.781	173.781	167.973	195.072	176.692	166.863	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The C-17 can perform the entire spectrum of airlift missions and is specifically designed to operate effectively and efficiently in both strategic and theater environments. Airlift provides essential flexibility when responding to contingencies on short notice anywhere in the world. It is a major element of America's national 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. The C-17 provides a vast increase in overall airlift capability necessary to replace and exceed the capabilities lost from retiring the aging C-141 fleet from the Air Force inventory. Not only can the C-17 deliver outsize cargo to austere tactical environments, but it also reduces ground time during airland operations. The C-17 will perform the airlift mission well into this century. RDT&E efforts support aircraft performance improvements.

This program is budget activity 7, Operational System Development, because the program has completed Milestone III and is continuing performance improvements to increase the operational capability of the C-17 through programmed modifications.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Performance Improvement Development & Testing	114.401	91.319	102.489
(U) Systems Engineering/Program Management	37.455	35.100	36.740
(U) Producibility Enhancement/Performance Improvement (PE/PI) Contractor Flight Test	19.820	24.242	24.415
(U) Producibility Enhancement/Performance Improvement (PE/PI) Government Flight Test	23.366	14.120	10.137
(U) Total Cost	195.042	164.781	173.781

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) APAF, MYP, BA02, PE0401130F	3057.358	3219.904	2636.192	349.950	350.959	316.157	294.430	0.000	10,224.950
(U) APAF, ICS, PE0401130F	917.745	0.000	0.000	0.000	0.000	0.000	0.000	0.000	917.745
(U) APAF, A/C Mods, BA05, PE0401130F/PE0401134F	182.720	257.358	251.404	327.427	713.968	606.987	551.161	0.000	2,891.025
(U) MilCon, Facilities, PE0401130F	95.922	76.547	174.338	46.071	1.204	0.000	0.000	0.000	394.082

In FY06, aircraft interim contract support (ICS) transitioned to contractor logistic support (CLS). Sustainment funds were transferred from ICS to O&M. Funds for initial spares and other non-CLS efforts were transferred from ICS to MYP.

The A/C mods funding includes the LAIRCM PE since those funds are included in the C-17 11C17A BPAC (P-1 line)

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401130F C-17 Aircraft**	PROJECT NUMBER AND TITLE **2569 C-17 Aircraft**

(U) D. Acquisition Strategy

The C-17 Acquisition Strategy is based on six separate contracts to support the entire scope of the C-17 weapon system. These five contracts are: 1) a multi-year procurement (MYP) aircraft contract (to economically purchase the full complement of production aircraft) - (APAF); 2) a Producibility Enhancement and Performance Improvement (PE/PI) contract (to develop cost reduction changes, capability enhancements, and design fixes to service-revealed problems) - (RDT&E, APAF); 3) a Globemaster III Sustainment Partnership (field support) contract (to support the current and future fielded aircraft) - (O&M, TWCF); 4) a MYP engine contract (for Government Furnished Equipment [GFE] engines) - (O&M, TWCF); 5) a set of aircrew simulator and training contracts: one for aircrew simulators and one for training & concurrency upgrades; and 6) a maintenance training device contract (for devices & concurrency upgrades) - (APAF).

Two C-17 Defense Acquisition Board (DAB) decisions, contained in the 3 Nov 95 and 1 Feb 96 USD(A&T) Acquisition Decision Memoranda (ADM), directed the Air Force to proceed with a 120-aircraft production program. The Air Force proceeded with procuring 40 aircraft followed by an 80-aircraft MYP program (along with engines to support them). Sixty additional C-17s were programmed at the end of the 80-aircraft MYP to meet requirements not included in the 120 aircraft program.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401130F C-17 Aircraft**

PROJECT NUMBER AND TITLE: **2569 C-17 Aircraft**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boeing	C,FPI/FP		5,337.804								5,337.804	
Boeing	C,CPFF		878.874	171.527	Jan-05	150.511	Jan-06	163.484	Jan-07	644.648	2,009.044	
Pratt & Whitney	C,FP		25.346							0.000	25.346	
Boeing	C,FPI		83.885							0.000	83.885	
Pratt & Whitney	FP+EPA		7.506							0.000	7.506	
None											0.000	
Subtotal Product Development			6,333.415	171.527		150.511		163.484		644.648	7,463.585	0.000
Remarks:												
(U) Support												
Mission Support OGC	PO		97.800							9.726	107.526	
Site Activation OGC	PO		1.500							0.000	1.500	
Miscellaneous			22.400							0.000	22.400	
None											0.000	
Subtotal Support			121.700	0.000		0.000		0.000		9.726	131.426	0.000
Remarks:												
(U) Test & Evaluation												
Combined Test Force	PO		296.460	18.671	Oct-04	9.420	Nov-05	10.137	Jan-07	51.485	386.173	
Wright Labs	PO		10.582	0.149	Oct-04	0.150	Jan-06	0.160	Oct-06	0.740	11.781	
Other (Army funds for testing)	PO		3.150	4.695	Nov-04	4.700	Dec-05			0.000	12.545	
None											0.000	
Subtotal Test & Evaluation			310.192	23.515		14.270		10.297		52.225	410.499	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			6,765.307	195.042		164.781		173.781		706.599	8,005.510	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401130F C-17 Aircraft	PROJECT NUMBER AND TITLE 2569 C-17 Aircraft

C-17 Schedule

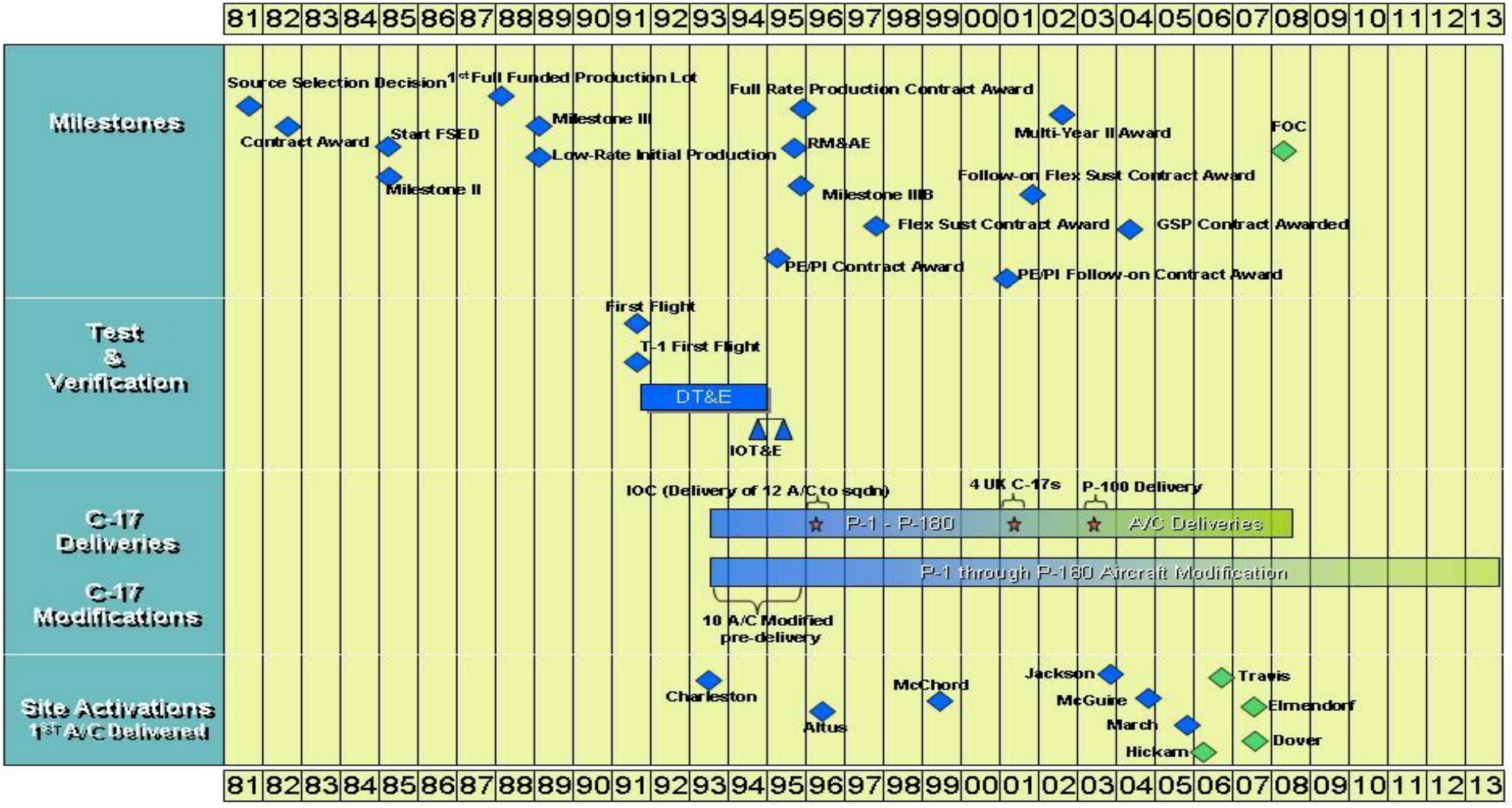


Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401130F C-17 Aircraft**	**2569 C-17 Aircraft**

	Schedule Profile	FY 2005	FY 2006	FY 2007
(U)	Incremental Funding of Ongoing Performance Improvement Projects (Boeing)	1-3Q	1-3Q	1-3Q
(U)	CNS/ATM/SAASM RNP Improvements	1Q	1Q	1Q
(U)	Formation Flying	1Q	1Q	1Q
(U)	Mission Computer/Core Integrated Processor	2Q	2Q	2Q
(U)	Airdrop Improvements			1Q
(U)	CNS/ATM IFF Mode S Enhanced S		2Q	1Q
(U)	Air Force Flight Test Center	1Q	2Q	1Q

PE NUMBER: 0401132F
PE TITLE: C-130J PROGRAM

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	23.247	6.586	40.542	45.430	40.605	44.045	48.318	Continuing	TBD
5061 C-130J	23.247	6.586	40.542	45.430	40.605	44.045	48.318	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

A. Mission Description and Budget Item Justification

FY07 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 6.0 Upgrades. Block 6.0 is the first phase of at least four block upgrades. AMC/CC has mandated capability releases on a two-year cycle. Block Upgrades include the development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing, as well as required operational upgrades identified by AMC, which is the USAF lead operating command for the C-130J. Block 6.0 requirements includes:

a.) Terrain Awareness Warning System (TAWS)
b.) Common Communication, Navigation and Identification (CNI)
c.) Identify Friend or For (IFF) Enhanced Mode S
d.) Mission Computer Take-Off and Landing Data (MC TOLD)
e.) AAR-47 missile warning reciver sensor cant adjustment
f.) Obstacle Voice Warning Alert
g.) CNI Track Offset

3.) Start of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades. Upgrades include the development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing, as well as enhancements identified by AMC, which is the USAF lead operating command for the C-130J. Block 7.0 will also be the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) TAWS Video
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade

FY08 C-130J program RDT&E funding provides for:

1.) Continued participation in COSSURM.

2.) Completion of Block 6.0 Upgrades and beginning of fleet modification.
3.) Continuation of Block 7.0 Upgrades.

FY05 funding was received to deliver the Stepped Frequency Microwave Radiometer (SFMR) for the WC-130J fleet in Oct 05. SFMR is a Congressionally-mandated requirement to assist the National Oceanographic and Atmospheric Administration (NOAA) in obtaining real-time surface wind measurements during tropical cyclone activity, which is useful in assessing the intensity and size of a tropical cyclone.

These RDT&E funds will enable development, integration, and testing of Department of Defense (DoD) mandated Communications, Navigation, and Surveillance / Air Traffic Management (CNS/ATM) requirements needed on the C-130J aircraft. The current C-130J Operational Requirements Document (ORD), validated 21 January 2005, identifies the CNS/ATM and Navigational Safety requirements for the C-130J. Supplemental guidance for the various CNS/ATM and Navigational Safety requirements is provided via numerous Federal Aviation Administration (FAA), International Civil Aviation Organization (ICAO) and DoD standards. Where possible, the C-130J CNS/ATM and Navigational Safety solution set will be common with other USAF/Air Mobility Command (AMC) weapon systems performing similar upgrades.

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

This effort is assigned to Budget Activity 7, as it supports an operational system.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	32.910	6.681	40.542
(U)	Current PBR/President's Budget	23.247	6.586	40.542
(U)	Total Adjustments	-9.663	-0.095	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.330	-0.095	
	Congressional Increases			
	Reprogrammings	-9.333		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401132F C-130J PROGRAM

PROJECT NUMBER AND TITLE: 5061 C-130J

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5061 C-130J	23.247	6.586	40.542	45.430	40.605	44.045	48.318	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

A. Mission Description and Budget Item Justification

FY07 C-130J program RDT&E funding provides for:

1.) Participation in the International Co-operative Systems and Software Upgrade Requirements Management (COSSURM). COSSURM participants include the United Kingdom, Australia, Italy, Denmark, and the United States. COSSURM provides a mechanism to jointly identify, collect, define, analyze, and price requirements. By combining requirements and resources under COSSURM, each participating country will save in aircraft upgrade costs.

2.) Continuation of Block 6.0 Upgrades. Block 6.0 is the first phase of at least four block upgrades. AMC/CC has mandated capability releases on a two-year cycle. Block Upgrades include the development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing, as well as required operational upgrades identified by AMC, which is the USAF lead operating command for the C-130J. Block 6.0 requirements includes:

a.) Terrain Awareness Warning System (TAWS)
b.) Common Communication, Navigation and Identification (CNI)
c.) Identify Friend or For (IFF) Enhanced Mode S
d.) Mission Computer Take-Off and Landing Data (MC TOLD)
e.) AAR-47 missile warning reciver sensor cant adjustment
f.) Obstacle Voice Warning Alert
g.) CNI Track Offset

3.) Start of Block 7.0 Upgrades. Block 7.0 is the second phase of at least four block upgrades. Upgrades include the development, integration, and testing of aircraft modifications necessary to correct deficiencies identified in qualification and operational testing, as well as enhancements identified by AMC, which is the USAF lead operating command for the C-130J. Block 7.0 will also be the first Block Upgrade initiative that is a true International partnership, as the development costs will be shared by each participating nation. Block 7.0 requirements include:

a.) TAWS Video
b.) Dual Multi-Mode Receivers (MMR) with TSO C-129A Civil Global Positioning System (GPS)
c.) CNI Special Processor upgrade

FY08 C-130J program RDT&E funding provides for:

1.) Continued participation in COSSURM.
2.) Completion of Block 6.0 Upgrades and beginning of fleet modification.

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401132F C-130J PROGRAM**	PROJECT NUMBER AND TITLE **5061 C-130J**

3.) Continuation of Block 7.0 Upgrades.

FY05 funding was received to deliver the Stepped Frequency Microwave Radiometer (SFMR) for the WC-130J fleet in Oct 05. SFMR is a Congressionally-mandated requirement to assist the National Oceanographic and Atmospheric Administration (NOAA) in obtaining real-time surface wind measurements during tropical cyclone activity, which is useful in assessing the intensity and size of a tropical cyclone.

These RDT&E funds will enable development, integration, and testing of Department of Defense (DoD) mandated Communications, Navigation, and Surveillance / Air Traffic Management (CNS/ATM) requirements needed on the C-130J aircraft. The current C-130J Operational Requirements Document (ORD), validated 21 January 2005, identifies the CNS/ATM and Navigational Safety requirements for the C-130J. Supplemental guidance for the various CNS/ATM and Navigational Safety requirements is provided via numerous Federal Aviation Administration (FAA), International Civil Aviation Organization (ICAO) and DoD standards. Where possible, the C-130J CNS/ATM and Navigational Safety solution set will be common with other USAF/Air Mobility Command (AMC) weapon systems performing similar upgrades.

The C-130J is a medium-sized transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 feet) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/H and the C-130J (Short). Special mission variants of the C-130J conduct airborne psychological operations (EC-130J) and weather reconnaissance (WC-130J). These aircraft must be capable of worldwide operations.

This effort is assigned to Budget Activity 7, as it supports an operational system.

(U)	**B. Accomplishments/Planned Program ($ in Millions)**	FY 2005	FY 2006	FY 2007
(U)	COSSURM payment	0.949	0.822	1.759
(U)	Initiate non-recurring engineering design and software development for Block 6.0 GATM/nav safety requirements and aircraft deficiencies/product improvements.			
(U)	Congressional Rescissions			
(U)	Reprogrammings			
(U)	SBIR/STTR Transfer			
(U)	Continue Block 6.0 non-recurring engineering design and software development. Conduct laboratory testing of GATM/nav safety hardware and software modifications. Procure and install hardware on flight test aircraft and one C-130J weapon system trainer.	12.298	5.264	22.334
(U)	Flight Test		0.500	1.000
(U)	Initiate non-recurring engineering design and software development for Block 7.0 GATM/nav safety requirements and aircraft deficiencies/product improvements.			15.449
(U)	Initiate Stepped Frequency Micorwave Radiometer (SFMR) non-recurring engineering design and software development for the WC-130J program.	10.000		
(U)	Total Cost	23.247	6.586	40.542

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE: 5061 C-130J

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN									
(U)	PE 0401132F, C-130J Procurement (BP1100)									
(U)	Mod MN-_1377 Blk 5.4	25.400	5.988						0.000	31.388
(U)	Mod MN-_1701 Blk 6.0			36.551	21.600	2.875			0.000	61.026
(U)	Mod MN-_6298 Blk 7.0				10.298	40.128	27.900	4.800	0.000	83.126
(U)	Mod MN-_5222 Blk 8.0						22.100	53.200	46.000	121.300
(U)	Mod MN-_8629 LAIRCM						38.682	8.315		TBD

(U) D. Acquisition Strategy

C-130J aircraft will be modified using a 'block upgrade' strategy. The full GATM/nav safety requirement will be met in four block upgrades: Block 6.0, which began with FY03 RDT&E funding and continues through FY07 RDT&E funding, Block 7.0, which will start in FY07, Block 8.0, which will start in FY09, and Block 9.0, which will start in FY11. The proportion of GATM/nav safety requirements allocated to Blocks 6.0 thru 9.0 was determined via a design trade study conducted by Lockheed Martin (the C-130J prime contractor) and verified by the C-130J system program office and AMC.

Lockheed Martin will be the prime contractor for these efforts, perform the non-recurring engineering and, following the successful conclusion of flight testing and certification of each block upgrade, will provide production retrofit kits on USAF C-130J aircraft. Installation will be performed by contractor, depot, and Air Force personnel.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401132F C-130J PROGRAM**

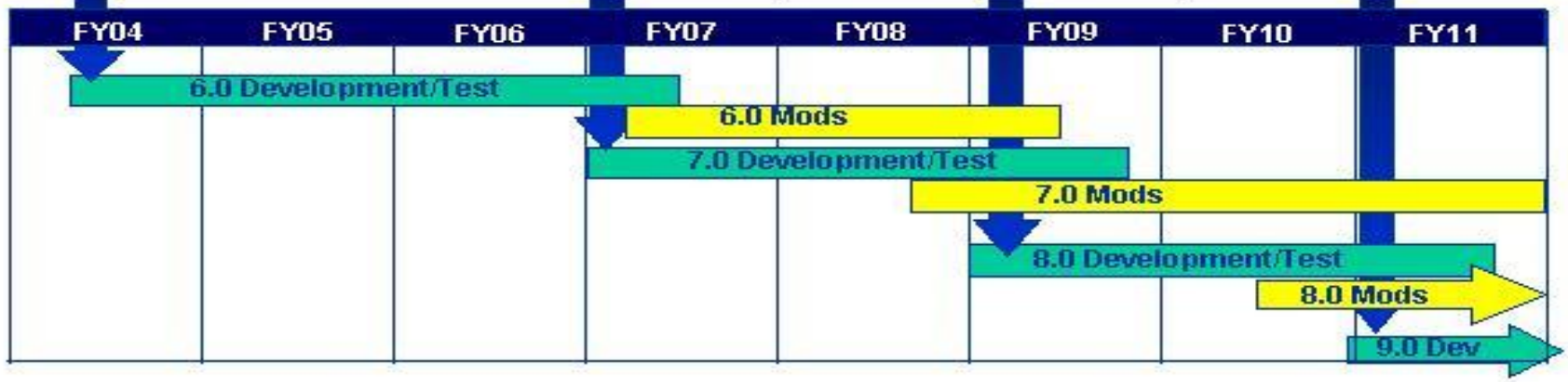
PROJECT NUMBER AND TITLE: **5061 C-130J**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Aeronautical Systems Center (AFMC), WPAFB, OH	CPFF	Lockheed Martin Aeronautics, Marietta GA		22.298	Nov-04	5.264	Jan-06	37.783	Oct-06		65.345	
Subtotal Product Development			0.000	22.298		5.264		37.783		0.000	65.345	0.000
Remarks:												
(U) Support												
TBD											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Air Force Materiel Command (DT&E)				0.000		0.500	Jan-06	1.000	Oct-06		1.500	
Subtotal Test & Evaluation			0.000	0.000		0.500		1.000		0.000	1.500	0.000
Remarks:												
(U) Management												
COSSURM				0.949	Oct-04	0.822	Jan-06	1.759	Oct-06		3.530	
Subtotal Management			0.000	0.949		0.822		1.759		0.000	3.530	0.000
Remarks:												
(U) Lockheed Martin Aeronautics, Marietta, GA												
(U) Total Cost			0.000	23.247		6.586		40.542		0.000	70.375	0.000
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401132F C-130J PROGRAM	PROJECT NUMBER AND TITLE 5061 C-130J

C-130J Block Upgrade Plan

Block 6.0	*Block 7.0*	*Block 8.0*	*Block 9.0*
GATM/NAV SAFETY ■Terrain Awareness & Warning System (TAWS) ■Enhanced IFF Mode S AIR LAND/AIRDROP ■Level A TOLD ■Common CNI SUSTAINMENT ■PC-based Mx ■Mgmt System (DTADS)	GATM/NAV SAFETY ■TAWS Video ■Dual Multi Mode Receivers AIR LAND/AIRDROP ■Comm/Nav/ Interphone Management Unit (CNI/MU)System Processor Upgrade SURVIVABILITY ■Tactical DataLink ■LAIRCM	GATM/NAV SAFETY ■Mobility 21 Data Link ■Selective Availability Anti-Spoofing Module (SASAM) w/ GPS RAIM SURVIVABILITY ■ASACMS Ph I AIRDROP ■Joint Precision Airdrop Airland ■Autonomous Approach and Landing System (AALS)	GATM/NAV SAFETY ■Full RNP Civil Compliance AIR LAND/AIRDROP ■Joint Tactical Radio System (JTRS) SURVIVABILITY ■ASACMS Ph II



Note: Block upgrades include variants, so mods will begin on C-130Js while EC-130J and WC-130J development is still underway

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401132F C-130J PROGRAM**	PROJECT NUMBER AND TITLE **5061 C-130J**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Block 6.0 FY05 award	1Q		
(U) Block 6.0 FY06 award		1Q	
(U) Block 6.0 DT&E payment to AFFTC		1Q	
(U) Start of Block 6.0 DT&E		4Q	
(U) Block 6.0 FY07 award			1Q
(U) Block 7.0 FY07 contract award			1Q

PE NUMBER: 0401133F
PE TITLE: Aeromedical Evacuation

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401133F Aeromedical Evacuation

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	2.047	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
4910 Aeromedical Readiness	0.000	2.047	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

In FY06, this is a new PE.

(U) A. Mission Description and Budget Item Justification

The program will modify COTS based Patient Isolation Units (PIU) in order to faciliate air transport of patients that may have been exposed to Critical List infections and/or Biological Warfare agents.

The funding may be transferred to another USAF Program where it will be more properly executed.

This program is in BA 7, Operational Systems Development, and it will modify existing COTS systems for use on deployed, operational aircraft.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget		2.047	
(U)	Current PBR/President's Budget	0.000	2.047	
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401133F Aeromedical Evacuation

PROJECT NUMBER AND TITLE: 4910 Aeromedical Readiness

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4910 Aeromedical Readiness	0.000	2.047	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The program will modify COTS based Patient Isolation Units (PIU) in order to faciliate air transport of patients that may have been exposed to Critical List infections and/or Biological Warfare agents.

The funding may be transferred to another USAF Program where it will be more properly executed.

This program is in BA 7, Operational Systems Development, and it will modify existing COTS systems for use on deployed, operational aircraft.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Analysis of User Requirements		0.100	
(U) Design of Patient Isolation Units		0.670	
(U) Manufacture and Modification of Initial Design		0.250	
(U) Developmental Testing of R&D Products		0.200	
(U) Modifications Based on Developmental Test		0.120	
(U) Purchase Prototypes for Evaluation & Testing		0.150	
(U) Operational Testing of Patient Isolation Unit		0.500	
(U) Program Management Support, Travel, Administration		0.057	
(U) Total Cost	0.000	2.047	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Contract will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401133F Aeromedical Evacuation**

PROJECT NUMBER AND TITLE: **4910 Aeromedical Readiness**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Analysis, Design, Manufacture, Development, Testing and Purchase	TBD	TBD				1.990	Apr-06			Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		1.990		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
Program Support	TBD	TBD				0.057				Continuing	TBD	TBD
Subtotal Support			0.000	0.000		0.057		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		2.047		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401133F Aeromedical Evacuation**	**4910 Aeromedical Readiness**

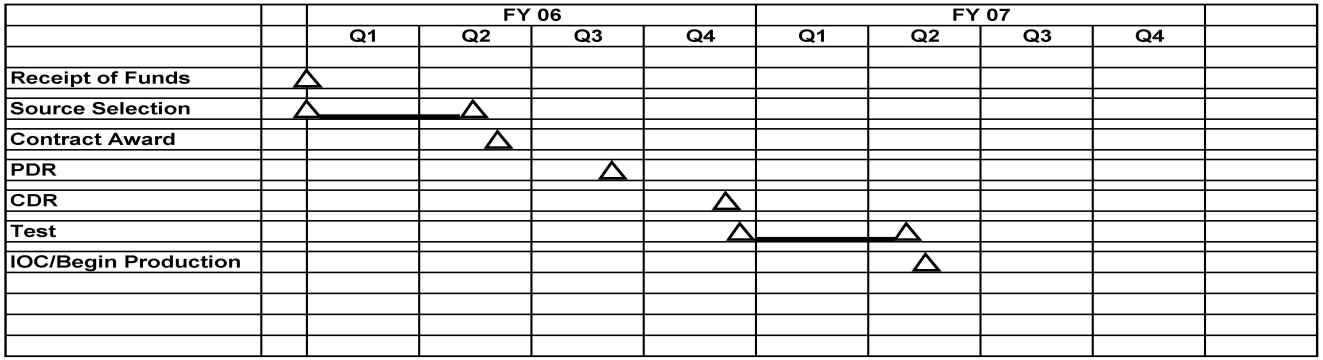


Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401133F Aeromedical Evacuation**	**4910 Aeromedical Readiness**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Receipt of funds		1Q	
(U) Source selection		1-2Q	
(U) Contract Award		2Q	
(U) PDR		3Q	
(U) CDR		4Q	
(U) Testing		4Q	1-2Q
(U) IOC			2Q

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PE NUMBER: 0401134F
PE TITLE: Large Aircraft InfraRed Counter Measures (LAIRCM)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	69.069	58.596	34.916	26.893	26.042	6.101	7.097	Continuing	TBD
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	69.069	58.596	34.916	26.893	26.042	6.101	7.097	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for the AF's airlift and tanker aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat.

The current LAIRCM system configuration [AN/AAQ-24V(13)] consists of an ultra-violet missile-warning sensor (MWS), a missile-tracking system, multi-band laser jammers, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of turrets per aircraft is determined by the size and signature of the aircraft. This system is fully automatic following system power-up. LAIRCM requirements are documented in the multi-command Operational Requirements Document (ORD) - LAIRCM ORD 314-92, validated on 3 Aug 98. LAIRCM satisfies AMC's Urgent and Compelling Need for protection of selected AMC aircraft. The system was first fielded in May 03 on the C-17 aircraft.

LAIRCM is a three phased evolutionary acquisition. Phase I installs today's LAIRCM (small laser turret assembly (SLTA), ultra-violet MWS, processor, Control Interface Unit (CIU)) on C-17s and C-130 aircraft to meet AMC's urgent and compelling need for advanced IR countermeasures. Phase II covers development of the Next Generation Missile Warning System (NexGen MWS) and a Guardian Laser Tracking Assembly (GLTA) which replaces the SLTA. Phase II developments increase the effectiveness and affordability of the LAIRCM system. Phase I equipment (SLTAs and MWS) on C-17s will be retrofitted with Phase II equipment (GLTA and NexGen MWS) as Phase II equipment becomes available. Phase II initial procurement is planned for late FY06 (GLTA) and mid FY07 (NexGen MWS) respectively. The SLTAs removed from C-17s will be placed on C-130s. Phase III development is currently unfunded.
The AF plans to equip a minimum of 444 aircraft with LAIRCM across a range of platform types (C-17s, C-130s, C-5s, C-40s, C-37s, C-130Js, the new Light Cargo Aircraft and the new tanker aircraft). The change to aircraft quantities was based on the "Study Report on Current and Future Threats to Mobility Aircraft". This study was directed by the AF's FY06-11 Annual Planning and Program Guidance.

LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	73.684	55.743	20.926
(U)	Current PBR/President's Budget	69.069	58.596	34.916
(U)	Total Adjustments	-4.615	2.853	
(U)	Congressional Program Reductions	-2.736	-0.590	
	Congressional Rescissions		-0.257	
	Congressional Increases		3.700	
	Reprogrammings	-1.879		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

The FY05 Supplemental of $95M funded the acceleration of 22 additional C-17s with LAIRCM Lite, bringing total to 52 LAIRCM Lite-equipped C-17s when the 52nd aircraft is delivered in Mar 07..

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE: 4942 Large Aircraft Infrared Counter Measures (LAIRCM)	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4942	Large Aircraft Infrared Counter Measures (LAIRCM)	69.069	58.596	34.916	26.893	26.042	6.101	7.097	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Large Aircraft Infrared Countermeasures System (LAIRCM) provides significantly improved defensive systems capability for the AF's airlift and tanker aircraft to counter the infrared (IR) Man-Portable Air-Defense Systems (MANPADS) missile threat.

The current LAIRCM system configuration [AN/AAQ-24V(13)] consists of an ultra-violet missile-warning sensor (MWS), a missile-tracking system, multi-band laser jammers, control interface unit and processors to detect, track, jam and counter incoming IR missiles. The number of turrets per aircraft is determined by the size and signature of the aircraft. This system is fully automatic following system power-up. LAIRCM requirements are documented in the multi-command Operational Requirements Document (ORD) - LAIRCM ORD 314-92, validated on 3 Aug 98. LAIRCM satisfies AMC's Urgent and Compelling Need for protection of selected AMC aircraft. The system was first fielded in May 03 on the C-17 aircraft.

LAIRCM is a three phased evolutionary acquisition. Phase I installs today's LAIRCM (small laser turret assembly (SLTA), ultra-violet MWS, processor, Control Interface Unit (CIU)) on C-17s and C-130 aircraft to meet AMC's urgent and compelling need for advanced IR countermeasures. Phase II covers development of the Next Generation Missile Warning System (NexGen MWS) and a Guardian Laser Tracking Assembly (GLTA) which replaces the SLTA. Phase II developments increase the effectiveness and affordability of the LAIRCM system. Phase I equipment (SLTAs and MWS) on C-17s will be retrofitted with Phase II equipment (GLTA and NexGen MWS) as Phase II equipment becomes available. Phase II initial procurement is planned for late FY06 (GLTA) and mid FY07 (NexGen MWS) respectively. The SLTAs removed from C-17s will be placed on C-130s. Phase III development is currently unfunded.
The AF plans to equip a minimum of 444 aircraft with LAIRCM across a range of platform types (C-17s, C-130s, C-5s, C-40s, C-37s, C-130Js, the new Light Cargo Aircraft and the new tanker aircraft). The change to aircraft quantities was based on the "Study Report on Current and Future Threats to Mobility Aircraft". This study was directed by the AF's FY06-11 Annual Planning and Program Guidance.

LAIRCM is Budget Activity 7, Operational Systems Development as it is an electronic countermeasures systems upgrade to existing weapons systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Group A Contracts	8.415	24.723	15.346
(U) Nex Gen MWS Contracts	31.114	8.494	6.803
(U) Guardian Laser Turret Assembly (GSLTA) Program	18.140	10.239	0.000
(U) Test	5.159	4.483	4.208
(U) PMA	4.100	3.870	4.310
(U) OGC	2.141	6.787	4.249

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**	PROJECT NUMBER AND TITLE **4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

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

	FY 2005	FY 2006	FY 2007
(U) Total Cost	69.069	58.596	34.916

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									
(U) PE 41134F, C-17 Procurement (BP1100)	134.713	83.340	137.849	131.732	287.264	82.426	11.179		868.503
(U) PE 41134F, C-130 Procurement (BP1100)	29.285	7.140	9.932	44.924	10.490	2.685	0.000		104.456
(U) PE 41134F, C-5B Procurement (BP1100)	0.000	0.000	28.952	37.342	38.015	29.350	6.034		139.693
(U) PE 41134F, C-130J Procurement (BP1100)	0.000	0.000	0.000	0.000	0.000	38.682	8.315		46.997
(U) PE 54343F, C-130 (AFRC) Procurement (BP1100)	0.000	0.000	0.000	34.515	54.306	1.040	1.031		90.892
(U) NGREA 0350 (ANG)	32.400	0.000	0.000	0.000	0.000	0.000	0.000		32.400
(U) SOCOM Funding	13.000	0.000	0.000	26.100	0.000	0.000	0.000		39.100
(U) AFRC (0350)	21.658	0.000	0.000	0.000	0.000	0.000	0.000		21.658

(U) D. Acquisition Strategy

Integration of the LAIRCM subsystems is accomplished by Northrop Grumman (Group B developer) and Group A integrators. The LAIRCM contract was awarded on 28 Sep 01 as a CPAF contract. Boeing Aerospace was awarded the C-17 LAIRCM integration contract on 18 Jan 02 as the Group A integrator working with Northrop Grumman. The C-130 LAIRCM integration contract was awarded to Northrop Grumman as a modification to the current contract on 7 Jun 02. Contracts to install LAIRCM on C-5B and C-130J will be awarded in FY06 and FY07 respectively. The Next Generation Missile Warning System (Nex Gen MWS) contracts for a System Design and Development (SDD) competition were awarded to Northrop Grumman and Lockheed Martin in Jun 04. Both contractors will develop Nex Gen MWS prototypes during the SDD competition. A Nex Gen MWS production contractor will be selected during a competitive selection in late FY06 with production buys starting in FY07. Integration of the Nex Gen MWS will be accomplished with the Nex Gen MWS production contractor and the platform Group A integrator for the various LAIRCM equipped platforms. The Guardian Laser Tracking Assembly (GLTA) is a Phase II development effort which delivers a smaller, more reliable, and cheaper replacement to the Small Laser Tracking Assembly. The GLTA SDD contract was awarded to Northrop Grumman in Feb 05 as a sole source contract. GLTA goes into production in late FY06/ early FY07 and will be integrated on designated platforms by the Group A integrator with Northrop Grumman integration support.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**

PROJECT NUMBER AND TITLE: **4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Northrop Grumman/2093	CPAF	Equipment manufacturer, Rolling Meadows, IL		2.512		1.690		1.805		14.000	20.007	TBD
Northrop Grumman/2093	CPAF/FFP	NexGen Integration, Rolling Meadows, IL		11.505	Mar-05	4.195		0.428			16.128	
Northrop Grumman	CPFF	NexGen MWS Development, Rolling Meadows, IL		8.810	Feb-05	1.904		13.190		9.386	33.290	TBD
Lockheed Martin	CPFF	NexGen MWS Development, Orlando, FL		11.620	Jun-04	4.670					16.290	TBD
Northrop	CPFF	Mini-turret Development, Rolling Meadows, IL		21.340	Feb-05	12.355		0.531			34.226	TBD
Lockheed	CPFF	C-5B Development & Integration		3.595	May-05	19.051		6.000			28.646	TBD
TBD	TBD	C-130J Development & Integration		0.000		0.000		2.000	May-07	28.000	30.000	TBD
FY01 RDT&E under PE 41130F											0.000	
Subtotal Product Development			0.000	59.382		43.865		23.954		51.386	178.587	TBD
Remarks: TBD												
(U) Support												
LAICSS				4.053		7.515		6.754		9.597	27.919	TBD
AFRL				0.297		1.058		0.000			1.355	TBD
Subtotal Support			0.000	4.350		8.573		6.754		9.597	29.274	TBD
Remarks:												
(U) Test & Evaluation												
Various Gov't Test Organizations	Various			5.337		6.158		4.208		5.150	20.853	TBD
Subtotal Test & Evaluation			0.000	5.337		6.158		4.208		5.150	20.853	TBD
Remarks:												
(U) Total System Cost												

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**	**4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

(U) Total Cost	0.000	69.069	58.596	34.916		66.133	228.714	TBD

Remarks:

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)	PROJECT NUMBER AND TITLE 4942 Large Aircraft Infrared Counter Measures (LAIRCM)

LAIRCM

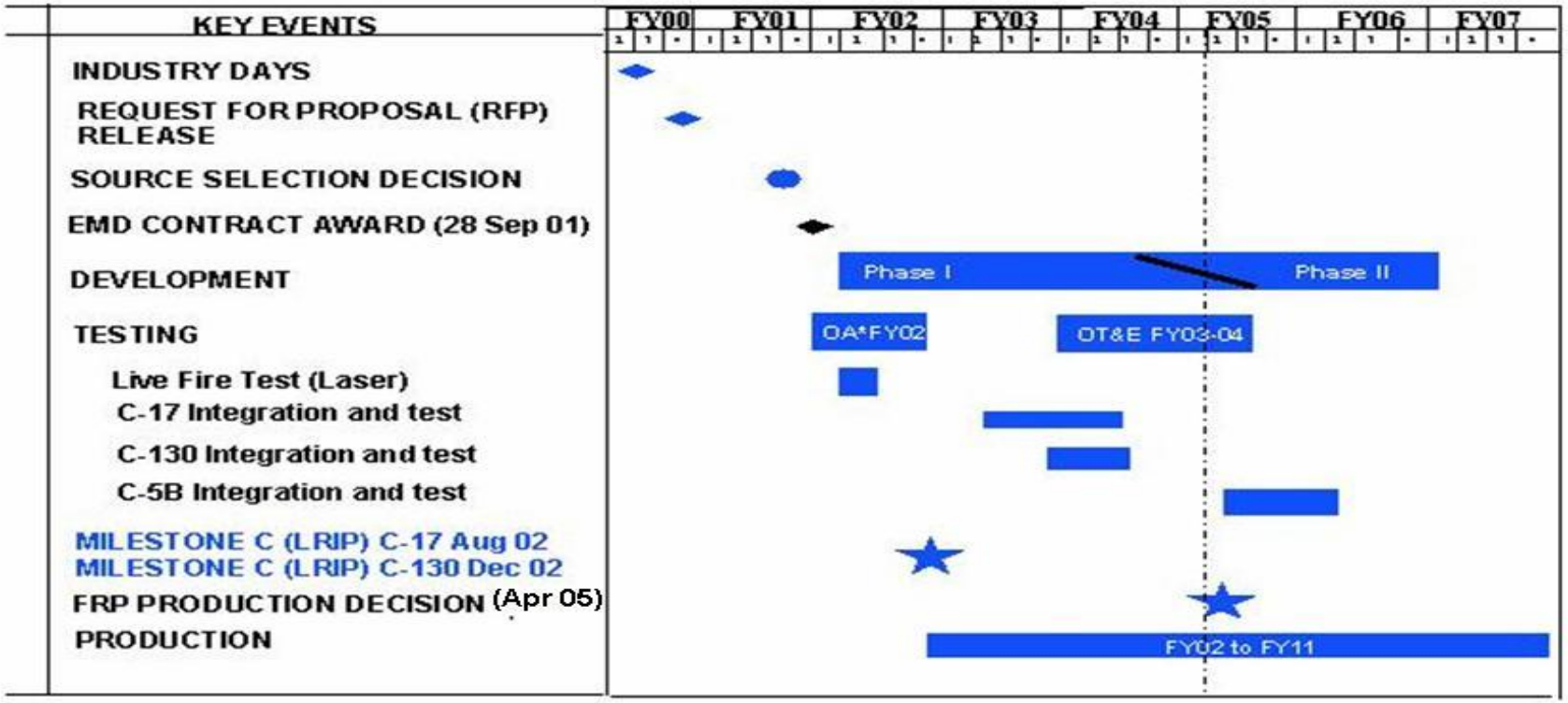

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401134F Large Aircraft InfraRed Counter Measures (LAIRCM)**	PROJECT NUMBER AND TITLE **4942 Large Aircraft Infrared Counter Measures (LAIRCM)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) C-5B Aircraft Integration (FY05-FY07)		1Q	

PE NUMBER: 0401218F
PE TITLE: KC-135s

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.931	1.477	1.126	1.155	1.177	0.000	0.000	Continuing	TBD
4494 KC-135 Aging Aircraft Program	1.931	1.477	1.126	1.155	1.177	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program supports projects that will help to keep the KC-135 viable in to the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

Boom Operator Weapon System Trainers (BOWST) - These funds will be used to develop and field two high-fidelity devices which simulate the environment in a KC-135 boom pod and allow realistic training of aerial refueling procedures across the spectrum of operational situations. The devices will be placed at the KC-135 Combat Crew Training School, and will replace the current Boom Operator Part Task Trainers.
These efforts are low technical risk supporting a fielded weapon system and, therefore, is assigned to Budget Activity 7, Operational Systems Development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	1.079	1.489	1.102
(U)	Current PBR/President's Budget	1.931	1.477	1.126
(U)	Total Adjustments	0.852	-0.012	
(U)	Congressional Program Reductions		-0.012	
	Congressional Rescissions	-0.010		
	Congressional Increases			
	Reprogrammings	0.885		
	SBIR/STTR Transfer	-0.023		
(U)	Significant Program Changes:			
	FY05 funding includes money for BOWST			

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401218F KC-135s

PROJECT NUMBER AND TITLE: 4494 KC-135 Aging Aircraft Program

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4494 KC-135 Aging Aircraft Program	1.931	1.477	1.126	1.155	1.177	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program supports projects that will help to keep the KC-135 viable in to the future. Projects include the analysis and testing efforts in the area of aging aircraft, to include structural, corrosion, fatigue, and stress corrosion cracking. Additionally, the Functional System Integrity Program (FSIP) proactively examines individual aircraft systems for potential impacts due to aging components. The USAF will utilize these activities to improve KC-135 Programmed Depot Maintenance efficiency and to provide direction for future aircraft efforts to sustain the KC-135 as a viable airframe.

Boom Operator Weapon System Trainers (BOWST) - These funds will be used to develop and field two high-fidelity devices which simulate the environment in a KC-135 boom pod and allow realistic training of aerial refueling procedures across the spectrum of operational situations. The devices will be placed at the KC-135 Combat Crew Training School, and will replace the current Boom Operator Part Task Trainers.
These efforts are low technical risk supporting a fielded weapon system and, therefore, is assigned to Budget Activity 7, Operational Systems Development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Corrosion/crack growth rate and fatigue determination and testing	0.507	0.373	0.125
(U) Functional Systems Integrity Program (FSIP)	0.503	0.750	0.698
(U) Mission support/contractor support	0.236	0.354	0.303
(U) Boom Operator Weapon System Trainer	0.685	0.000	0.000
(U) Total Cost	1.931	1.477	1.126

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other APPN									
PE#0401218F/KC-135 Squadrons, Aircraft Procurement, AF, BA-5, KC-135 Mods, BOWST, BP-11									

(U) D. Acquisition Strategy

The acquisition strategy consists primarily of separate task orders (with separate statements of work) ranging from fixed price to cost plus contracts. These task orders address a myriad of aging aircraft activities against existing contract vehicles, such as the SPO-managed KC-135 Fleet Support Contract and Design Engineering Program contracts managed through the Air Logistics Centers.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401218F KC-135s**

PROJECT NUMBER AND TITLE: **4494 KC-135 Aging Aircraft Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Boom Operator Weapon System Trainer	MIPR	Air Education & Training Command		0.685	Mar-05					Continuing	TBD	
Subtotal Product Development			0.000	0.685		0.000		0.000		Continuing	TBD	0.000
Remarks:												
(U) Support												
Aging Aircraft Studies	C/FP	ARINC, Oklahoma City and other support ctrs.		0.000		0.325	Jan-06			Continuing	TBD	
Subtotal Support			0.000	0.000		0.325		0.000		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
Corrosion & Fatigue Testing/Functional Systems Integrity Program	Fleet Support, T&M/FFP	Boeing, Wichita KS		1.010	Jan-05	1.000	Nov-05	1.050	Dec-06	Continuing	TBD	
Subtotal Test & Evaluation			0.000	1.010		1.000		1.050		Continuing	TBD	0.000
Remarks:												
(U) Management												
				0.236		0.152		0.076		Continuing	TBD	
Subtotal Management			0.000	0.236		0.152		0.076		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	1.931		1.477		1.126		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401218F KC-135s	PROJECT NUMBER AND TITLE 4494 KC-135 Aging Aircraft Program

KC-135 R-4 Schedule Profile

Fiscal Year	FY05				FY06				FY07				FY08				FY09				FY10			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Corrosion & Fatigue Testing																								
FSIP (see note 1)																								
Boom Operator Weapon System Trainer																								
Note 1: FSIP will continue to examine additional aircraft systems as required while monitoring those systems that have pr been examined.																								

☆ **Major Event or Milestone**

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ **Completed Event**

△ **Planned Task(s)**

Exhibit R-4a, RDT&E Schedule Detail

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401218F KC-135s**	**4494 KC-135 Aging Aircraft Program**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Corrosion & Fatigue Testing	1-4Q	1-4Q	1-4Q
(U) FSIP	1-4Q	1-4Q	1-4Q
(U) Boom Operator Weapon System Trainer	2-4Q	1-2Q	

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PE NUMBER: 0401219F
PE TITLE: KC-10S

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401219F KC-10S

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	13.280	4.781	39.270	50.779	5.662	0.000	Continuing	TBD
5195	Aircraft Modernization Program (AMP)	0.000	13.280	4.781	39.270	50.779	5.662	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) will provide a robust, integrated on board aircraft network where measurements are taken by digital sensors, transmitted to digital equipment, used to operate the aircraft, and displayed for the aircrew. This postures the KC-10 for global "network centric operations", and provides enhanced survivability (to include Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit lighting; a growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real time information in the cockpit (RTIC) capability). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include adding a data link to augment/replace voice communications, and adding a secure voice and data communications. Navigation capabilities include a fully integrated GPS (to include YMCA card, if available) and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic) and the 406MHz Emergency Locator Transmitter (ELT). KC-10 aircraft modernization is needed to address reliability/maintainability concerns and obsolescence issues, to include inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. KC-10 AMP will automate aircrew tasks to reduce the crew's workload, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded. Concept Refinement Studies will address potential technical approaches, spiral development, cockpit commonality, affordability, etc, and will precede award of development contract.

NOTE: OGC on funding page includes AF Mission support as well as Contractor support at 327 CLSG.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational Systems Development.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401219F KC-10S**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	18.452	13.472	38.710
(U)	Current PBR/President's Budget	0.000	13.280	4.781
(U)	Total Adjustments	-18.452	-0.192	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-18.452	-0.192	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

GATM Development Program Cancelled; Congress rescinded GATM RDT&E appropriations in FY05.
The Aircraft Modernization Program is a new start in FY06.
FY06 was realigned to match the acquisition strategy for Concept Refinement studies.
FY07 was realigned to match Congressional program reductions for a one year slip.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401219F KC-10S	PROJECT NUMBER AND TITLE: 5195 Aircraft Modernization Program (AMP)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5195	Aircraft Modernization Program (AMP)	0.000	13.280	4.781	39.270	50.779	5.662	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	1	0	0		

(U) A. Mission Description and Budget Item Justification

Global Air Traffic Management (GATM) was based upon evolving Communication, Navigation and Surveillance (CNS) and Free Flight concepts and requirements. Key elements of its architecture were Dual MMR (Multi-Mode Receiver), Dual CMU (Communications Management Unit), Communication Data links (HF, VHF, SATCOM), and associated avionics components and wiring. Communications upgrades included a data link to augment/replace voice communications. The navigation capabilities included a fully integrated GPS and an advanced flight management system. The surveillance capabilities included automatic aircraft position reporting (both enroute and oceanic). Prototype aircraft delivery was scheduled for 3QFY03 but due to schedule slips and cost overruns, the prototype delivery was expected to be delayed to 2QFY05. The development program was terminated in April 2004.

KC-10 Aircraft Modernization Program (AMP) will provide a robust, integrated on board aircraft network where measurements are taken by digital sensors, transmitted to digital equipment, used to operate the aircraft, and displayed for the aircrew. This postures the KC-10 for global "network centric operations", and provides enhanced survivability (to include Night Vision Imaging System (NVIS) compatibility for aircraft exterior, boom operator station and cockpit lighting; a growth path to Defensive Systems (DS), provisions to support multi-mission payload, and real time information in the cockpit (RTIC) capability). All aircraft controls and systems will be compatible with aircrew chemical defense ensemble. Communications upgrades include adding a data link to augment/replace voice communications, and adding a secure voice and data communications. Navigation capabilities include a fully integrated GPS (to include YMCA card, if available) and an advanced flight management system. Surveillance capabilities include automatic aircraft reporting (both enroute and oceanic) and the 406MHz Emergency Locator Transmitter (ELT). KC-10 aircraft modernization is needed to address reliability/maintainability concerns and obsolescence issues, to include inertial navigation units (INU), central air data computer (CADC), weather radar, analog autopilot, analog engine instruments, analog flight instruments, analog nav/comm radios, cockpit voice recorder (CVR), and flight data recorder (FDR), fuel system gauges, refueling boom/drogue electronics, and flight engineer station controls/instruments. KC-10 AMP will automate aircrew tasks to reduce the crew's workload, and integrate products and displays into an efficient package that will increase situational awareness. KC-10 training and mission planning systems will be correspondingly upgraded. Concept Refinement Studies will address potential technical approaches, spiral development, cockpit commonality, affordability, etc, and will precede award of development contract.

NOTE: OGC on funding page includes AF Mission support as well as Contractor support at 327 CLSG.

These efforts support a fielded weapon system and therefore are assigned to Budget Activity 7, Operational Systems Development.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401219F KC-10S	PROJECT NUMBER AND TITLE: 5195 Aircraft Modernization Program (AMP)

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Prime Contract	0.000		0.000
(U)	Studies and Analysis	0.000	11.172	1.894
(U)	Government Furnished Equipment	0.000	0.000	0.000
(U)	Government Test and Evaluation	0.000	0.000	0.000
(U)	Mission Support	0.000	2.108	2.887
(U)				
(U)				
(U)				
(U)				
(U)				
(U)	Total Cost	0.000	13.280	4.781

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other APPN		1.600	2.000	0.103	5.616	35.173	44.141	Continuing	TBD

PE # 41219F / KC-10, Aircraft procurement, AF, BA-5, KC-10 Mods, BP-11, BP-16

(U) D. Acquisition Strategy

Concept Refinement Studies in FY06 will foster competition, mitigate identified acquisition risks, and support System Development and Demonstration (SDD) Request for Proposal (RFP). FY07 will consist of RFP prep, solicitation and source selection. The SDD contract will be a competitively awarded, best value contract, commencing in FY08.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401219F KC-10S**

PROJECT NUMBER AND TITLE: **5195 Aircraft Modernization Program (AMP)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Studies and Analysis	TBD	TBD				11.172	Apr-06	1.894	Nov-06	Continuing	TBD	
										Continuing	TBD	
Subtotal Product Development			0.000	0.000		11.172		1.894		Continuing	TBD	0.000
Remarks:												
(U) Support												
Mission Support		Wright Patterson AFB, OH				2.108		2.887		Continuing	TBD	
Subtotal Support			0.000	0.000		2.108		2.887		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		13.280		4.781		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401219F KC-10S	PROJECT NUMBER AND TITLE 5195 Aircraft Modernization Program (AMP)

Fiscal Year	FY06				FY07				FY08			
Quarter	1	2	3	4	1	2	3	4	1	2	3	4
CDD JROC Approved		*										
Concept Refinement Studies												
Draft SDD RFP							*					
SDD RFP								*				
Source Selection												
SDD Contract Award/Milestone B										*		

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401219F KC-10S**	PROJECT NUMBER AND TITLE **5195 Aircraft Modernization Program (AMP)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) CDD approved by JROC		2Q	
(U) Concept Refinement Studies		3-4Q	1Q
(U) Draft System Development & Demonstration (SDD) Request for Proposal (RFP) released			3Q
(U) SDD RFP released			4Q

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PE NUMBER: 0401221F
PE TITLE: KC-135 Replacement Tanker

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0401221F KC-135 Replacement Tanker

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	10.200	97.797	203.932	238.125	113.361	44.967	14.725	Continuing	TBD
4927 KC-135 Replacement Tanker	10.200	97.797	203.932	238.125	113.361	44.967	14.725	Continuing	TBD

FY05 Congressional add of $100M in Tanker Replacement Transfer Fund. Some of the funds will be requested in FY05; remainder will be used in FY06 and beyond.

(U) A. Mission Description and Budget Item Justification

The KC-135 fleet averages over 44 years. There are 530 KC-135s that are operated by the active duty Air Force, Air National Guard, and Air Force Reserves. This program will begin the replacement of the fleet with the first aircraft being delivered in FY10. This effort will result in a replacement tanker for the KC-135 -- the replacement platform has not been selected, but the program presented is modeled on a commercial derivative tanker . This effort is assigned to Budget Activity 7 because we are pursuing operational systems development.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	99.210	301.614
(U)	Current PBR/President's Budget	10.200	97.797	203.932
(U)	Total Adjustments	10.200	-1.413	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-1.413	
	Congressional Increases	10.200		
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Program has been restructured to represent a commercial derivative tanker.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0401221F KC-135 Replacement Tanker**	**4927 KC-135 Replacement Tanker**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4927 KC-135 Replacement Tanker	10.200	97.797	203.932	238.125	113.361	44.967	14.725	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY05 Congressional add of $100M in Tanker Replacement Transfer Fund. $10.2M requested in FY05; received in May 05. Remainder will be used in FY06 and beyond.

(U) A. Mission Description and Budget Item Justification

The KC-135 fleet averages over 44 years. There are 530 KC-135s that are operated by the active duty Air Force, Air National Guard, and Air Force Reserves. This program will begin the replacement of the fleet with the first aircraft being delivered in FY10. This effort will result in a replacement tanker for the KC-135 -- the replacement platform has not been selected, but the program presented is modeled on a commercial derivative tanker . This effort is assigned to Budget Activity 7 because we are pursuing operational systems development.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Non-recurring engineering--USAF unique NRE tanker systems (e.g., military avionics, refueling systems, structures, electrical)	0.000	93.551	199.919
(U) Test		2.000	2.000
(U) Program office	10.200	2.246	2.013
(U) Total Cost	10.200	97.797	203.932

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Aircraft Procurement			36.130	965.052	1868.631	1981.594	2914.781		
(U) MILCON				7.783	125.500	43.900	43.900		
(U) O&M			0.073	2.712	7.629	77.705	120.129		

APPN=PE#0401221F/KC-135 Replacement Aircraft

(U) D. Acquisition Strategy

The acquisition strategy is to be determined pending selection of replacement tanker. Notional profile based on a commercial derivative aircraft acquisition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401221F KC-135 Replacement Tanker**

PROJECT NUMBER AND TITLE: **4927 KC-135 Replacement Tanker**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
NRE	TBD	Aerospace manufacturer TBD		0.000		93.551		199.919	Aug-07		293.470	
Subtotal Product Development			0.000	0.000		93.551		199.919		0.000	293.470	0.000
Remarks: Contract award dates are NOTIONAL until recapitalization program is defined.												
(U) Support												
Currently n/a											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Test and Planning	TBD	Proposed AFFTC, AFOTEC, Edwards AFB		0.000		2.000		2.000			4.000	
Subtotal Test & Evaluation			0.000	0.000		2.000		2.000		0.000	4.000	0.000
Remarks:												
(U) Management												
Tanker system modernization squadron (System Program Office)	n/a	MWS/TSMSS, Wright Patterson AFB		10.200	May-05	2.246		2.013			14.459	
Subtotal Management			0.000	10.200		2.246		2.013		0.000	14.459	0.000
Remarks:												
(U) Total Cost			0.000	10.200		97.797		203.932		0.000	311.929	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401221F KC-135 Replacement Tanker**	PROJECT NUMBER AND TITLE **4927 KC-135 Replacement Tanker**

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U.S. AIR FORCE

Notional Schedule
KC-135 Replacement Program

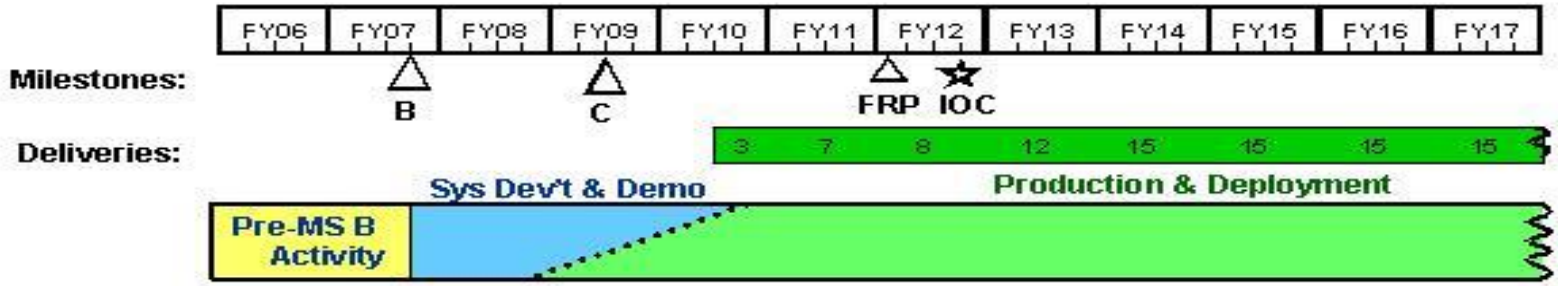

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0401221F KC-135 Replacement Tanker**	PROJECT NUMBER AND TITLE: **4927 KC-135 Replacement Tanker**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Non-recurring engineering			3-4Q
(U) Test			3-4Q
(U) Program office	2-4Q	1-4Q	1-4Q
(U) Milestone B estimate			3-4Q

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PE NUMBER: 0401839F
PE TITLE: Airlift/Other Tactical Data Link

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	0.000	32.099	0.000	0.000	0.000	0.000	0.000	32.099
5040 Airlift/Other Tactical Data Link	0.000	0.000	32.099	0.000	0.000	0.000	0.000	0.000	32.099

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This development effort adds TDL Line of Sight (LOS) and Beyond Line of Sight (BLOS) capability to the Air Mobility and Special Operations Forces (SOF) Fleet. LOS/BLOS Integration includes, but is not limited to, the following aircraft: KC-135, C-5, C-17, C-130, KC-10 and other Air Mobility, Refueling, and SOF Aircraft. TDLs provide a secure, jam-resistant, digital-data-transfer-network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data-, target-, and threat information. TDL efforts include, but are not limited to: changes and additions to the TDL message standard (MIL-STD-6016C) and Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

RDT&E activity is currently planned for FY07 to develop and integrate LOS/BLOS TDL capabilities in the Program Element / Project.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0401839F Airlift/Other Tactical Data Link

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget			
(U)	Current PBR/President's Budget	0.000	0.000	32.099
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY07, funds are programmed to support the Air Mobility Command (AMC) requirement for A-kit development and airframe design integration analysis/changes for C-130 Link-16 integration and BLOS standard A-kit development.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401839F Airlift/Other Tactical Data Link**

PROJECT NUMBER AND TITLE: **5040 Airlift/Other Tactical Data Link**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5040	Airlift/Other Tactical Data Link	0.000	0.000	32.099	0.000	0.000	0.000	0.000	0.000	32.099
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Tactical Data Links (TDL) are used in a combat environment to exchange information such as messages, data, radar tracks, target information, platform status, imagery, and command assignments. TDLs provide interoperability, local and global connectivity, and situational awareness to the user when operating under rapidly changing operational conditions. TDLs are used by all Service theater Command and Control (C2) elements, weapons platforms, and sensors. TDLs include, but are not limited to: Link-16, Link-11, Situational Awareness Data Link (SADL), and Variable Message Format (VMF).

This development effort adds TDL Line of Sight (LOS) and Beyond Line of Sight (BLOS) capability to the Air Mobility and Special Operations Forces (SOF) Fleet. LOS/BLOS Integration includes, but is not limited to, the following aircraft: KC-135, C-5, C-17, C-130, KC-10 and other Air Mobility, Refueling, and SOF Aircraft. TDLs provide a secure, jam-resistant, digital-data-transfer-network capability with a standardized waveform and data format allowing intra- and inter-flight communications. TDLs increase mission effectiveness, provide situational awareness, provide positive identification of aircraft in the network, correlate on- and off-board sensor data-, target-, and threat information. TDL efforts include, but are not limited to: changes and additions to the TDL message standard (MIL-STD-6016C) and Interface Change Proposals (ICPs); interoperability certification testing with the Joint Interoperability Test Center (JITC); future development, integration, and verification of TDL Operational Flight Program (OFP) upgrades; data gathering processes for future network-centric assessments for all Air Mobility Command (AMC) platforms; and Joint Tactical Radio System (JTRS) migration activities.

RDT&E activity is currently planned for FY07 to develop and integrate LOS/BLOS TDL capabilities in the Program Element / Project.

Airlift/Other Tactical Data Link program is in Budget Activity 7, Operational System Development, since it supports integration of tactical data links into operational systems.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Antenna/Cabling analysis and development	0.000	0.000	4.017
(U)	Flight system/subsystem functional verification	0.000	0.000	8.830
(U)	Test and compatibility analysis	0.000	0.000	5.420
(U)	Design training system/simulators	0.000	0.000	13.832
(U)	Total Cost	0.000	0.000	32.099

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401839F Airlift/Other Tactical Data Link**	PROJECT NUMBER AND TITLE **5040 Airlift/Other Tactical Data Link**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	RDT&E (3600)									
(U)	0207434F (Link 16 Sup & Sus)	120.633	161.345	172.625	142.449	152.320	154.994	156.665	Continuing	TBD
(U)	0207445F (Fighter TDL)	35.668	119.965	113.388	81.084	38.626	34.714	0.000		423.445
(U)	0207446F (Bomber TDL)	76.568	142.800	168.168	94.889	0.000	0.000	0.000		482.425
(U)	0207448F (C2ISR TDL)	24.420	14.627	4.338	1.801	1.731	1.697	1.633	Continuing	TBD
(U)	Procurement (3010)									
(U)	0207423F (JTRS I&I)	0.000	0.000	0.000	19.472	26.521	66.948	42.346	Continuing	TBD
(U)	0207434F (Link 16 Sup & Sus)	2.046	2.996	2.783	0.000	9.598	9.846	9.962	Continuing	TBD
(U)	0207445F (Fighter TDL)	95.934	89.222	61.623	12.688	0.000	0.000	0.000		259.467
(U)	0207446F (Bomber TDL)	44.245	21.940	11.818	4.456	0.000	0.000	0.000		82.459
(U)	0401839F (Airlift TDL)	0.000	24.118	11.539	14.616	12.603	26.263	26.591	Continuing	TBD
(U)	Procurement (3080)									
(U)	0207434F (Link 16 Sup & Sus)	26.231	42.462	30.740	12.777	8.435	8.508	8.612	Continuing	TBD
(U)	O&M (3400)									
(U)	0207434F (Link 16 Sup & Sus)	9.549	21.112	10.156	12.279	16.177	16.629	16.975	Continuing	TBD
(U)	0401839F (Airlift TDL)	0.596	2.731	5.708	11.783	16.499	17.178	17.271	Continuing	TBD

(U) D. Acquisition Strategy

The Air Force Tactical Data Links System Program Office (SPO) provides for common development of integration and interoperability across all Air Force platforms and ensures that TDLs are procured and maintained as joint, end-to-end, command-and-control systems.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0401839F Airlift/Other Tactical Data Link**

PROJECT NUMBER AND TITLE: **5040 Airlift/Other Tactical Data Link**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
TDL integration for airlift, refueling and other AMC aircraft	Various	Various						21.219	Oct-06	0.000	21.219	TBD
Subtotal Product Development			0.000	0.000		0.000		21.219		0.000	21.219	TBD
Remarks:												
(U) Support												
	TBD	TBD		0.000				1.525	Oct-06		1.525	TBD
Subtotal Support			0.000	0.000		0.000		1.525		0.000	1.525	TBD
Remarks:												
(U) Test & Evaluation												
	TBD	TBD						8.330	Oct-06		8.330	TBD
Subtotal Test & Evaluation			0.000	0.000		0.000		8.330		0.000	8.330	TBD
Remarks:												
(U) Management												
	TBD	TBD						1.025	Oct-06		1.025	TBD
Subtotal Management			0.000	0.000		0.000		1.025		0.000	1.025	TBD
Remarks:												
(U) Total Cost			0.000	0.000		0.000		32.099		0.000	32.099	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0401839F Airlift/Other Tactical Data Link	PROJECT NUMBER AND TITLE: 5040 Airlift/Other Tactical Data Link

U.S. AIR FORCE

Tactical Data Links / Link 16
Air Mobility Development Schedule

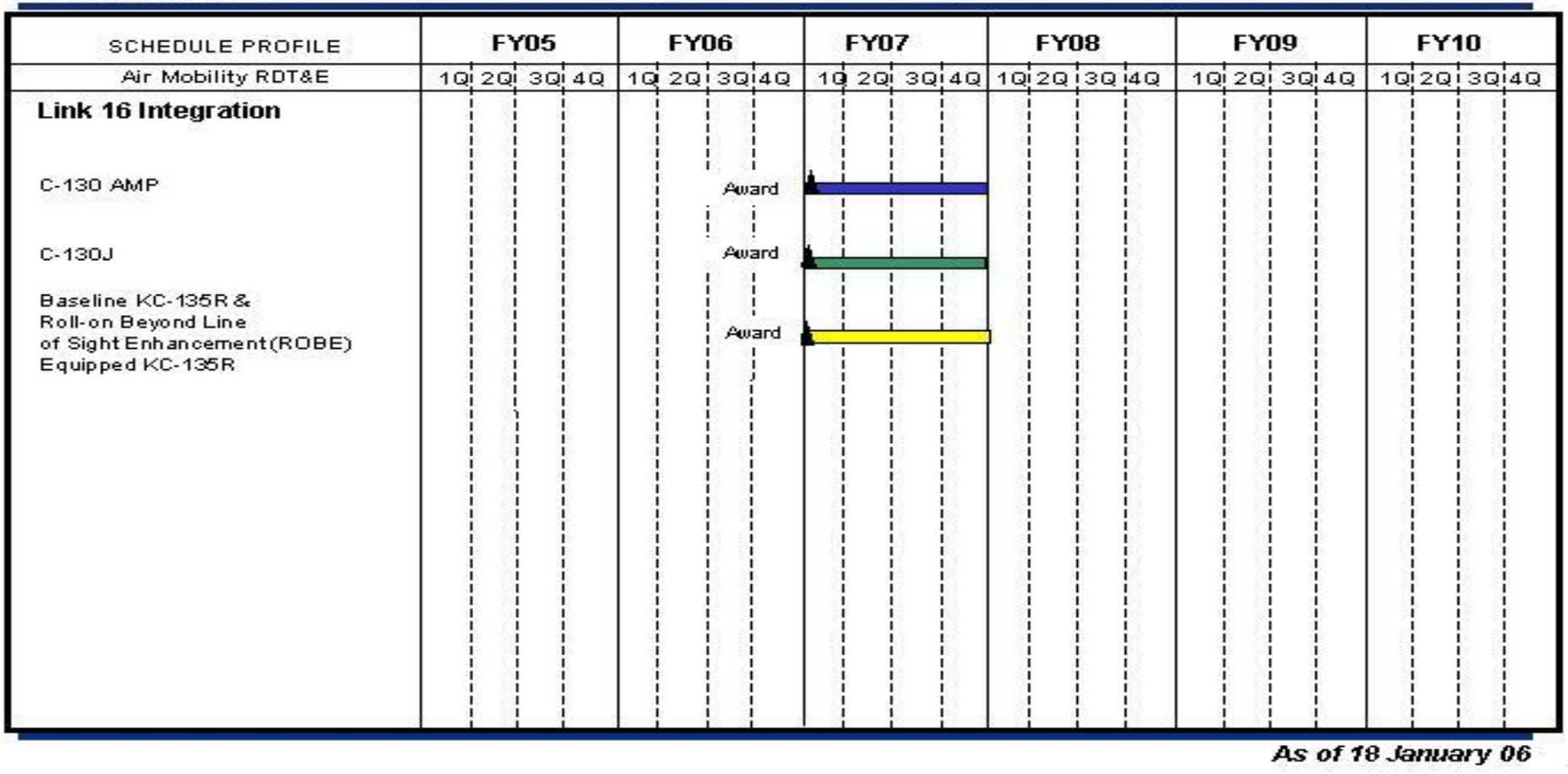

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0401839F Airlift/Other Tactical Data Link**	PROJECT NUMBER AND TITLE **5040 Airlift/Other Tactical Data Link**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) TDL integration for C-130 AMP			1-4Q
(U) TDL integration for C-130 J			1-4Q
(U) TDL integration for KC-135 R with ROBE			1-4Q

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PE NUMBER: 0408011F
PE TITLE: SPECIAL TACTICS/COMBAT CONTROL

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.027	2.124	1.024	5.174	5.705	8.322	7.521	Continuing	TBD
5138 ST System Development	1.027	2.124	1.024	5.174	5.705	8.322	7.521	Continuing	TBD

The first year this program was funded was FY05.

(U) A. Mission Description and Budget Item Justification

This program will develop specified technologies to provide Combat Control operators with the capability to see, range, and designate a target at distances from 20 meters out to 10,000 meters, day or night and to reduce the load they carry into battle. Combat Control operators calculate coordinates primarily with pencil and paper and then transmit data to the aircraft via voice over the radio. Current targeting equipment is limited in range, to line of sight, and information management. This program will develop systems that provide highly accurate target grid coordinates in three dimensions and then image a target, both pre and post-strike, and transmit the picture to Command and Control centers.

Combat Control operators are usually dismounted often carrying packs weighing 150 pounds or more. They operate in very difficult terrain, sometimes in the mountains at altitudes of up to 10,000 feet. The equipment used today is too unwieldy, heavy, and has an element for increased human error. Functionality is required for the current and future War on Terrorism operations by supporting airdropped precision attack weapons, the capture of target data from stand-off distances of up to 10 kilometers, and provides aircrew digital information that is needed to quickly, effectively and accurately deliver weapons on time, on target.

These technologies will decrease opportunities for human error and fratricide, significantly reduces the time required to find, fix, track, target and engage the enemy, and substantially decreases the weight a combat control operator carries to execute his mission.

This program is in Budget Activity 4, Advanced Component Development & Prototypes (ACD&P) because the efforts demonstrates technology, component and subsystem maturity, and provides risk reduction.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	1.058	2.124	1.024
(U)	Current PBR/President's Budget	1.027	2.124	1.024
(U)	Total Adjustments	-0.031	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.001		
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.030		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0408011F SPECIAL TACTICS/COMBAT CONTROL	PROJECT NUMBER AND TITLE: 5138 ST System Development

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5138 ST System Development	1.027	2.124	1.024	5.174	5.705	8.322	7.521	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program will develop specified technologies to provide Combat Control operators with the capability to see, range, and designate a target at distances from 20 meters out to 10,000 meters, day or night and to reduce the load they carry into battle. Combat Control operators calculate coordinates primarily with pencil and paper and then transmit data to the aircraft via voice over the radio. Current targeting equipment is limited in range, to line of sight, and information management. This program will develop systems that provide highly accurate target grid coordinates in three dimensions and then image a target, both pre and post-strike, and transmit the picture to Command and Control centers.

Combat Control operators are usually dismounted often carrying packs weighing 150 pounds or more. They operate in very difficult terrain, sometimes in the mountains at altitudes of up to 10,000 feet. The equipment used today is too unwieldy, heavy, and has an element for increased human error. Functionality is required for the current and future War on Terrorism operations by supporting airdropped precision attack weapons, the capture of target data from stand-off distances of up to 10 kilometers, and provides aircrew digital information that is needed to quickly, effectively and accurately deliver weapons on time, on target.

These technologies will decrease opportunities for human error and fratricide, significantly reduces the time required to find, fix, track, target and engage the enemy, and substantially decreases the weight a combat control operator carries to execute his mission.

This program is in Budget Activity 4, Advanced Component Development & Prototypes (ACD&P) because the efforts demonstrates technology, component and subsystem maturity, and provides risk reduction.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) System and equipment development.	0.827	1.580	0.850
(U) System test and evaluation.	0.200	0.544	0.174
(U) Total Cost	1.027	2.124	1.024

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

The spiral development acquisition strategy will focus on meeting immediate requirements with current technology while pursuing future spirals for improved accuracy, increased vertical and horizontal integration, and reduced weight.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0408011F SPECIAL TACTICS/COMBAT CONTROL**

PROJECT NUMBER AND TITLE: **5138 ST System Development**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Various	TBD	TBD		0.827	Aug-05	1.580	Aug-06	0.850	Aug-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.827		1.580		0.850		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Various	TBD	TBD		0.200	Aug-05	0.544	Aug-06	0.174	Aug-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.200		0.544		0.174		Continuing	TBD	TBD
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	1.027		2.124		1.024		Continuing	TBD	TBD

In FY04 the first Spiral for BRITES was previously funded and listed under BPAC 6622, which no longer exists. Funding moved into BPAC 5138.

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

U.S. AIR FORCE

ST/CCT Milestone Schedule

Power Systems - **wearable, multi-source, multi-use power source and management; 5 lb. device replaces 25 lbs. of batteries. Technology transitions from Battery Renewable Integrated Tactical Energy System (BRITES).**

DIGITAL TARGETING NETWORK **Integrates existing hardware with software to make ST/CCT a network player, including sending targeting to the network & receiving situational awareness from the network. Enables Machine to Machine Targeting (M2MT) via Cursor-on-Target software and system management. Technology transition from SOF Tactical Network (SOFTNET) - for, secure, self-forming, self-healing local area network via Cursor on Target network protocol, enables multi-cast communications, provides "John Madden" screen writing, links to C2 nodes and data links for improved TST capability and speed. Additional system management technology transitioned from** Battlefield air targeting man-aided knowledge (BATMAN)

Non Line of Site Targeting - **2 lb., individual, hand-held micro UAV derived from BATCAM technology program that eliminates line-of-sight targeting in close terrain/urban combat. Single man portability and individual employment, hand-held UAV that eliminates line-of-sight problems, increase targeting range, improves situational awareness and improves force protections**

INTEGRATED LASER TARGETING SYSTEM (LITES) – **Integrates existing targeting lasers and geo location devices into a single light weight targeting component. 50% weight reduction in overall components. Provides improved capability in combined device with laser target designator, laser range finder, night optics, day scope, image capture, overt & infrared pointer, ballistic wind sensor, and GPS for TAC.**

FY06 Staffer Brief

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Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

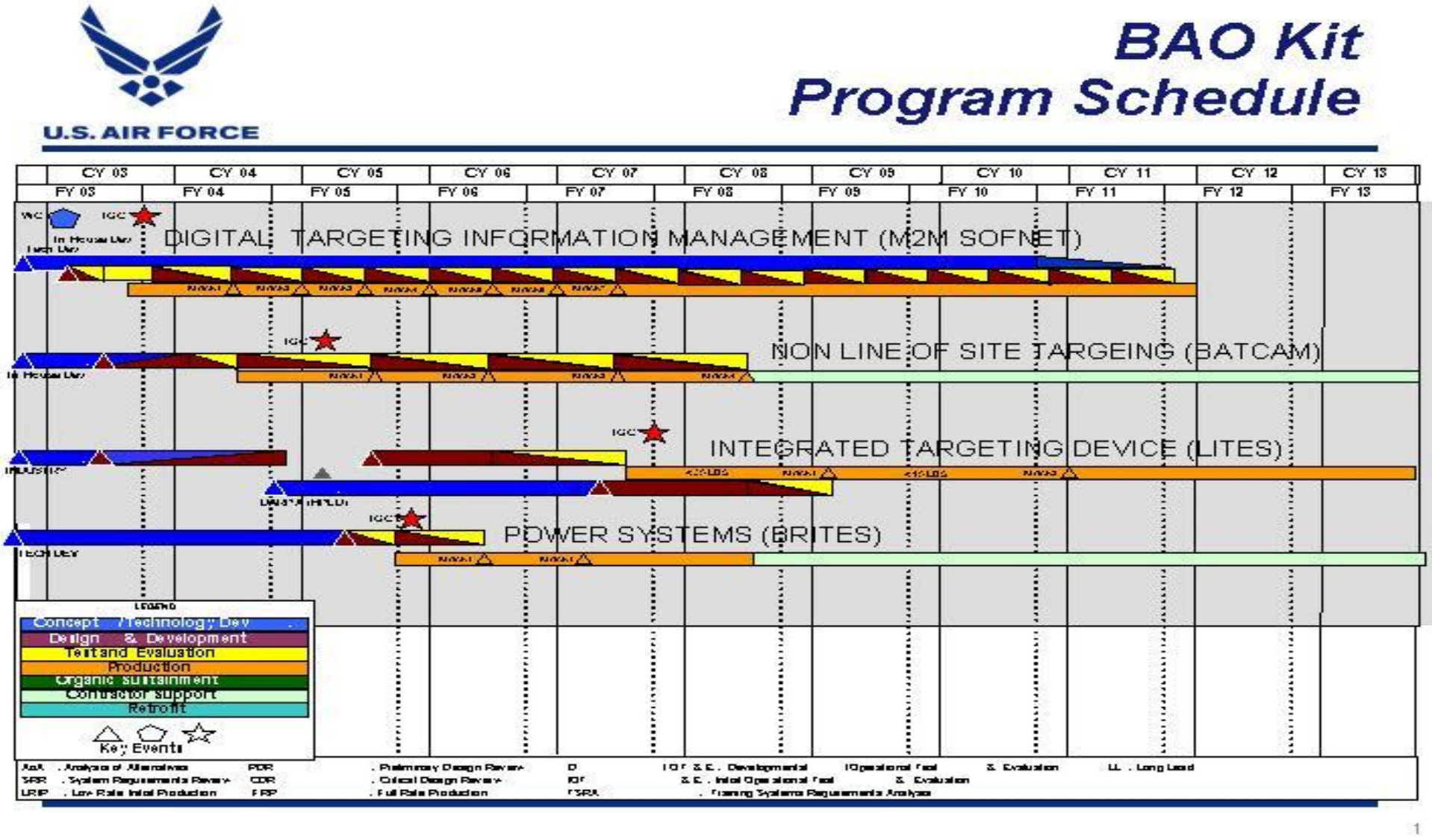

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0408011F SPECIAL TACTICS/COMBAT CONTROL**	PROJECT NUMBER AND TITLE **5138 ST System Development**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) BRITES power systems delivery	3Q	2-4Q	3Q
(U) Non-Line of Sight Targeting (BATCAM) Increment 1 Delivery	4Q	4Q	1Q
(U) Digital Targeting Net	4Q	3Q	2Q
(U) Integrated Laser Targeting	3Q	2Q	3Q

PE NUMBER: 0702207F
PE TITLE: Depot Maintenance (Non-IF)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	1.328	1.388	1.457	1.494	1.523	1.553	1.576	Continuing	TBD
3326 Precision Measurement & Calibration	1.328	1.388	1.457	1.494	1.523	1.553	1.576	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	1.418	1.408	1.423
(U)	Current PBR/President's Budget	1.328	1.388	1.457
(U)	Total Adjustments	-0.090	-0.020	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.090	-0.020	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

None

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0702207F Depot Maintenance (Non-IF)	PROJECT NUMBER AND TITLE: 3326 Precision Measurement & Calibration	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3326	Precision Measurement & Calibration	1.328	1.388	1.457	1.494	1.523	1.553	1.576	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program develops, tests, and evaluates national and Air Force measurement standards (hardware) and calibration equipment in support of all Air Force programs and activities, including Precision Measurement Equipment Laboratories (PMELs) worldwide. Metrology research and development provides technology to support systems in all phases of development and acquisition, as well as Air Force R&D laboratories, test ranges, ground test facilities, and operational weapons systems support. Rapidly changing technology requires continuing research and development of measurement standards and calibration equipment to ensure modern weapon systems meet Air Force readiness objectives. This program addresses all metrology disciplines and includes the technology areas of laser, infrared, microwave, millimeter wave, optical, physical, mechanical, electrical, electronic, and ionizing radiation measurements. Metrology is a technical discipline devoted to the science of measurements and to the study and improvement of measurement technology. Measurements are the foundation of military system development, quality assurance, hardware conformance testing and system readiness tests. The integrity of these tests is assured through calibration and traceability assurance schemes. The capability to measure and calibrate must parallel the emergence of new technology, new ranges, and new capabilities of military systems. Lack of new measurement capability impedes or blocks the successful exploitation of new technologies, especially in the movement from development laboratory to production to deployment. R&D efforts are essential within the DoD to pace these requirements, otherwise, these same new systems will suffer time delays, excessive cost, and increased risk due to unreliable test results in all phases of development, production, deployment and operation.

This program is in budget activity 7 - Operational System Development because it supports operational systems.

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Continue development of national measurement standards to support Air Force infrared / laser / electro-optical weapon systems and support equipment.	0.607	0.618	0.619
(U)	Continue development of standards for electrical measurements to support high accuracy electronic test equipment.	0.308	0.139	0.225
(U)	Continue development of standards for radar support, RF communication systems, and radar cross section range measurements.	0.127	0.227	0.215
(U)	Continue the development of improved calibration standards to support physical, mechanical and electro-mechanical support equipment.	0.167	0.272	0.175
(U)	Continue the development of national standards for calibration of ionizing radiation hazard instrumenation.	0.037	0.039	0.030
(U)	Continue development of improved standards and procedures to support chemical/biological measurements	0.082	0.093	0.093
(U)	Continue development of standards and procedures to support analytical metrology applications	0.000	0.000	0.100
(U)	Total Cost	1.328	1.388	1.457

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0702207F Depot Maintenance (Non-IF)**	PROJECT NUMBER AND TITLE **3326 Precision Measurement & Calibration**

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDTE									0.000

(U) D. Acquisition Strategy

Primarily accomplish through intergovernmental transfer between the Department of Defense and other Federal Departments.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0702207F Depot Maintenance (Non-IF)**

PROJECT NUMBER AND TITLE: **3326 Precision Measurement & Calibration**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
National Institute of Standards & Technology	MIPR (DD FORM 448)			1.214		1.242		1.332		Continuing	TBD	
Department of Energy	MIPR (DD FORM 448)			0.090		0.120		0.000		Continuing	TBD	
GSA Contract	In House			0.000		0.000		0.100		Continuing	TBD	
AFMC				0.024		0.026		0.025			0.075	
Subtotal Product Development			0.000	1.328		1.388		1.457		Continuing	TBD	0.000
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	1.328		1.388		1.457		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0702207F Depot Maintenance (Non-IF)	PROJECT NUMBER AND TITLE 3326 Precision Measurement & Calibration

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0702207F Depot Maintenance (Non-IF)**	PROJECT NUMBER AND TITLE **3326 Precision Measurement & Calibration**

(U) Schedule Profile FY 2005 FY 2006 FY 2007

(U) A schedule for Depot Maintenance PE is Not Applicable due to the nature of this project.

PE NUMBER: 0702239F
PE TITLE: Avionics Component Improvement Program

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0702239F Avionics Component Improvement Program

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.976	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
4926	Reengineering and Enabling Technologies	0.976	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget			
(U)	Current PBR/President's Budget	0.000	0.000	
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0702239F Avionics Component Improvement Program**	**4926 Reengineering and Enabling Technologies**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4926	Reengineering and Enabling Technologies	0.976	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

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

	FY 2005	FY 2006	FY 2007
(U)			
(U)			
(U)			
(U) Total Cost	0.000	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)									

(U) D. Acquisition Strategy

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0702239F Avionics Component Improvement Program**

PROJECT NUMBER AND TITLE: **4926 Reengineering and Enabling Technologies**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
											0.000	
Subtotal Product Development			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.000		0.000		0.000	0.000	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0702239F Avionics Component Improvement Program	PROJECT NUMBER AND TITLE 4926 Reengineering and Enabling Technologies

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0702239F Avionics Component Improvement Program	PROJECT NUMBER AND TITLE: 4926 Reengineering and Enabling Technologies

(U) Schedule Profile

	FY 2005	FY 2006	FY 2007

(U)

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PE NUMBER: 0708011F
PE TITLE: Industrial Preparedness

Exhibit R-2, RDT&E Budget Item Justification	DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708011F Industrial Preparedness

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	62.501	55.137	36.673	39.732	39.900	40.641	41.111	Continuing	TBD
2865	Manufacturing Technology	62.501	55.137	36.673	39.732	39.900	40.641	41.111	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

The DoD Manufacturing Technology (ManTech) program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2006, Congress added $19 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($4.0 million), Electronic Industry-Wide Network for Characteristics and Specifications (e-LINCS) Program ($1.0 million), Nanomaterial Manufacturing and Military Application ($2.8 million), Aerial Multi-Axis Platform ($2.7 million), Affordable Multi-Junction Solar Cells ($1.0 million), Rapid Qualification/Certification/Inspection of Manufactured Parts (RQCIMP) Program ($1.0 million), Supply Chain Optimization Universal Tool Kit (SCOUT) Program ($1.4 million), and Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative ($5.1 million). ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	56.708	36.934	38.237
(U)	Current PBR/President's Budget	62.501	55.137	36.673
(U)	Total Adjustments	5.793	18.203	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.043	-0.797	
	Congressional Increases		19.000	
	Reprogrammings	7.046		
	SBIR/STTR Transfer	-1.210		
(U)	Significant Program Changes:			

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708011F Industrial Preparedness**

Not Applicable.

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE: 2865 Manufacturing Technology	

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
2865 Manufacturing Technology	62.501	55.137	36.673	39.732	39.900	40.641	41.111	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The DoD Manufacturing Technology (ManTech) program is mandated by Section 2521, Title 10, United States Code, to create an affordable, world-class industrial base manufacturing capability responsive to the warfighter's needs. The Air Force ManTech major program tenets are: improvement of manufacturing processes and technologies; collaboration with government program offices, industry, and academia; investments in technologies beyond reasonable risk level for industry alone; cost-sharing; multiple system/customer applications; potential for significant return on investment; and customer commitment to implement. To this end, ManTech develops, demonstrates, and transitions advanced manufacturing processes and technologies to reduce costs, improve quality/capability, and shorten cycle times of weapon systems during design, development, production, and sustainment. ManTech projects include efforts that respond to government program office acquisition and sustainment requirements to reduce cost, schedule, cycle time, and risks during transition of technology. Where mature processes are not available, laboratory-developed initial process capabilities are matured and inserted into weapon system programs. ManTech objectives are conducted through partnership with all industry levels, from large prime contractors to small material and parts vendors. Program planning centers on the Aeronautical, Sustainment, Armament/Directed Energy, and Command/Control/Intelligence/Surveillance/Reconnaissance (C2ISR), and Space sectors of the industrial base. Note: In FY 2006, Congress added $19 million for Technical Insertion Demonstration and Evaluation (TIDE) Program ($4.0 million), Electronic Industry-Wide Network for Characteristics and Specifications (e-LINCS) Program ($1.0 million), Nanomaterial Manufacturing and Military Application ($2.8 million), Aerial Multi-Axis Platform ($2.7 million), Affordable Multi-Junction Solar Cells ($1.0 million), Rapid Qualification/Certification/Inspection of Manufactured Parts (RQCIMP) Program ($1.0 million), Supply Chain Optimization Universal Tool Kit (SCOUT) Program ($1.4 million), and Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative ($5.1 million). ManTech is in Budget Activity 7, Operational System Development, since it provides support for systems in design, production, and/or operational use. ManTech is part of the Industrial Preparedness Program Element supporting the Defense Planning Guidance and the Air Force Planning Guidance.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) MAJOR THRUST: Manufacturing of Aeronautical Survivability and Modernization. Pursue affordable and efficient manufacturing investigations for critical, high quality, reliable structural, propulsion, stealth, and electronic components and assemblies required for existing and next generation aircraft.	11.470	5.597	6.357

(U) In FY 2005: Continued high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continued development of manufacturing capabilities for more affordable low-observable structures. Continued rapid response productivity improvement efforts with selected high value programs.

(U) In FY 2006: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development of manufacturing capabilities for more affordable low-observable structures. Begin affordability/producibility improvements for radio frequency/infrared/directed energy countermeasures systems. Continue rapid response productivity improvement

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
	efforts with selected high value programs.			
(U)	In FY 2007: Continue high value efforts to verify advantages of flexible manufacturing, commercial/military integration, quality processing, and supplier improvements. Continue development of manufacturing capabilities for more affordable low-observable structures. Continue affordability/producibility improvements for radio frequency/infrared/directed energy countermeasures systems. Continue rapid response productivity improvement efforts with selected high value programs.			
(U)				
(U)	MAJOR THRUST: Manufacturing for Sustainment/Readiness. Pursue cost-effective repair and manufacturing technologies for affordable sustainment components.	9.679	2.914	6.438
(U)	In FY 2005: Continued cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continued multi-year Engine Rotor Life Extension (ERLE) Spiral I technical efforts to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Initiated ERLE Spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continued rapid response productivity improvement efforts with selected high-value programs.			
(U)	In FY 2006: Continue cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continue ERLE Spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continue rapid response productivity improvement efforts with selected high value programs.			
(U)	In FY 2007: Continue cost-effective repair and manufacturing technologies for affordable sustainment of aircraft and turbine engine components. Continue ERLE spiral II technical effort to extend the life of critical, high value rotating engine components, which have been in service and scheduled for retirement. Continue rapid response productivity improvement efforts with selected high value programs.			
(U)				
(U)	MAJOR THRUST: Manufacturing for Armament and Directed Energy Systems. Develop efficient and cost-effective manufacturing methods for high performance, high reliability components and materials for advanced tactical missiles, aircraft missile sensors, and directed energy systems.	4.680	4.700	4.721
(U)	In FY 2005: Continued to pursue cost-effective manufacturing methods for high performance, reliable components for advanced tactical missiles, missile sensors. Completed ManTech program efforts for Micro-Electro Mechanical Systems (MEMS) Inertial Measurement Units, Selective Availability Anti-Spoofing Module (SAASM) coatings for GPS production, and Joint Programmable Fuze (JPF) production. Began Precision Guided Munitions (PGM) Components Phase 0 analysis effort to identify opportunities for manufacturing improvement for seekers and			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
guidance components for next generation miniaturized munitions.			
(U) In FY 2006: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation miniaturized munitions. Continue PGM Components effort, transitioning into a Phase 1 ManTech program for advanced guidance and seekers.			
(U) In FY 2007: Continue to pursue cost-effective manufacturing methods for high performance, reliable components for next generation miniaturized munitions. Continue Phase 1 PGM Components effort for advanced guidance and seekers and directed energy systems. Begin Phase 0 analysis effort to determine opportunities for manufacturing improvement of directed energy critical components.			
(U)			
(U) MAJOR THRUST: Manufacturing of Command, Control, Intelligence, Surveillance and Reconnaissance (C2ISR) Electronics and Space. Address critical manufacturing issues for various C2ISR and space platforms.	12.091	23.197	19.157
(U) In FY 2005: Continued efforts to address critical electronics manufacturing technologies for various C2ISR systems in order to improve affordability and producibility. Continued major multi-year and cross-sector effort on Active Electronically Scanned Arrays (AESA) components to enable improved manufacturing processes, reduce integration and test, and reduce production costs for all users of AESA systems. Continued rapid response productivity improvement efforts with selected high value programs.			
(U) In FY 2006: Continue efforts to address critical manufacturing technologies for various C2ISR and space systems in order to improve affordability and producibility. Continue effort on AESA to enable improved manufacturing processes, reduced integration and test, and reduce production costs for armament, aeronautical, C2ISR, and space users of AESA systems. Initiate major multi-year and cross sector effort on Affordable Datalink Components to enable improved manufacturing processes, insert lower level test practices prior to subsystem integration, and increase production throughput for high value, high demand Intelligence Surveillance and Reconnaissance (ISR) datalinks. Investigate affordability and producibility of key space system components through improved manufacturing processes, technology transition, and/or supplier base improvements. Continue rapid response productivity improvement efforts with selected high value programs.			
(U) In FY 2007: Continue efforts to address critical electronics manufacturing technologies for various Command, Control, Intelligence, Surveillance and Reconnaissance (C2ISR) and space systems in order to improve affordability and producibility. Continue effort on Active Electronically Scanned Arrays (AESA) to enable improved manufacturing processes, reduce integration and test, and reduce production costs for armament, aeronautical, C2ISR, and space users of AESA systems. Continue major multi-year and cross sector effort on Affordable Datalink components to enable improved manufacturing processes, insert lower level test practices prior to subsystem integration, and increase production throughput for high value, high demand ISR datalinks. Continue effort to			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
	reduce manufacturing cost of weapon datalink through investments in reduction of touch labor and insertion of automated test processes in addition to subsystem integration efforts at board level. Insertion of power device technologies to achieve unique size, weight, and power requirements necessary for munition applications.			
(U)				
(U)	CONGRESSIONAL ADD: Advanced Low Observable Coatings Production Scale-Up.	3.460	0.000	0.000
(U)	In FY 2005: Continued tasks to increase production rates and reduce low observable coating cost.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Technical Insertion Demonstration and Evaluation (TIDE) Program.	4.942	3.943	0.000
(U)	In FY 2005: Studied current state of Original Equipment Managers (OEM) - Subject Matter Experts collaboration and developed capabilities for improvement. Developed a supply chain assessment tool for government and OEM program managers. Continued to deploy commercial collaboration processes/tools into the weapons supply chain to accelerate production.			
(U)	In FY 2006: Studying current state of Original Equipment Managers (OEM) - Subject Matter Experts collaboration and refine capabilities for improvement. Further develop the supply chain assessment tool for government and OEM program managers. Continued to deploy commercial collaboration processes/tools into the weapons supply chain to accelerate production.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Nickel Hydride Battery.	1.285	0.000	0.000
(U)	In FY 2005: Continued test and evaluation for suitability in military aircraft. Continued additional production scale-up efficiencies and automation.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Electronic Industry-Wide Network for Characteristics and Specifications (e-LINCS).	0.989	0.986	0.000
(U)	In FY 2005: Continued refinement of infrastructure, pilot program kick-off, initiation of sub-task training and conducting of Advisory Board Meetings.			
(U)	In FY 2006: Provide mechanism for flow of specification data. Demonstrate through regional pilot involving small producers.			
(U)	In FY 2007: Not Applicable.			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

(U)	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)				
(U)	CONGRESSIONAL ADD: Nanomaterials Manufacturing and Military Application.	1.877	2.760	0.000
(U)	In FY 2005: Down selected and validated, synthesis, purification and funtionalization methods for pilot plant scale-up for production of high quality single walled nanotubes and metalized nanomaterials.			
(U)	In FY 2006: Design reaction and purification process optimized for yield improvements. Apply in situ measurement and control process parameters to reduce product variation.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Aerial Multi-Axis Platform.	0.989	2.661	0.000
(U)	In FY 2005: Pursued reducing de-paint flow time by implementing Aerial Multi-Axis Platform in new and existing facilities.			
(U)	In FY 2006: Demonstrate operator controlled de-paint manipulator performing abrasive blasting. Demonstrate hazmat friendly and ergonomically friendly operator interface.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Affordable Multi-Junction Solar Cells.	1.483	0.986	0.000
(U)	In FY 2005: Investigated and developed lean, domestic sources of high purity Germanium (Ge) wafers required in manufacturing Multi-Junction Solar Cells.			
(U)	In FY 2006: Improve germanium wafer production yield and packaging processes.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Laser Peening for F119 Engines.	0.989	0.000	0.000
(U)	In FY 2005: Increased damage tolerance of integrally bladed rotors.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Rapid Manufacturing Using Computers and Lasers.	0.989	0.000	0.000
(U)	In FY 2005: Developed rapid manufacturing capabilities by reducing the cost and time of manufacturing through the use of innovative and novel processes.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	CONGRESSIONAL ADD: Supply Chain Optimization Universal Tool Kit (SCOUT).	0.989	1.380	0.000
(U)	In FY 2005: Utilized radio frequency identification technology, lean six sigma practices, and e-commerce to effect improvements in DoD value chain.			
(U)	In FY 2006: Continue efforts to utilize radio frequency identification technology, lean six sigma practices, and e-commerce to effect improvements in DoD value chain.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Warner Robbins Air Logistics Center (WR-ALC) Maintenance Operations Support (MOS) Simulation Model.	0.989	0.000	0.000
(U)	In FY 2005: Developed tasks associated with WR-ALC MOS Simulation Model.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: National Aerospace Leadership Initiative.	5.600	0.000	0.000
(U)	In FY 2005: Supported U.S. in aerospace research and development and manufacturing supply chain.			
(U)	In FY 2006: Not Applicable.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Rapid Qualification/Certification/Inspection Parts.	0.000	0.986	0.000
(U)	In FY 2005: Not Applicable.			
(U)	In FY 2006: Establish capability to provide tailored testing services; specializing in design verification testing, product performance, failure analysis, production testing, environmental stress screening and a total quality controlled system with on-line interface.			
(U)	In FY 2007: Not Applicable.			
(U)				
(U)	CONGRESSIONAL ADD: Wright Brothers Institute (WBI) - Radio Frequency Identification (RFID) Rapid Adoption Collaboration Initiative.	0.000	5.027	0.000
(U)	In FY 2005: Not Applicable.			
(U)	In FY 2006: Development and application of RFID for stand-off monitoring inventory and shipment of cargo and parts. Develop an electronically coordinated lean manufacturing toolkit and methodical adoption process for using RFID technology by small and medium enterprise (SME) suppliers.			
(U)	In FY 2007: Not Applicable.			

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

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

	FY 2005	FY 2006	FY 2007
(U)			
(U) Total Cost	62.501	55.137	36.673

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) AF RDT&E									
(U) Other APPN									

Not Applicable.

(U) D. Acquisition Strategy

All major contracts in this Program Element were awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708011F Industrial Preparedness**

PROJECT NUMBER AND TITLE: **2865 Manufacturing Technology**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Advanced Technology Inst	Coop Agmt									0.000	0.000	
Aerojet-General Corp	Coop Agmt									0.000	0.000	
Anteon	Various			1.883						0.000	1.883	
AT&T Government Solutions	Cost Plus									0.000	0.000	
Boeing	Various			1.738						0.000	1.738	
Central State University	Cost Share									0.000	0.000	
CMC	Various			0.400							0.400	
Connecticut Center for Advanced Technology				5.793							5.793	
Doyle Center for MTech, PA	Various			4.956		3.943					8.899	
Electro Energy Inc	Various			1.288							1.288	
Frontier Technologies	Cost Plus									0.000	0.000	
GE	Coop Agmt									0.000	0.000	
General Atomics	Various			3.470							3.470	
GRC	Cost Plus									0.000	0.000	
Honeywell	Various			0.338						0.000	0.338	
Indigo	Various			0.475							0.475	
Infoscribe	Various			0.223							0.223	
Kaman-Dayron	Various			0.200							0.200	
KBSI	Cost Share									0.000	0.000	
Killdeer Mountain Manufacturing Inc.						1.380					1.380	
Lockheed Martin	Various			0.584						0.000	0.584	
Logistic Support Management Group						0.986					0.986	
LSP Technologies	Cost Share			0.992						0.000	0.992	
Luna Technologies						2.760					2.760	
Mississippi State University	Cost Share									0.000	0.000	
MIT	Coop Agmt			2.000						0.000	2.000	
Motorola	Tech Int Agr									0.000	0.000	
Northrop Grumman	Various			3.392						0.000	3.392	
Pratt & Whitney	Tech Int Agr									0.000	0.000	
Raytheon	Coop Agmt			1.908						0.000	1.908	
Renaissance Service Inc.						0.986					0.986	
Surmet	Various			0.550							0.550	
TMCI	Cost Plus									0.000	0.000	
TRW	Coop Agmt									0.000	0.000	
Univ Dayton Res Inst	Cost Plus			4.108						0.000	4.108	
Univ Maryland	Coop Agmt									0.000	0.000	

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708011F Industrial Preparedness**	**2865 Manufacturing Technology**

	US Technology	Various		1.000	2.661					3.661	
	UTC	Various							0.000	0.000	
	Wright Brothers Institute				5.027					5.027	
	Various	Various		27.203	37.394	Sep-06	36.673	Sep-07	Continuing	TBD	
	Subtotal Product Development		0.000	62.501	55.137		36.673		Continuing	TBD	0.000
	Remarks:										
(U)	Support										
	In house support									0.000	
	Subtotal Support		0.000	0.000	0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)	Test & Evaluation										
										0.000	
	Subtotal Test & Evaluation		0.000	0.000	0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)	Management										
										0.000	
	Subtotal Management		0.000	0.000	0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)											
										0.000	
	Subtotal		0.000	0.000	0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)											
										0.000	
	Subtotal		0.000	0.000	0.000		0.000		0.000	0.000	0.000
	Remarks:										
(U)	Total Cost		0.000	62.501	55.137		36.673		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708011F Industrial Preparedness	PROJECT NUMBER AND TITLE 2865 Manufacturing Technology

ManTech Schedule Summary

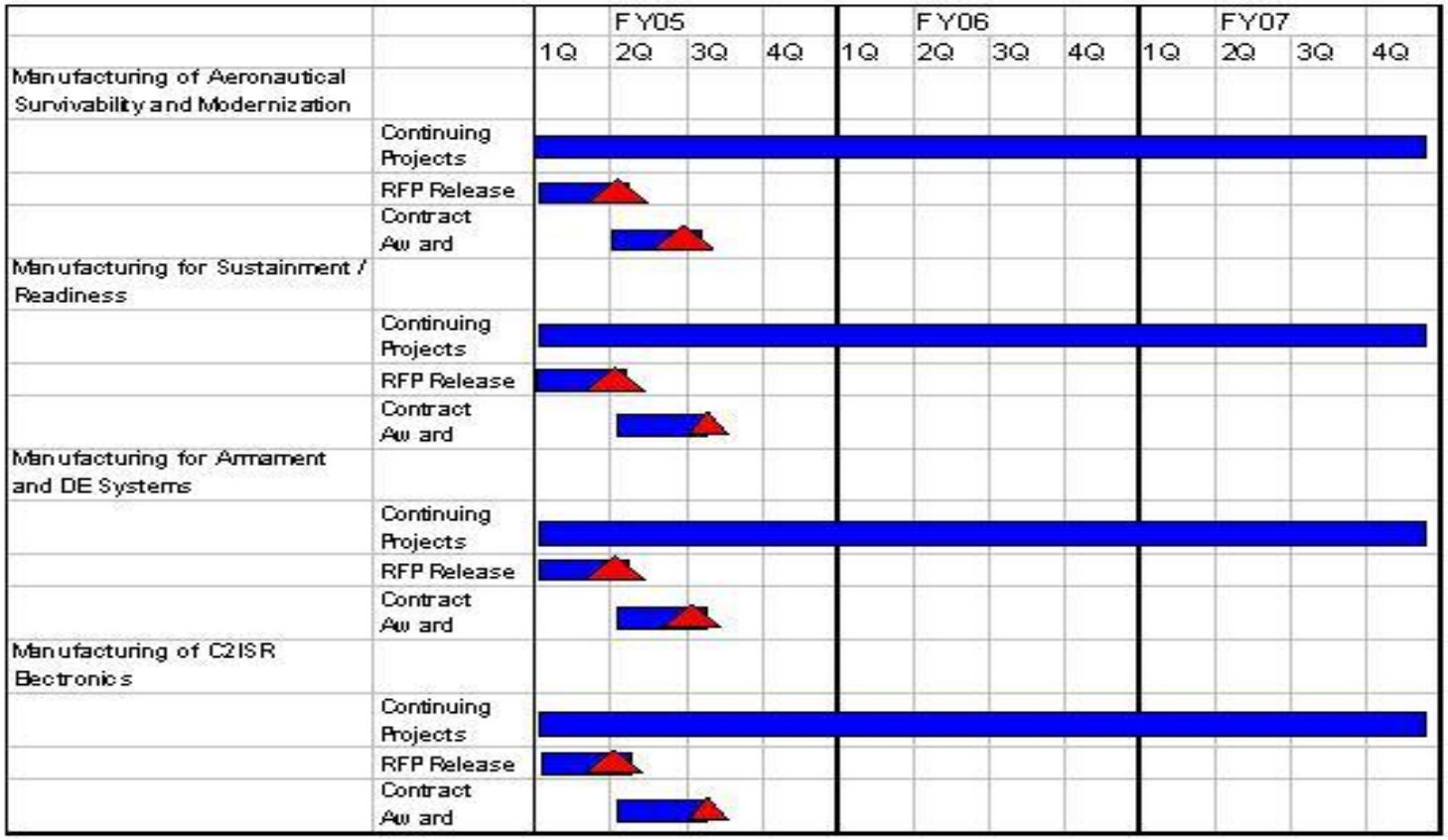

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708011F Industrial Preparedness**	PROJECT NUMBER AND TITLE **2865 Manufacturing Technology**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Manufacturing Technology for Aeronautical Survivability and Modernization.	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	2Q	2Q	2Q
(U) Contract Awards	3Q	3Q	3Q
(U) Manufacturing Technology for Sustainment / Readiness	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q
(U) Manufacturing for Armament and Directed Energy Systems.	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q
(U) Manufacturing for command, control, intelligence, surveillance, and reconnaissance (C2ISR) electronics	1-4Q	1-4Q	1-4Q
(U) Request for Proposal Release	1Q	1Q	1Q
(U) Contract Awards	2Q	2Q	2Q

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PE NUMBER: 0708012F
PE TITLE: Logistic Support Activities

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708012F Logistic Support Activities

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.962	2.760	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5054 CAM Modernization	0.962	2.760	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003. The FY 2005 and 2006 funds are Congressional adds for the Reliability and Maintainability Information System (REMIS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.991	0.000	0.000
(U)	Current PBR/President's Budget	0.962	2.760	0.000
(U)	Total Adjustments	-0.029	2.760	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.029	-0.040	
	Congressional Increases		2.800	
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

In FY2006 Congress added 2.8M RDT&E funds to PE0708012F Logistic Support Activities for REMIS and Common Configuration Environment (Operational Support Battle Lab) Logistics Operations Support.

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708012F Logistic Support Activities

PROJECT NUMBER AND TITLE: 5054 CAM Modernization

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5054 CAM Modernization	0.962	2.760	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This Project was set up to fund the development of the Air Force Core Automated Maintenance System (CAMS) which is the standard Air Force base-level automated maintenance information management system for managing weapon systems worldwide. The system supports aircraft, communications-electronics, and support equipment maintenance activities at worldwide operating bases, Air National Guard/AF Reserve sites, and selected North Atlantic Treaty Organization (NATO) locations. CAMS provides on-line remote terminals connected to the Standard Base-Level Computer (SBLC) system throughout the maintenance complexes. CAMS automates aircraft history, aircraft scheduling, aircrew debriefing processes, and provides a common interface for entering base-level maintenance data into other logistics management systems. That development was completed in FY2003. The FY 2005 and 2006 funds are Congressional adds for the Reliability and Maintainability Information System (REMIS). REMIS provides a single, primary Air Force data system for collecting and processing equipment maintenance data which is used to provide information on reliability and maintainability, trend analysis, failure prediction and weapon system availability. REMIS funds are being used to support the migration/modernization of REMIS to Global Combat Support System - Air Force.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) REMIS GCSS-AF migration/Modernization	0.962	1.380	0.000
(U) Operations Support Battle Lab	0.000	1.380	0.000
(U) Total Cost	0.962	2.760	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

REMIS is executing an incremental code conversion and migration approach of its current functionality from a stand alone mainframe HP/TANDEM environment to the GCSS-AF framework. Code conversion and migration efforts will be obtained under a directed award (sole source), Time and Material with Award Fee Incentives contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708012F Logistic Support Activities**

PROJECT NUMBER AND TITLE: **5054 CAM Modernization**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
CAMS Modernization											0.000	
REMIS											0.000	
- GCSS-AF Migration/Modernization	C & CPAF	Northrop Grumman Information Technology, Wright Patterson AFB, OH		0.962	Apr-05	1.380	Apr-06	0.000		Continuing	TBD	TBD
Operations Support Battle Lab	TBD	TBD		0.000		1.380	May-06	0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	0.962		2.760		0.000		Continuing	TBD	TBD
Remarks:												
(U) Support												
										0.000	0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U)												
											0.000	
Subtotal			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.962		2.760		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE: 5054 CAM Modernization

Exhibit R-4: REMIS & Battle Lab Schedule Profile

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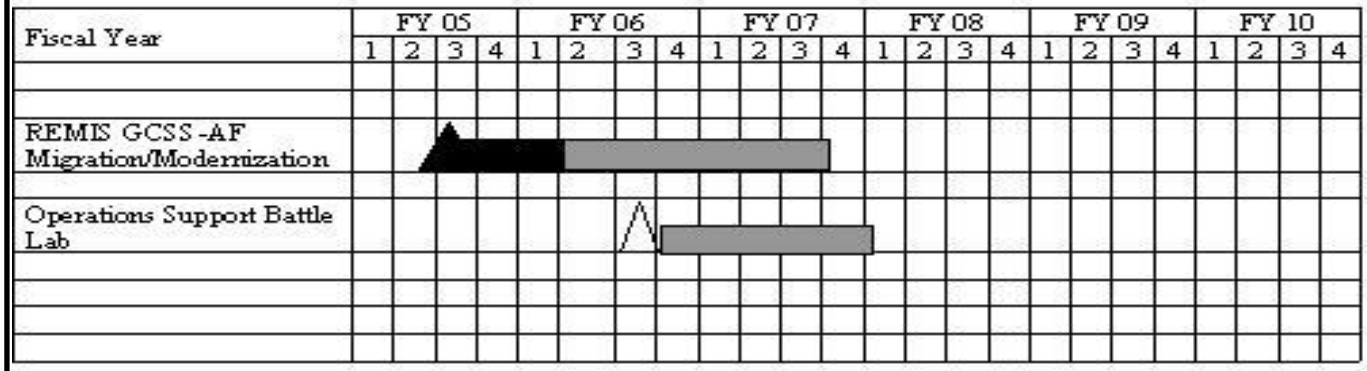

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708012F Logistic Support Activities	PROJECT NUMBER AND TITLE: 5054 CAM Modernization

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) REMIS GCSS-AF Migration/Modernization	3-4Q	1-4Q	1-3Q
(U) Operations Support Battle Lab		3-4Q	1-4Q

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PE NUMBER: 0708610F
PE TITLE: Logistics Information Technology (LOGIT)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	3.000	43.384	166.338	124.106	116.673	40.601	41.212	Continuing	TBD
5208	Expeditionary Combat Support System (ECSS)	3.000	43.384	166.338	124.106	116.673	40.601	41.212	Continuing	TBD

Project 5208, Expeditionary Combat Support System (ECSS), efforts were transferred from PE0708611F, Support Systems Development, Project 4654, Integrated Maintenance Data System and Project 5044, Log Application Integrated Logistics System - Supply, in order to support the Enterprise Resource Planning (ERP) technical solution (named ECSS) and provide enhanced visibility and management oversight.

(U) A. Mission Description and Budget Item Justification

EXPEDITIONARY COMBAT SUPPORT SYSTEM (ECSS): ECSS is the integration of commercial off the shelf (COTS) software and hardware to perform many AF logistics functions such as Finance, Facilities Management, Configuration/Bill of Materials, Repair, Materials Management, Personnel, Distribution, Quality Control, and Product Data Management. The ECSS will provide more efficient and less expensive logistics support to the warfighter by transforming the full-range of Air Force logistic business processes and related IT hardware and software. The program will reduce the need for over 500 legacy systems. ECSS is using a revolutionary new approach to large-scale acquisition via a methodology called Enterprise Resource Planning (ERP). Under an ERP, a COTS software product is selected first and then Business processes are reengineered to fit the COTS product.

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	44.503	45.726
(U)	Current PBR/President's Budget	3.000	43.384	166.338
(U)	Total Adjustments	3.000	-1.119	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-1.119	
	Congressional Increases			
	Reprogrammings	3.000		
	SBIR/STTR Transfer			

(U) Significant Program Changes:

Funding in FY 2006 to FY2011 moved from PE 0708611F to PE 0708610F, a new PE, to provide improved visibility and management oversight of ERP solution. Congress approved request for FY2005 new start for ECSS June 2005 which added $3 million FY2005 RDT&E. Funding realignment from Air Force Working Capital funds added RDT&E funds starting in FY07.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708610F Logistics Information Technology (LOGIT)**

PROJECT NUMBER AND TITLE: **5208 Expeditionary Combat Support System (ECSS)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5208	Expeditionary Combat Support System (ECSS)	3.000	43.384	166.338	124.106	116.673	40.601	41.212	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2006, Project 5208, Expeditionary Combat Support System (ECSS), efforts were transferred from PE0708611F, Support Systems Development, Project 4654, Integrated Maintenance Data System and Project 5044, Log Application Integrated Logistics System - Supply.

(U) A. Mission Description and Budget Item Justification

EXPEDITIONARY COMBAT SUPPORT SYSTEM (ECSS): ECSS is the integration of commercial off the shelf (COTS) software and hardware to perform many AF logistics functions such as Finance, Facilities Management, Configuration/Bill of Materials, Repair, Materials Management, Personnel, Distribution, Quality Control, and Product Data Management. The ECSS will provide more efficient and less expensive logistics support to the warfighter by transforming the full-range of Air Force logistic business processes and related IT hardware and software. The program will reduce the need for over 500 legacy systems. ECSS is using a revolutionary new approach to large-scale acquisition via a methodology called Enterprise Resource Planning (ERP). Under an ERP, a COTS software product is selected first and then Business processes are reengineered to fit the COTS product.

This program is in Budget Activity 7, Operational System Development because the program modernizes Automated Information Systems (AIS).

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) ERP System Integration	3.000	43.384	166.338
(U) Total Cost	3.000	43.384	166.338

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Other Procurement AF, ECSS (PE 0708610F)	0.000	2.501	9.608	2.668	2.732	2.794	2.834	Continuing	TBD
(U) Operations & Maintenance AF, ECSS (PE 0708610F)	0.000	34.590	36.500	140.823	150.723	64.723	36.174	Continuing	TBD

(U) D. Acquisition Strategy

Acquisition strategy is two fold. First is the award of a COTS solution, followed by the selection of a System Integrator. ECSS System will be awarded using GSA schedule and/or Enterprise Software Agreement (ESA) and the Blanket Purchase Agreement (BPA) under the Enterprise Software Initiative (ESI).

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708610F Logistics Information Technology (LOGIT)**

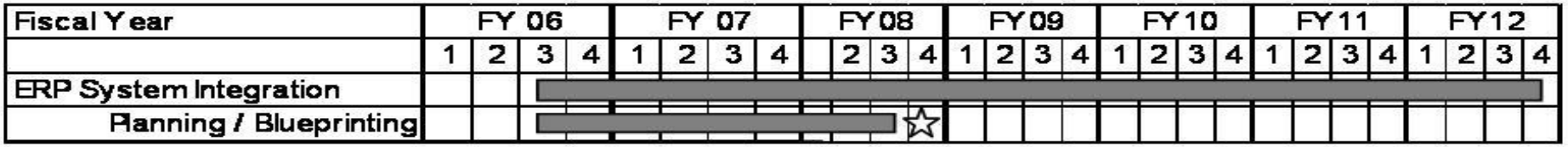
PROJECT NUMBER AND TITLE: **5208 Expeditionary Combat Support System (ECSS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ERP System Integration	C/FFP	AFMC/DFSG, Wright Patterson AFB, OH	0.000	3.000	Jul-06	29.824	May-06	148.388	May-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	3.000		29.824		148.388		Continuing	TBD	TBD
Remarks:												
(U) Support												
Contractor Support	C/LOE	Sumaria, MCR Federal, Oasis, Wright Patterson AFB, OH	0.000	0.000		10.780	May-06	13.010	May-07	Continuing	TBD	TBD
Subtotal Support			0.000	0.000		10.780		13.010		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Office Operations	C/LOE	DFSG/EC, Wright Patterson AFB, OH	0.000	0.000		2.780	Oct-05	4.940	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		2.780		4.940		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	3.000		43.384		166.338		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708610F Logistics Information Technology (LOGIT)**	PROJECT NUMBER AND TITLE **5208 Expeditionary Combat Support System (ECSS)**

U.S. AIR FORCE

ECSS SCHEDULE



☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708610F Logistics Information Technology (LOGIT)	PROJECT NUMBER AND TITLE: 5208 Expeditionary Combat Support System (ECSS)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) ERP System Integration		3-4Q	1-4Q
(U) Planning / Blueprinting		3-4Q	1-4Q

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PE NUMBER: 0708611F
PE TITLE: Support Systems Development

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0708611F Support Systems Development

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	52.764	26.590	10.596	10.957	11.143	11.371	11.564	Continuing	TBD
3318	Product Data Systems Modernization (PDSM)	8.781	3.024	3.335	3.473	3.532	3.628	3.681	Continuing	TBD
4654	Integrated Maintenance Data System (IMDS)	26.863	13.432	0.000	0.000	0.000	0.050	0.022	Continuing	TBD
4926	Reengineering and Enabling Technologies	4.360	3.300	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
5042	Log Application Logisitics Integration (LALI)	6.367	6.834	7.261	7.484	7.611	7.664	7.861	Continuing	TBD
5044	Log Application ILS-S (LAILS-S)	6.393	0.000	0.000	0.000	0.000	0.029	0.000	Continuing	TBD

In FY 2006, Project 4654, Integrated Maintenance Data System and Project 5044, Log Application Integrated Logistics System - Supply efforts were transferred to PE 0708610F, Logistics Information Technology, Project 5208, Expeditionary Combat Support System (ECSS), The small amount of funds remaining for projects 4654 (FY 2010, and 2011) and 5044 (FY 2010) will be realigned during the FY 2008 budget cycle.

(U) A. Mission Description and Budget Item Justification

This program element supports five separate programs. PDSM (project 3318) upgrades Air Force digital data standards to commercial industry standards supporting the Joint Computer-Aided Acquisition Logistic Support (JCALS) System which is being phased out of the inventory. JCALS will be replaced by the modernization program Enhanced Technical Information Management System (ETIMS). IMDS (project 4654) develops and fields an Air Force standard maintenance information system to integrate information systems supporting Air Force maintenance activities into a single open architecture, modern decision support system that is compatible with the Global Combat Support System - Air Force (GCSS-AF) architecture. This enhanced decision support system will increase operational production capability and support system efficiency, while decreasing mobility infrastructure requirements and cost of operations. Reengineering and Enabling Technologies (RET) (project 4926) provides for continuing analytical research and studies in reengineering and enabling technologies. LAILS-S, (project 5044), will modernize the existing legacy Standard Base Supply System (SBSS). LALI, (project 5042), is the effort to migrate existing Installations and Logistics (IL) legacy systems to the common GCSS-AF Integration Framework (IF)

This program is a Budget Activity 7, Operational System Development, because projects are being engineered to support already operational weapon systems.

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0708611F Support Systems Development

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	68.065	10.316	10.551
(U)	Current PBR/President's Budget	52.764	26.590	10.596
(U)	Total Adjustments	-15.301	16.274	
(U)	Congressional Program Reductions		-0.041	
	Congressional Rescissions	-0.067	-0.385	
	Congressional Increases		16.700	
	Reprogrammings	-13.700		
	SBIR/STTR Transfer	-1.534		

(U) Significant Program Changes:

In FY 2006, Congress added $16.7 Million RDT&E funds to SSD for new activities not related to SSD programmed projects. These included Information Assurance for Reengineering and Enabling Technologies ($1.8 Million), Air Force Center of Acquisition Reengineering and Enabling Technologies ($1.5 Million), C-17 IDE Aging Aircraft Logistics Management ($5.0 Million), Warner Robins Aging Aircraft ($4.0 Million), Center for Aircraft & System/Support Infrastructure ($1.0 Million), Heavy Duty Hybrid Electric ($2.5 Million), Fuel Cell Power Non-Tactical Vehicle ($1.0M), Real-Time Health Care Management ($1.4M), and Teleoperated Semi-autonomous Robot for Aging Aircraft Maintenance ($1.0 Million). The AF is working to identify and transfer these funds to the correct program office for execution.

In FY 2005, Congress added $19.7 Million RDT&E funds to SSD for new activities not related to SSD programmed projects. These included Information Assurance for Reengineering and Enabling Technologies ($2.0 Million), Air Force Center of Acquisition Reengineering and Enabling Technologies ($2.0 Million), C-5/C-17 IDE (Aging Aircraft) ($5.0 Million), Develop Rapid Retargeting Capability at Warner Robins Air Logistics Center Depot ($1.0 Million), Special Operations Forces Program Directorate (WR-ALC/LU) Integrated Data Environment (IDE) ($1.0 Million), Center for Aircraft & System/Support Infrastructure ($1.0 Million), ACC Support Systems Development ($2.7 Million), Heavy Duty Hybrid Electric ($2.0 Million), Common Core Power Production Program ($2.0 Million), and Teleoperated Semi-autonomous Robot for Aging Aircraft Maintenance ($1.0 Million). The AF is working to identify and transfer these funds to the correct program office for execution. As part of this effort, the AF determined that the correct PE for the $1.0 Million Develop Rapid Retargeting Capability at Warner Robins Air Logistics Center Depot add belongs in PE 0702239F Avionics Component Improvement Program and has moved these funds to that PE for FY2005 execution.

IMDS and LAILS-S funding will support the Expeditionary Combat Support System (ECSS). FY2006 to FY2011 IMDS and LAILS-S funds moved into PE 0708610F Logistics Information Techology.

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708611F Support Systems Development**	**3318 Product Data Systems Modernization (PDSM)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
3318	Product Data Systems Modernization (PDSM)	8.781	3.024	3.335	3.473	3.532	3.628	3.681	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This project implements the Air Force Technical Order (TO) Functionality and the final phase out of the Joint Computer-Aided Acquisition Logistic Support (JCALS) system that is being replaced by the modernization program Enhanced Technical Information Management System (ETIMS). It will develop new software and integrate existing Technical Order databases. The Automated Civil Engineering System (ACES) is the modernization of the Interim Work Information Management System (IWIMS) legacy system that supports Civil Engineering Management Information System (CEMIS) requirements. ACES project completed in FY05.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program			
(U)	Manage AF technical data activities	0.926	0.532	0.525
(U)	Develop Automated Civil Engineer Systems (ACES) Software	0.015	0.000	0.000
(U)	Continue Technical Order (TO) Architecture Integration	0.270	0.165	0.161
(U)	Continue Technical Data Integrator/Developer Support	6.950	1.927	2.254
(U)	Continue Integration/Migration of Technical Management systems	0.370	0.260	0.260
(U)	Support and Sustain Technical Data Integration Lab	0.250	0.140	0.135
(U)	Total Cost	8.781	3.024	3.335

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

ETIMS will incrementally develop a user friendly, technically accurate, and current digital TO management solution at the point of use. The acquisition will execute a Cost Plus Award Fee contract competitively awarded utilizing the ETIA vehicle.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **3318 Product Data Systems Modernization (PDSM)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Software Development (ACES)	MIPR	Softwae Factory, SSG/BICE, Maxwell AFB-Gunter Annex, AL		0.015	Mar-05	0.000		0.000		0.000	0.015	TBD
Subtotal Product Development			0.000	0.015		0.000		0.000		0.000	0.015	TBD
Remarks:												
(U) Support												
Manage and Support Technical Data activies	C/FP	LOGTEC/MTC, MSG/MM, Wright Patterson AFB, OH		2.049	Jan-05	1.207	Jan-06	1.202	Jan-07	Continuing	TBD	TBD
Develop and Integrate Technical Data activites	C/FP	Intergraph, MSG/MM, Wright Patterson AFB, OH		6.416	Jun-05	1.632	Jun-06	1.949	Jun-07	Continuing	TBD	TBD
Subtotal Support			0.000	8.465		2.839		3.151		Continuing	TBD	TBD
Remarks:												
(U) Management												
System Program Office (SPO) Operations	MIPR	MSG/MM, Wright Patterson AFB, OH		0.301	Oct-04	0.185	Oct-05	0.184	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	0.301		0.185		0.184		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	8.781		3.024		3.335		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **3318 Product Data Systems Modernization (PDSM)**

Exhibit R-4 BA 07 PEC 78611F Project 3318 PDSM

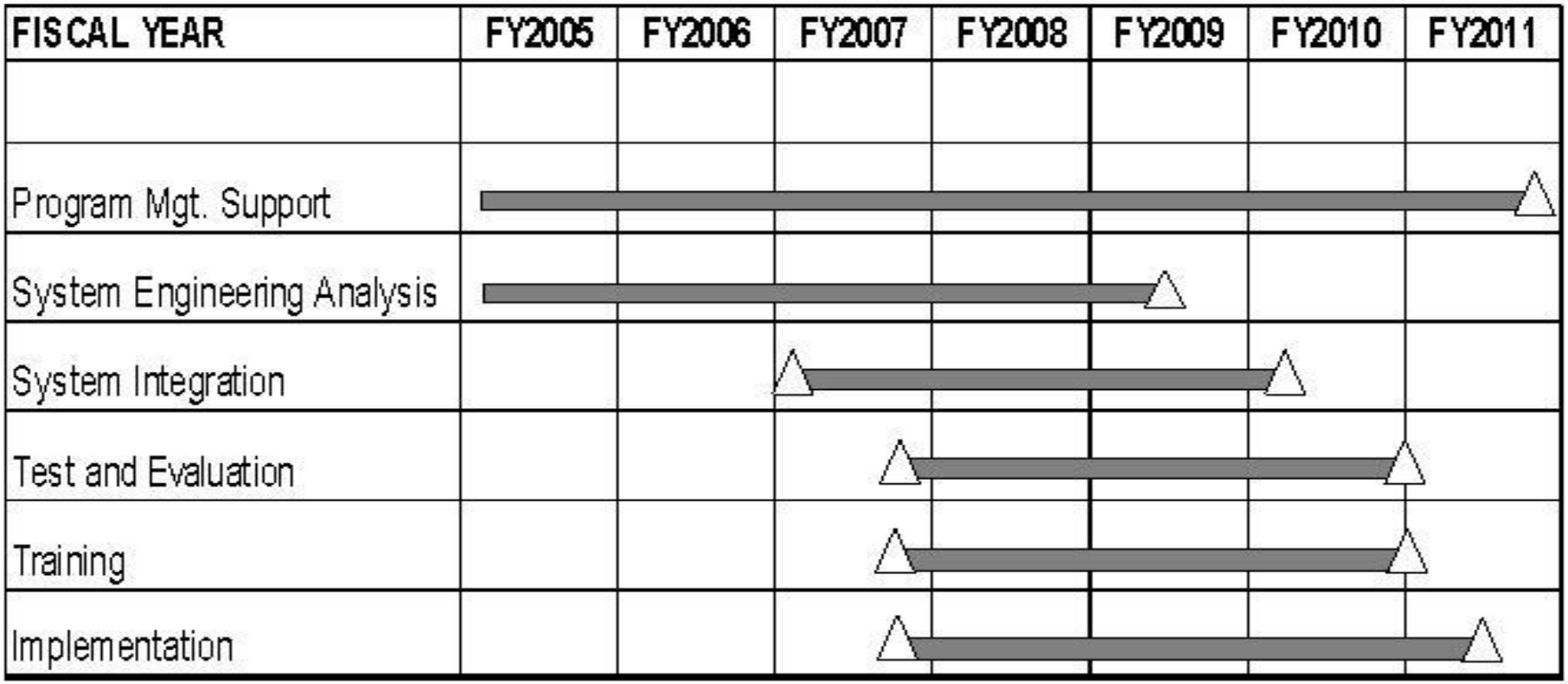


Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 3318 Product Data Systems Modernization (PDSM)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Program Mgt Support	1-4Q	1-4Q	1-4Q
(U) System Integration			1-4Q
(U) Test and Evaluation			4Q
(U) Training			4Q
(U) Implementation			4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708611F Support Systems Development**	**4654 Integrated Maintenance Data System (IMDS)**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4654	Integrated Maintenance Data System (IMDS)	26.863	13.432	0.000	0.000	0.000	0.050	0.022	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2006, Project 4654, Integrated Maintenance Data System, efforts were transferred to PE 0708610F, Logistics Information Technology, Project 5208, Expeditionary Combat Support System (ECSS). The small amount of funds remaining for project 4654 (FY 2010, and 2011) will be realigned during the FY 2008 budget cycle.

(U) A. Mission Description and Budget Item Justification

Integrated Maintenance Data System (IMDS) is an information technology program which provides Joint Command and Air Force warfighters with global maintenance visibility of aircraft, space, missile, communications, and related support environments. It will develop new software and integrate existing databases. IMDS provides the capability to plan and accomplish combat operations anywhere in the world. IMDS includes sustainment of AF standard base level legacy maintenance systems ensuring operational maintenance capabilities continue to support the operational Air Force. Thus, IMDS enables the Air Force to increase its combat sortie production capability while also decreasing its mobility footprint and cost of operations.

The balance of FY 2006 funds are Congressional adds.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program			
(U)	Continue IMDS System Development	8.183	0.000	0.000
(U)	Continue Systems Engineering and Development Contractor Support	4.121	0.000	0.000
(U)	Support System Program Office (SPO) Operations and management oversight	2.981	0.000	0.000
(U)	Center for Aircraft System/Support Infrastructure Congressional Add	0.965	1.000	0.000
(U)	C-5/C17 SCME Aging Aircraft Congressional Add	4.825	2.500	0.000
(U)	Teleoperated Semiautonomous Robot for Aging Aircraft Maintenance Congressional Add	0.965	1.000	0.000
(U)	Fuel Cell-Based Common Core Power Production Congressional Add	1.929	1.000	0.000
(U)	Special Operations Aircraft Depot Maintenance Congressional Add	0.965	0.000	0.000
(U)	Heavy Duty Hybrid Electric Congressional Add	1.929	2.500	0.000
(U)	Continue ECSS/ERP support	0.000	0.032	0.000
(U)	Real-Time Health Care Management Congressional Add	0.000	1.400	0.000
(U)	Warner Robins Aging Aircraft Congressional Add	0.000	4.000	0.000
(U)	Total Cost	26.863	13.432	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4654 Integrated Maintenance Data System (IMDS)**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement AF, IMDS (PE 0708611F).	2.567	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
(U)	Operations & Maintenance AF, IMDS (PE 0708611F)	1.663	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	TBD

(U) D. Acquisition Strategy

RDT&E funding for this project has been moved to support PE 0708610F Logistics Information Technology after FY06. All functional requirements will be subsumed by PE 0708610F for managment and tracking.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **4654 Integrated Maintenance Data System (IMDS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
IMDS System											0.000	
Software Development	MIPR	Engineering and Software Technology Solution, HQ OSSG, Maxwell AFB-Gunter Annex, AL		3.442	Oct-04	0.000		0.000		0.000	3.442	TBD
GCSS-AF Systems Integration	C/CPAF	LMSI, Owego, NY		0.466	Mar-05	0.000		0.000		0.000	0.466	TBD
Software Development	C/FP	General Dynamics, Montgomery, AL		1.763	Apr-05	0.000		0.000		0.000	1.763	TBD
Software Development	C/FP	Northrop-Grumman IT, Montgomery, AL		2.511	Apr-05	0.000		0.000		0.000	2.511	TBD
ERP	TBD	TBD		0.000		0.032	Jun-07	0.000		0.000	0.032	TBD
Center for Aircraft System/Support Infrastructure	SS/FP	TMI/CACI, OK		0.965	Jun-05	1.000		0.000		0.000	1.965	TBD
C-5/C17 SCME Aging Aircraft	C/FFP	Intergraph Corp, Huntsville, AL		4.825	Jun-05	2.500		0.000		0.000	7.325	TBD
Teleoperated Semiautonomous Robot for Aging Aircraft Maintenance	SS/CPFF	Battelle, Columbus, OH		0.965	Jun-05	1.000		0.000		0.000	1.965	TBD
Fuel Cell-Based Common Core Power Production	C/FP	FCTEC, Johnstown PA.		1.929	Jun-05	1.000		0.000		0.000	2.929	TBD
Special Operations Aircraft Depot Maintenance	SS/FP	Intergraph Corp.,Huntsville, AL		0.965	Jun-05	0.000		0.000		0.000	0.965	TBD
Real-Time Health Care Management	TBD	TBD		0.000		1.400		0.000			1.400	
Warner Robins Aging Aircraft	TBD	TBD		0.000		4.000	Jun-07	0.000		Continuing	TBD	TBD
Heavy Duty Hybrid Electric	C/FP	Mack Truck, Hagerstown, MD		1.929	Jun-05	2.500	Jun-07	0.000		Continuing	TBD	TBD
Subtotal Product Development			0.000	19.760		13.432		0.000		Continuing	TBD	TBD

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

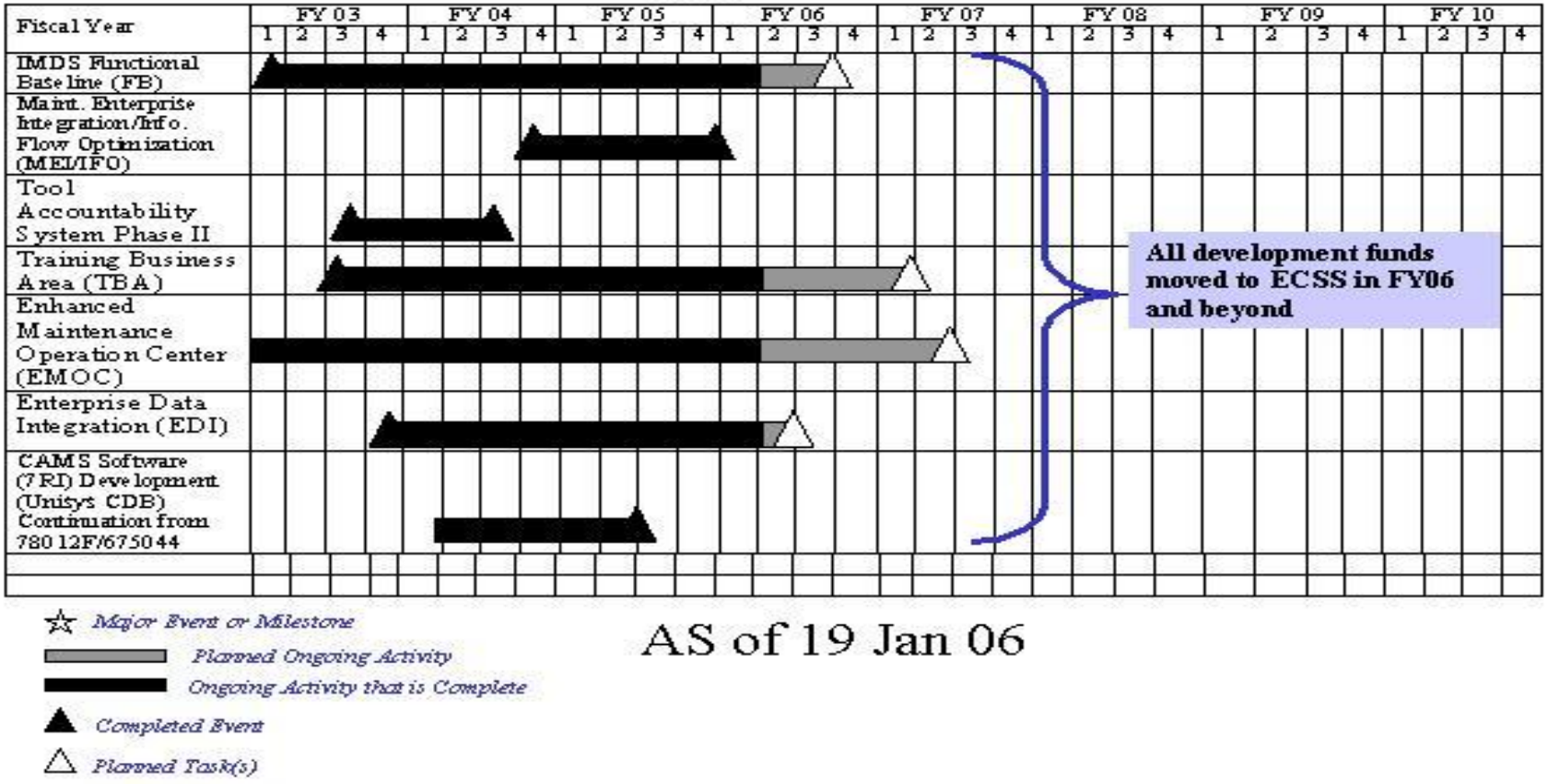
PROJECT NUMBER AND TITLE: **4654 Integrated Maintenance Data System (IMDS)**

	Remarks:										
(U)	Support										
	Contractor Support	C/FP	MCR, Titan,, DSD, PSI, Montgomery, AL		4.121	Apr-05	0.000	0.000	0.000	4.121	TBD
	Subtotal Support			0.000	4.121		0.000	0.000	0.000	4.121	TBD
	Remarks:										
(U)	Management										
	System Program Office Operations	MIPR	SSG, Maxwell AFB-Gunter Annex, AL		2.982	Oct-04	0.000	0.000	0.000	2.982	TBD
	Subtotal Management			0.000	2.982		0.000	0.000	0.000	2.982	TBD
	Remarks:										
(U)	Total Cost			0.000	26.863		13.432	0.000	Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 4654 Integrated Maintenance Data System (IMDS)

Exhibit R-4 : IMDS Schedule Profile

21 Dec 06



AS of 19 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 4654 Integrated Maintenance Data System (IMDS)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) IMDS Functional Baseline (FB)	1-4Q	1-3Q	
(U) Maintenance Enterprise Integration/Information Flow Optimization (MEI/IFO)	1-4Q		
(U) Training Business Area (TBA)	1-4Q	1-4Q	1Q
(U) Enhanced Maintenance Operation Center (EMOC)	1-4Q	1-4Q	1-2Q
(U) Enterprise Data Integration (EDI) Formally Data Management	1-4Q	1-2Q	
(U) CAMS Software (7R1) Development (Unisys CDB)	1-2Q		
(U) ERP Analysis		3Q	

Exhibit R-2a, RDT&E Project Justification			DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 4926 Reengineering and Enabling Technologies	

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4926	Reengineering and Enabling Technologies	4.360	3.300	0.000	0.000	0.000	0.000	0.000	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program provides for continuing analytical research and studies in reengineering and enabling technologies. It provides quick response assistance for senior Air Force officials and others in the Business Process Reengineering (BPR) and change management arenas. Using reengineering processes and enabling technologies, existing processes and their associated activities can be analyzed to identify work that is value added, non-value added, and wasted. It will assist senior leaders with removing duplication of effort, unnecessary product generation delays and non-productive activities and provide significant improvements in product quality.

This program funds research and development projects that will increase the reliability and readiness of weapons systems and platforms and provide future savings in total ownership costs. The objective of the program is to optimize the return-on-investments that reduce the operating and support costs for aging systems. Current Air Force Reduction of Total Ownership Cost (RTOC) efforts are demonstrating that cost reductions can be achieved by a variety of best practices. They include replacing high cost and low reliability components, enhancing supply chain efficiency, using smart decision support tools with logistics support arrangements, leveraging commercial-of-the-shelf components, and initiating public-private partnerships. The program seeks to reduce the cost of products and processes used to acquire, operated, and sustain weapon systems as well as infrastructure costs. The aim is to realize significant cost reductions in order to free up budgetary Total Obligation Authority to help fund urgent modernization priorities. The primary objectives are to capture and arrest cost growth, reduce the costs and capture the savings, and then reinvest the savings in future cost savings in future cost saving initiatives.

The Air Force acquisition community is pursuing excellence through business process redesign and the associated enabling technologies. This program provides for developing a center of excellence in BPR and for mentoring Headquarters Air Force (HAF) leaders in the proper application of BPR principles for their initiatives. It will maintain information on the state of the art in BPR paradigms and tailor their application for the HAF and SAF/AQ environment. It will also capture lessons learned and other feedback from BPR applications for change management and process improvement strategies.

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) Acquisition Reengineering Studies	1.930	1.500	0.000
(U) Information Assurance for Enabling Technologies	1.930	1.800	0.000
(U) Agile Rapid Global Combat Support	0.500	0.000	0.000
(U) Total Cost	4.360	3.300	0.000

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4926 Reengineering and Enabling Technologies**

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

FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost

(U) Not Applicable

(U) D. Acquisition Strategy

All major contracts awarded after full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **4926 Reengineering and Enabling Technologies**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Acquisition Reengineering Studies	FFP	DSD Labs, Bedford, MA		1.930		1.500	Mar-06	0.000		Continuing	TBD	TBD
Scientist and Engineers Transformation Initiative	FFP	AFAIA, San Antonio, TX		0.000		0.000	Mar-06	0.000		Continuing	TBD	TBD
Information Assurance for Enabling Technologies				1.930		1.800		0.000		Continuing	TBD	TBD
Agile Rapid Global Combat Support				0.500		0.000		0.000			0.500	
Subtotal Product Development			0.000	4.360		3.300		0.000		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	4.360		3.300		0.000		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4926 Reengineering and Enabling Technologies**

Exhibit R-4:Reengineering and Enabling Technologies Schedule Profile

28 Jan. 04

Fiscal Year	FY 05				FY 06				FY 07			
	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Reengineering Studies												
Scientist and Engineering Transformation Initiative												

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **4926 Reengineering and Enabling Technologies**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Acquisition Reengineering Studies		2Q	
(U) Scientist and Engineers Transformation Initiative		2Q	
(U) Information Assurance for Enabling Technologies		2Q	

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 5042 Log Application Logisitics Integration (LALI)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5042	Log Application Logisitics Integration (LALI)	6.367	6.834	7.261	7.484	7.611	7.664	7.861	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Log Application Logistics Integration is the effort to migrate existing Installations and Logistics (IL) legacy systems to the common GCSS-AF Integration Framework and provide integration support to assist this effort. The target is a suite of software components that are continuously updated or refined to embrace emerging best practices and commercial information technology innovations. The strategic plan is the creation of a logistics enterprise system using common software and hardware products requiring a smaller number of interfacing transactions.

LALI integration funding will support the Expeditionary Combat Support System (ECSS).

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapons systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) Continue Program Management Office (PMO) Support	1.805	1.811	1.838
(U) Continue PMO Tasks(Supporting Integration and Development)	0.357	0.353	0.360
(U) Provide Systems Engineering Base Support	0.540	0.535	0.546
(U) Continue Systems Engineering Contractor Support	3.539	4.010	4.390
(U) Continue Integration Task Contracts	0.126	0.125	0.127
(U) Total Cost	6.367	6.834	7.261

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

"Engineering & Integration Systems (EIS) formally ILI, is the Operations and Sustainment Engineering Flight of the Engineering Integration Systems Squadron (EISS) which manages logistics systems engineering and integration issues for the Air Force. EIS performs a set of activities required by the EISS to deliver world-class capabilities to our customers. This includes enterprise architecture, engineering technical and functional support of services for the development, integration, maintenance and installation of modernized Logistics Information Systems. The focus is on facilitating the improvement of the systems efficiency through integration

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **5042 Log Application Logisitics Integration (LALI)**

and technology insertion."

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **5042 Log Application Logisitics Integration (LALI)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Support Contractor (Portfolio Management, Architecture, & Data Management)	C/FP	Greentree, Wright Patterson AFB, OH		0.620	Feb-05	0.614	Feb-06	0.627	Feb-07	Continuing	TBD	TBD
Support Contractor (Data Management, Enterprise Architecture, & System Modernization support)	C/FP	Oracle, Maxwell AFB-Gunter Annex, AL		1.048	Feb-05	1.037	Feb-06	1.064	Feb-07	Continuing	TBD	TBD
Portal/Systems Engineering Support (Integration Task)	C/FP	Various, Maxwell AFB-Gunter Annex, AL		0.083	Oct-04	0.082	Oct-05	0.084	Oct-06	Continuing	TBD	TBD
Portal/Systems Engineering Support (Integration Task)	MIPR	Engineering, SSG, Maxwell AFB-Gunter Annex, AL		0.043	Oct-04	0.043	Oct-05	0.043	Oct-06	Continuing	TBD	TBD
PMO Tasks (Supporting Integration and Development)	MIPR	SSG, Maxwell AFB-Gunter Annex, AL		0.357	Oct-04	0.357	Oct-05	0.357	Oct-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	2.151		2.133		2.175		Continuing	TBD	TBD
Remarks:												
(U) Support												
Support Contractor	C/FP	DSD, Maxwell AFB-Gunter Annex, AL		1.629	Feb-05	1.538	Feb-06	1.718	Feb-07	Continuing	TBD	TBD
Subtotal Support			0.000	1.629		1.538		1.718		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
PMO Support	MIPR	SSG, Maxwell AFB-Gunter Annex, AL		0.366	Oct-04	0.366	Oct-05	0.370	Oct-06	Continuing	TBD	TBD
Support Contractor	C/FP	Optimization Technology INC, Maxwell AFB-Gunter Annex, AL		0.929	Feb-05	0.916	Feb-06	0.938	Feb-06	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	1.295		1.282		1.308		Continuing	TBD	TBD
Remarks:												

Exhibit R-3, RDT&E Project Cost Analysis

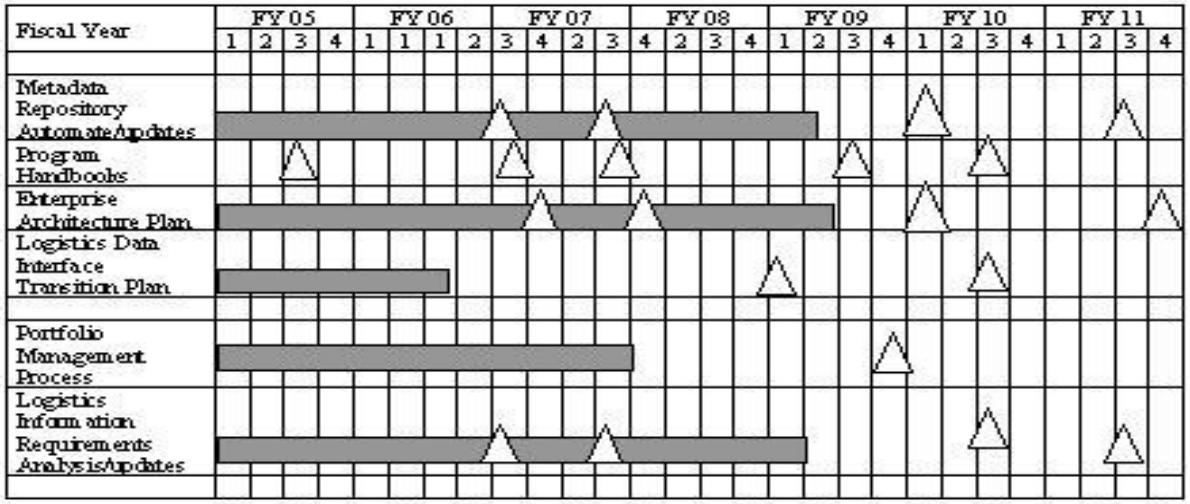
DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0708611F Support Systems Development**	**5042 Log Application Logisitics Integration (LALI)**

(U) Management												
PMO Support (System Program Office management and operations)	MIPR	SSG, Maxwell AFB-Gunter Annex, AL		0.752	Oct-04	1.346	Oct-05	1.520	Oct-06	Continuing	TBD	TBD
Base Support	MIPR	SSG, Maxwell AFB-Gunter Annex, AL		0.540	Oct-04	0.535	Oct-05	0.540	Oct-06	Continuing	TBD	TBD
Subtotal Management			0.000	1.292		1.881		2.060		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	6.367		6.834		7.261		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE **5042 Log Application Logisitics Integration (LALI)**

Exhibit R-4: Logistics Integration Schedule Profile



As of 19 Jan 06

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: **07 Operational System Development**	PE NUMBER AND TITLE: **0708611F Support Systems Development**	PROJECT NUMBER AND TITLE: **5042 Log Application Logisitics Integration (LALI)**

(U) **Schedule Profile**	FY 2005	FY 2006	FY 2007
(U) Metadata Repository (Automate/Updates)	1-4Q	1-4Q	1-4Q
(U) Program Handbooks	3Q		3Q
(U) Architecture Plan Integrated Data Warehouse (IDW) Preliminary Architecture	1-4Q	1-4Q	1-4Q
(U) Logistics Data Interface Transition Plan	1-4Q	1-3Q	1Q
(U) Portfolio Management Process Updates	1-4Q	1-4Q	1-4Q
(U) Logistics Information Requirements Analysis/Updates	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

PROJECT NUMBER AND TITLE: **5044 Log Application ILS-S (LAILS-S)**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5044 Log Application ILS-S (LAILS-S)	6.393	0.000	0.000	0.000	0.000	0.029	0.000	Continuing	TBD
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

In FY 2006, Project 5044, Log Application Integrated Logistics System - Supply efforts were transferred to PE 0708610F, Logistics Information Technology, Project 5208, Expeditionary Combat Support System (ECSS). The small amount of funds remaining for project 5044 (FY 2010) will be realigned during the FY 2008 budget cycle.

(U) A. Mission Description and Budget Item Justification

The primary focus of the Log Application Integrated Logistics System - Supply (LAILS-S) is the modernization of the Standard Base Supply System (SBSS) to seamlessly integrate with other logistics systems to provide total asset visibility, facilitate regionalization, and enable the war fighter to control, order, receive, and exploit materiel in a cheaper and more efficient manner.

Beginning in FY 2005, LAILS-S funding will support the Expeditionary Combat Support System (ECSS).

This program is in Budget Activity 7, Operational System Development, because projects are being engineered to support operational weapon systems already in existence.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Accomplishments/Planned Program			
(U) Continue ECSS/ERP solution planning and analysis blueprinting	6.393	0.000	0.000
(U) Total Cost	6.393	0.000	0.000

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not Applicable									

(U) D. Acquisition Strategy

RDT&E funding for this project has been moved to support PE 0708610F Logistics Information Technology after FY05. All functional requirements will be subsumed by PE 0708610F for management and tracking.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0708611F Support Systems Development**

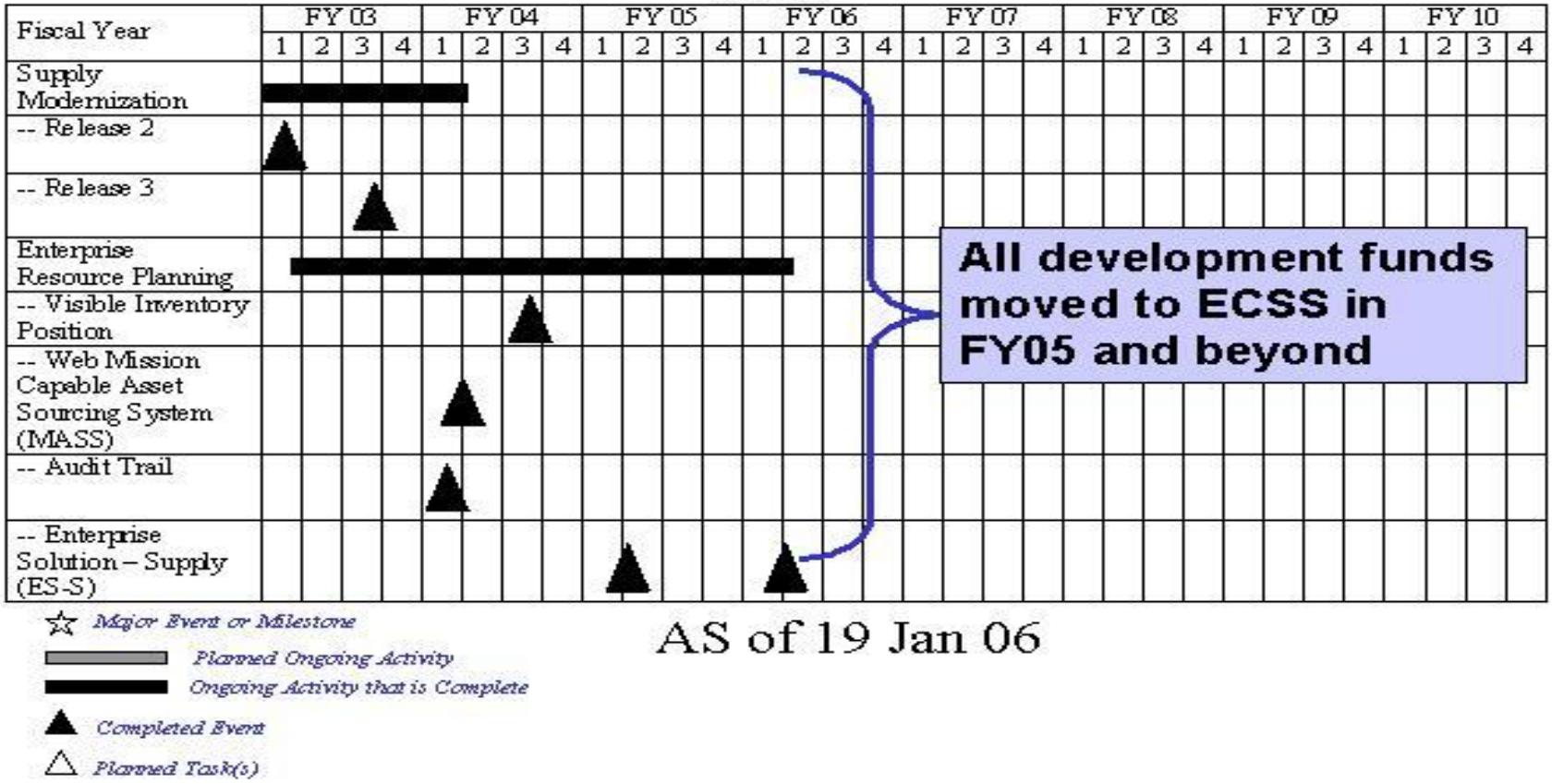
PROJECT NUMBER AND TITLE: **5044 Log Application ILS-S (LAILS-S)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
ERP Solution											0.000	
- Planning & Analysis Study	MIPR	MSG, Wright Patterson AFB, OH		6.393	Oct-04	0.000		0.000		0.000	6.393	TBD
Subtotal Product Development			0.000	6.393		0.000		0.000		0.000	6.393	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	6.393		0.000		0.000		0.000	6.393	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 5044 Log Application ILS-S (LAILS-S)

Exhibit R-4: ILS-S Schedule Profile

21 Dec 05



AS of 19 Jan 06

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0708611F Support Systems Development	PROJECT NUMBER AND TITLE: 5044 Log Application ILS-S (LAILS-S)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Enterprise Resource Planning	1-3Q		
(U) Enterprise Solution-Supply	2-3Q	1Q	

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PE NUMBER: 0804757F
PE TITLE: JOINT NATIONAL TRAINING CENTER

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	2.829	2.883	3.073	3.098	3.200	3.273	3.330	0.000	0.000
5124 Training Transformation	2.829	2.883	3.073	3.098	3.200	3.273	3.330	0.000	0.000

NOTE: Until FY 06 PE 0804757F was a BA 3 effort. The FY 05 PE 0804757F for data provided in this document was originally reported in a BA 3 document.

(U) A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint National Training Capability (JNTC). Develops capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, researches new technologies and methods that provide a crucial technology-based foundation supporting all JNTC operations.

This program is in budget activity 7- Operational Systems Development because it supports rapid transformation of Department of Defense training into a Joint National Training Capability.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	2.829	2.924	3.060
(U)	Current PBR/President's Budget	2.829	2.883	3.073
(U)	Total Adjustments	0.000	-0.041	
(U)	Congressional Program Reductions			
	Congressional Rescissions	0.000	-0.041	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			

(U) Significant Program Changes:

FY 06

- Decreased by Congressional General Reductions

FY 07

-Increased by inflation rate change

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0804757F JOINT NATIONAL TRAINING CENTER**

PROJECT NUMBER AND TITLE: **5124 Training Transformation**

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5124 Training Transformation	2.829	2.883	3.073	3.098	3.200	3.273	3.330	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

FY 04 and FY 05 efforts in BA03 PE0804757F

(U) A. Mission Description and Budget Item Justification

Supports the SECDEF's Transformation in Training/Joint National Training Capability (JNTC). Develops capabilities that integrate live, virtual, and constructive elements into a seamless joint training environment. Using a scientific and phased approach, researches new technologies and methods that provide a crucial technology-based foundation supporting all JNTC operations.

This program is in budget activity 7- Operational Systems Development because it supports rapid transformation of Department of Defense training into a Joint National Training Capability.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Continue Air Force Modeling and Simulations tool Kit (AFMSTT) Air Warfare Simulation (AWSIM) Upgrades	0.850	0.847	0.700
(U) Continue Test & Evaluation Network Architecture	0.850	0.000	0.000
(U) Continue Theater Battle Management Communication System (TBMCS)	0.886	0.000	0.000
(U) Continue basic operations support, systems acquisition,engineering and development studies/efforts	0.243	0.886	1.230
(U) Begin/Continue Multi-level security (Radiant Mercury) for Distributed Mission Operations Center (DMOC)	0.000	0.156	0.533
(U) Begin/Continue Concept of Operations for Space DMOC into JNTC Live -Virtual-Constructive events	0.000	0.994	0.440
(U) Begin Command and Control, Intelligence, Surveillance and Reconnaissance (C2ISR) replay tool development; Terrain/visual/IR/SAR database to support CONUS and OCONUS	0.000	0.000	0.170
(U) Total Cost	2.829	2.883	3.073

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) PE 0804757, Joint National Training Center, APAF	0.000	2.915	3.007	1.556	1.574	1.582	1.676	Continuing	TBD
(U) PE 0804757, Joint National Training Center, OPAF	0.000	32.663	21.817	23.672	24.271	24.904	25.242	Continuing	TBD
(U) PE 0804757, Joint National Training Center, O&M	13.032	17.399	17.618	17.964	18.163	18.526	18.894	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0804757F JOINT NATIONAL TRAINING CENTER**	PROJECT NUMBER AND TITLE **5124 Training Transformation**

(U) D. Acquisition Strategy

The acquisition strategy will be competitive, with cost plus fixed fee and firm fixed price contracts.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0804757F JOINT NATIONAL TRAINING CENTER**

PROJECT NUMBER AND TITLE: **5124 Training Transformation**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
AFMSTT		L3, Mesa , AZ Northrup Grumman, McLean, VA	0.865	0.850		0.731	Jan-06	0.772	Jan-07	Continuing	TBD	
DMOC-S		SPARTA, Schreiver AFB, CO	0.000	0.000		0.994	Jan-06	1.003	Jan-07	Continuing	TBD	
TBMCS			0.277	0.886		0.000		0.000			1.163	
DMOC TENA-HLA		Northrup Grumman, McLean, VA	0.500	0.850		0.000		0.000			1.350	
Ops Support, System Acq, Engineering & Development Studies		Various	0.000	0.243		0.886		1.000		Continuing	TBD	
DMOC (DTNG)		Lockheed Martin Corp, Kirtland AFB, NM	0.000	0.000		0.156	Mar-06	0.170	Mar-07	Continuing	TBD	
Subtotal Product Development			1.642	2.829		2.767		2.945		Continuing	TBD	0.000
Remarks: FY 04 and FY 05 efforts in BA03 PE0804757F												
(U) Support												
AFMSTT		Northrup Grumman, McLean, VA	0.000	0.000		0.116	Mar-06	0.128	Mar-07	Continuing	TBD	
DMOC-S		Northrup Grumman, McLean, VA	0.000	0.000		0.000					0.000	
Subtotal Support			0.000	0.000		0.116		0.128		Continuing	TBD	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			1.642	2.829		2.883		3.073		Continuing	TBD	0.000

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0804757F JOINT NATIONAL TRAINING CENTER**	PROJECT NUMBER AND TITLE **5124 Training Transformation**

U.S. AIR FORCE

Joint National Training Capability

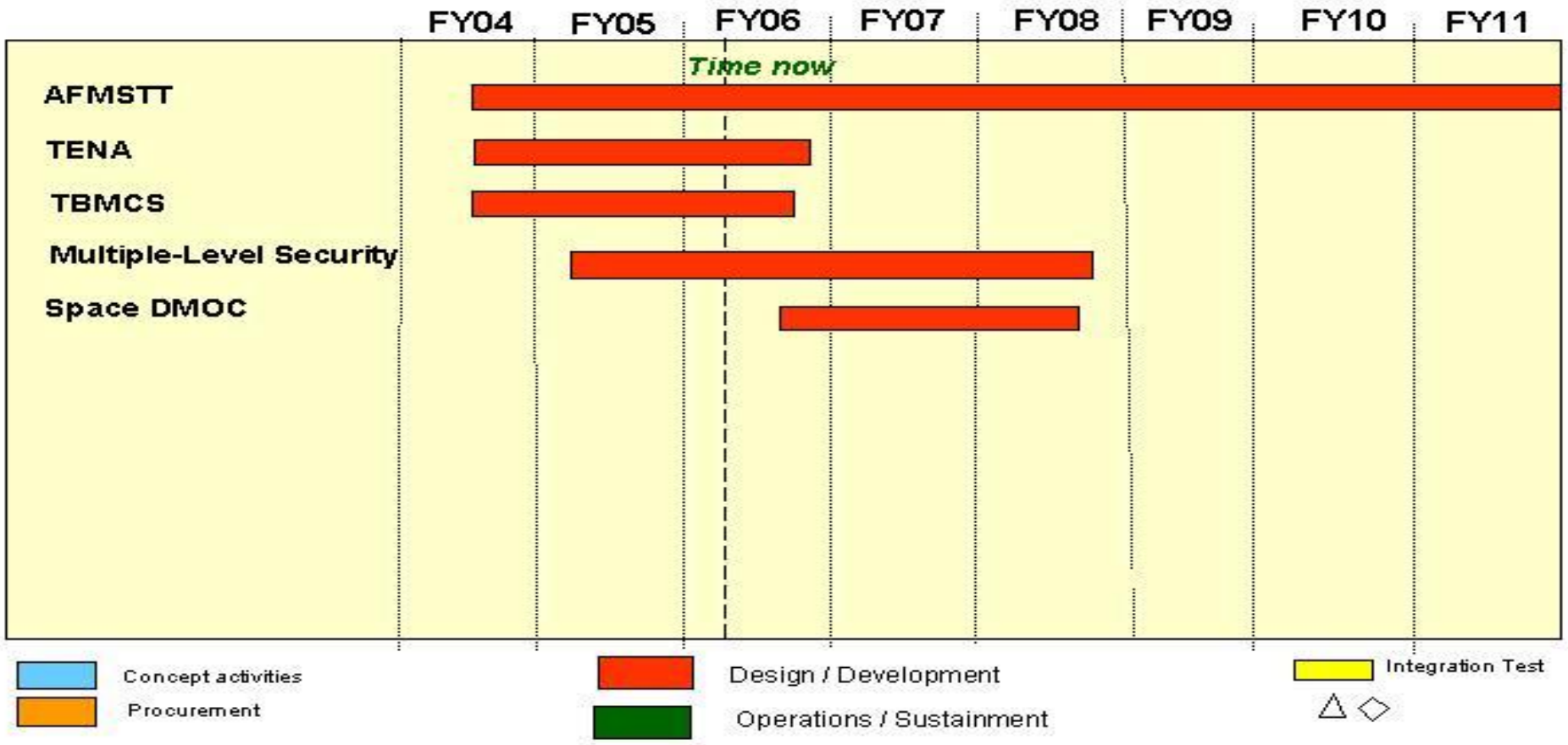

Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0804757F JOINT NATIONAL TRAINING CENTER	PROJECT NUMBER AND TITLE: 5124 Training Transformation

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) AFMSTT	2Q	2Q	2Q
(U) TENA	3Q		
(U) TBMCS	3Q		
(U) Basic Operating Support, System Acquisition, Engineering Support	1Q	1Q	1Q
(U) Multi-Level Security	1Q	1Q	
(U) Concept of Operations for Space DMOC-S		3Q	3Q
(U) C2ISR relay tool develop		3Q	3Q

PE NUMBER: 0808716F
PE TITLE: OTHER PERSONNEL ACTIVITIES

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.106	0.110	0.113	0.114	0.115	0.117	0.119	0.000	0.000
4236 Engineering Analysis	0.106	0.110	0.113	0.114	0.115	0.117	0.119	0.000	0.000

In FY05, this is a new PE.

(U) A. Mission Description and Budget Item Justification

The Defense Equal Opportunity Management Institute (DEOMI) provides grants to the civilian academic community to conduct research on military and civilian equal opportunity issues using standard social science methodology. The research methodology includes developing a literature review proposing hypotheses and methods of research. The grantee will then gather appropriate data, draw conclusions and present discussions, recommendations and reports based on their funding.

Previously the US Air Force provided Operations & Maintenance (O&M) funding to DEOMI as their contribution. However, beginning with 2005, it was determined that Research, Development, Test & Evaluation (RDT&E) funding would be more proper.

This program is in Budget Activity 7 as it provides support to operational forces.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.109	0.110	0.113
(U)	Current PBR/President's Budget	0.106	0.110	0.113
(U)	Total Adjustments	-0.003	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer	-0.003		
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0808716F OTHER PERSONNEL ACTIVITIES	PROJECT NUMBER AND TITLE: 4236 Engineering Analysis

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4236 Engineering Analysis	0.106	0.110	0.113	0.114	0.115	0.117	0.119	0.000	0.000
Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Defense Equal Opportunity Management Institute (DEOMI) provides grants to the civilian academic community to conduct research on military and civilian equal opportunity issues using standard social science methodology. The research methodology includes developing a literature review proposing hypotheses and methods of research. The grantee will then gather appropriate data, draw conclusions and present discussions, recommendations and reports based on their funding.

Previously the US Air Force provided Operations & Maintenance (O&M) funding to DEOMI as their contribution. However, beginning with 2005, it was determined that Research, Development, Test & Evaluation (RDT&E) funding would be more proper.

This program is in Budget Activity 7 as it provides support to operational forces.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Conduct engineering analysis on military and civilian equal opportunity issues.	0.106	0.110	0.113
(U) Total Cost	0.106	0.110	0.113

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Grants will be awarded competitively.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0808716F OTHER PERSONNEL ACTIVITIES**

PROJECT NUMBER AND TITLE: **4236 Engineering Analysis**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Eng Analysis	Grant	Various		0.106	Apr-05	0.110	Apr-06	0.113	Apr-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.106		0.110		0.113		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.106		0.110		0.113		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0808716F OTHER PERSONNEL ACTIVITIES	PROJECT NUMBER AND TITLE 4236 Engineering Analysis

Engineering Analysis

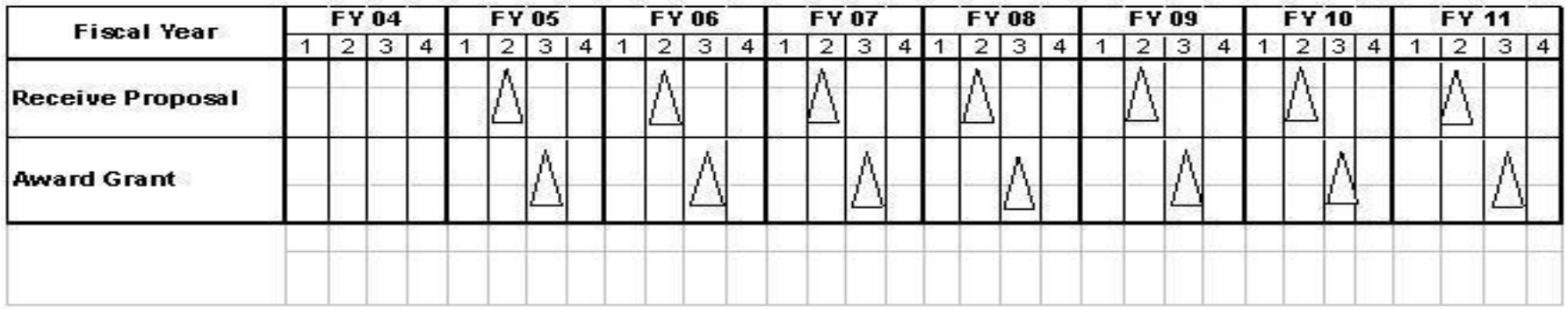

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0808716F OTHER PERSONNEL ACTIVITIES**	PROJECT NUMBER AND TITLE **4236 Engineering Analysis**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Receive grants	2Q	2Q	2Q
(U) Award grants	3Q	3Q	3Q

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PE NUMBER: 0901202F
PE TITLE: JOINT PERSONNEL RECOVERY AGENCY (JPRA)

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	0.000	0.964	0.992	1.019	1.038	1.062	1.080	0.000	0.000
691X	EO/IR Warning & Countermeasures Tech	0.000	0.964	0.992	1.019	1.038	1.062	1.080	0.000	0.000

In FY06, this is a new PE.

(U) A. Mission Description and Budget Item Justification

Joint Personnel Recovery Agency (JPRA) to execute tasks related to Commander, USJFCOM responsibilities as DoD Executive Agent (less policy) for Personnel Recovery. Provides separate PE to execute AF task to "fund JPRA" in DODD 2310.2. Includes funding for research and development (R&D), support equipment, contract services, and all associated costs specifically identified to support the JPRA headquarters at Ft. Belvoir, VA and other JPRA operating locations and project sites.

Funding provides USJFCOM capability to conduct Personnel Recovery advanced concept testing and development, identify, research, and exploit technologies to provide COCOM and Service Personnel Recovery capabilities.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget		0.964	0.992
(U)	Current PBR/President's Budget	0.000	0.964	0.992
(U)	Total Adjustments	0.000	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions		0.000	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification

DATE: **February 2006**

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT NUMBER AND TITLE
07 Operational System Development	**0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)**	**691X EO/IR Warning & Countermeasures Tech**

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
691X	EO/IR Warning & Countermeasures Tech	0.000	0.964	0.992	1.019	1.038	1.062	1.080	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Joint Personnel Recovery Agency (JPRA) to execute tasks related to Commander, USJFCOM responsibilities as DoD Executive Agent (less policy) for Personnel Recovery. Provides separate PE to execute AF task to "fund JPRA" in DODD 2310.2. Includes funding for research and development (R&D), support equipment, contract services, and all associated costs specifically identified to support the JPRA headquarters at Ft. Belvoir, VA and other JPRA operating locations and project sites.

Funding provides USJFCOM capability to conduct Personnel Recovery advanced concept testing and development, identify, research, and exploit technologies to provide COCOM and Service Personnel Recovery capabilities.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Personnel Recovery Mission Software Development (PRMS)		0.416	0.430
(U) Personnel Recovery Extraction using Smart Sensors (PRESS)		0.118	0.132
(U) Technology Assessment		0.430	0.430
(U) Total Cost	0.000	0.964	0.992

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Contracts will be awarded based on full and open competition.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)**

PROJECT NUMBER AND TITLE: **691X EO/IR Warning & Countermeasures Tech**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Personnel Recovery Mission Software Development (PRMS)	TBD	TBD				0.416	Mar-06	0.430	Mar-07	Continuing	TBD	TBD
Personnel Recovery Extraction using Smart Sensors (PRESS)	TBD	TBD				0.118	May-06	0.132	May-07	Continuing	TBD	TBD
Tech Assessment						0.430	Mar-06	0.430	Mar-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		0.964		0.992		Continuing	TBD	TBD
Remarks:												
(U) Support												
											0.000	0.000
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
											0.000	0.108
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.108
Remarks:												
(U) Management												
											0.000	0.000
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Total Cost			0.000	0.000		0.964		0.992		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)**	PROJECT NUMBER AND TITLE **691X EO/IR Warning & Countermeasures Tech**

JPRA

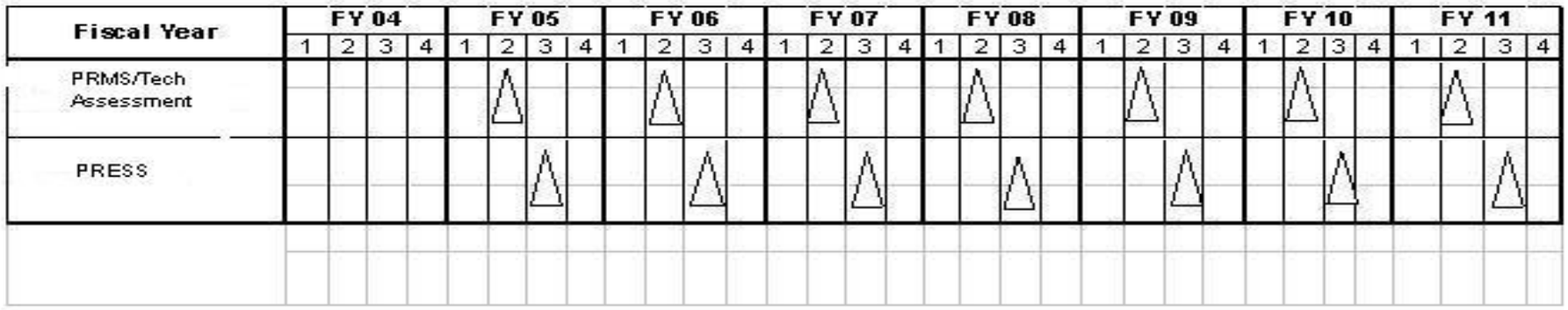

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901202F JOINT PERSONNEL RECOVERY AGENCY (JPRA)**	PROJECT NUMBER AND TITLE **691X EO/IR Warning & Countermeasures Tech**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) PRMS		2Q	2Q
(U) PRESS		3Q	3Q
(U) Technology Assessment		2Q	2Q

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PE NUMBER: 0901218F
PE TITLE: Civilian Compensation Program

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901218F Civilian Compensation Program

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.608	7.339	7.779	7.984	8.082	8.267	8.409	Continuing	TBD
4139	Civilian Compensation Program	14.608	7.339	7.779	7.984	8.082	8.267	8.409	Continuing	TBD

(U) A. Mission Description and Budget Item Justification

This program element provides for payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81. The Department of Labor (DOL) administers this program and charges the Department of the Air Force for its employee costs; therefore, this is a MUST PAY bill for Air Force. The PE excludes manpower authorizations and costs.

This Program Element (PE) is in Budget Activity 7 in support of payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	7.208	7.339	7.779
(U)	Current PBR/President's Budget	14.608	7.339	7.779
(U)	Total Adjustments	7.400	0.000	
(U)	Congressional Program Reductions			
	Congressional Rescissions			
	Congressional Increases			
	Reprogrammings	7.400		
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			
	N/A			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901218F Civilian Compensation Program	PROJECT NUMBER AND TITLE: 4139 Civilian Compensation Program

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
4139	Civilian Compensation Program	14.608	7.339	7.779	7.984	8.082	8.267	8.409	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

This program element provides for payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81. The Department of Labor (DOL) administers this program and charges the Department of the Air Force for its employee costs; therefore, this is a MUST PAY bill for Air Force. The PE excludes manpower authorizations and costs.

This Program Element (PE) is in Budget Activity 7 in support of payment of civilian compensation benefits for disability due to personal injury sustained while in the performance of duty or due to employment-related disease according to the Federal Employees Compensation Act (FECA) under Title 5 U.S.C., Chapter 81.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Accomplishments/Planned Program			
(U)	Continue a program to compensate employees assigned to RDT&E facilities for worked-related injury or disease.	14.608	7.339	7.779
(U)	Total Cost	14.608	7.339	7.779

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

	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U) Not applicable									

(U) D. Acquisition Strategy

Not Applicable.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901218F Civilian Compensation Program**

PROJECT NUMBER AND TITLE: **4139 Civilian Compensation Program**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Continue development of compensation plan				14.608	Aug-05	7.339	Aug-06	7.779	Aug-07	Continuing	TBD	TBD
Subtotal Product Development			0.000	14.608		7.339		7.779		Continuing	TBD	TBD
Remarks:												
(U) Support												
Not Applicable											0.000	
Subtotal Support			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Test & Evaluation												
Not Applicable											0.000	
Subtotal Test & Evaluation			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) Management												
Not Applicable											0.000	
Subtotal Management			0.000	0.000		0.000		0.000		0.000	0.000	0.000
Remarks:												
(U) NA												
Not Applicable											0.000	
(U) Total Cost			0.000	14.608		7.339		7.779		Continuing	TBD	TBD
Remarks:												

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901218F Civilian Compensation Program**	PROJECT NUMBER AND TITLE **4139 Civilian Compensation Program**

A schedule is not applicable due to the nature of this PE

Exhibit R-4, RDT&E Schedule Profile		DATE **February 2006**
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901218F Civilian Compensation Program**	PROJECT NUMBER AND TITLE **4139 Civilian Compensation Program**

A schedule is not applicable due to the nature of this PE

Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901218F Civilian Compensation Program**	PROJECT NUMBER AND TITLE **4139 Civilian Compensation Program**

(U) Schedule Profile

FY 2005	FY 2006	FY 2007

(U) Not Applicable

PE NUMBER: 0901220F
PE TITLE: PERSONNEL ADMINISTRATION

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION

Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
Total Program Element (PE) Cost	0.000	16.150	18.262	12.221	16.442	10.683	12.119	Continuing	TBD
5194 Force Development Transformation	0.000	16.150	18.262	12.221	16.442	10.683	12.119	Continuing	TBD

In FY06, PE 0901220F, Personnel Administration, includes new start RDT&E efforts.

(U) A. Mission Description and Budget Item Justification

The Force Development Transformation (FDT) project under the Personnel Administration program funds operational developments necessary to acquire, field, and modify segments of an integrated Air Force Human Resource (HR) customer service delivery system that will effectively incorporate personnel, manpower, and pay services for the Total Force - Active Duty, Reserve, Guard, and Civilians. It supports the transition from the current AF personnel HR system enterprise (Military Personnel Data System (MilPDS) plus other AF unique applications to a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). FDT is supported through the AF architecture enterprise using Enterprise Resource Planning (ERP) Commercial Off The Shelf (COTS) products. FDT's most important enabler is the virtual Personnel Services Center (vPSC), which combines what was previously referred to as Personnel Services Delivery System (PSDS) and virtual Personnel Center (vPC). vPSC is an IT spiral development project that will provide the Air Force unique HR capabilities not delivered in DIMHRS, and will ensure MilPDS and other legacy systems are compatible with DIMHRS. vPSC will provide "one-stop shopping" to airmen in a seamless, integrated fashion through web-enabled self-service functionality. vPSC will support the migration of legacy applications (that will not be subsumed by DIMHRS) and other information technology support to FDT.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	0.000	16.383	18.187
(U)	Current PBR/President's Budget	0.000	16.150	18.262
(U)	Total Adjustments	0.000	-0.233	
(U)	Congressional Program Reductions			
	Congressional Rescissions		-0.233	
	Congressional Increases			
	Reprogrammings			
	SBIR/STTR Transfer			
(U)	Significant Program Changes:			

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE: 5194 Force Development Transformation

Cost ($ in Millions)		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5194	Force Development Transformation	0.000	16.150	18.262	12.221	16.442	10.683	12.119	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

The Force Development Transformation (FDT) project under the Personnel Administration program funds operational developments necessary to acquire, field, and modify segments of an integrated Air Force Human Resource (HR) customer service delivery system that will effectively incorporate personnel, manpower, and pay services for the Total Force - Active Duty, Reserve, Guard, and Civilians. It supports the transition from the current AF personnel HR system enterprise (Military Personnel Data System (MilPDS) plus other AF unique applications to a Global Combat Support System-Air Force (GCSS-AF) compliant enterprise that supports the deployment of the Defense Integrated Military Human Resources System (DIMHRS). FDT is supported through the AF architecture enterprise using Enterprise Resource Planning (ERP) Commercial Off The Shelf (COTS) products. FDT's most important enabler is the virtual Personnel Services Center (vPSC), which combines what was previously referred to as Personnel Services Delivery System (PSDS) and virtual Personnel Center (vPC). vPSC is an IT spiral development project that will provide the Air Force unique HR capabilities not delivered in DIMHRS, and will ensure MilPDS and other legacy systems are compatible with DIMHRS. vPSC will provide "one-stop shopping" to airmen in a seamless, integrated fashion through web-enabled self-service functionality. vPSC will support the migration of legacy applications (that will not be subsumed by DIMHRS) and other information technology support to FDT.

This program is in Budget Activity 7, Operational System Development, because it upgrades and develops capabilities for current operational systems.

(U) B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U) Develop application modules for the Force Development Tool Kit (FDTK) and legacy system migration	0.000	7.208	10.861
(U) Integrate development hardware and software for vPSC.	0.000	4.186	0.748
(U) Develop a GCSS-AF compliant systems enterprise framework to transition from MilPDS to DIMHRS. This effort will integrate Air Force-unique, web-enabled, self-service capabilities with existing functionality.	0.000	2.365	4.162
(U) Program Management Support	0.000	2.391	2.491
(U) Total Cost	0.000	16.150	18.262

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF WSC 834010 General Information Technologies	0.000	2.171	3.914	1.617	1.008	0.684	0.693	Continuing	TBD
(U)	Operations and Maintenance, AF	0.000	27.812	22.229	27.055	32.547	24.730	20.890	Continuing	TBD

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901220F PERSONNEL ADMINISTRATION**	PROJECT NUMBER AND TITLE **5194 Force Development Transformation**

(U) D. Acquisition Strategy

Force Development Transformation employs an evolutionary acquisition strategy with spiral development contracts that are awarded in a competitive environment.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901220F PERSONNEL ADMINISTRATION**

PROJECT NUMBER AND TITLE: **5194 Force Development Transformation**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
FDTK	IDIQ	CellExchange Federal, Inc. Framingham, MA	0.000	0.000		7.208	Mar-06	10.861	Oct-06	Continuing	TBD	TBD
Enterprise Framework	IDIQ	CellExchange, Federal, Inc. Framingham, MA	0.000	0.000		2.365	Mar-06	4.162	Dec-06	Continuing	TBD	TBD
Subtotal Product Development			0.000	0.000		9.573		15.023		Continuing	TBD	TBD
Remarks:												
(U) Support												
Hardware, Software Integration	FFP	CellExchange Federal, Inc. Framingham, MA				3.981	Mar-06	0.000		Continuing	TBD	TBD
Subtotal Support			0.000	0.000		3.981		0.000		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Hardware/Software Test & Evaluation	T&M	Diversified Technical Services Inc, Randolph AFB, TX				0.205	Dec-05	0.748	Oct-07	Continuing	TBD	TBD
Subtotal Test & Evaluation			0.000	0.000		0.205		0.748		Continuing	TBD	TBD
Remarks:												
(U) Management												
Program Management Office Support	FFP/LOE	Dynamics Research Corp, San Antonio, TX	0.000	0.000		2.391	Mar-06	2.491	Mar-07	Continuing	TBD	TBD
Subtotal Management			0.000	0.000		2.391		2.491		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		16.150		18.262		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901220F PERSONNEL ADMINISTRATION	PROJECT NUMBER AND TITLE: 5194 Force Development Transformation

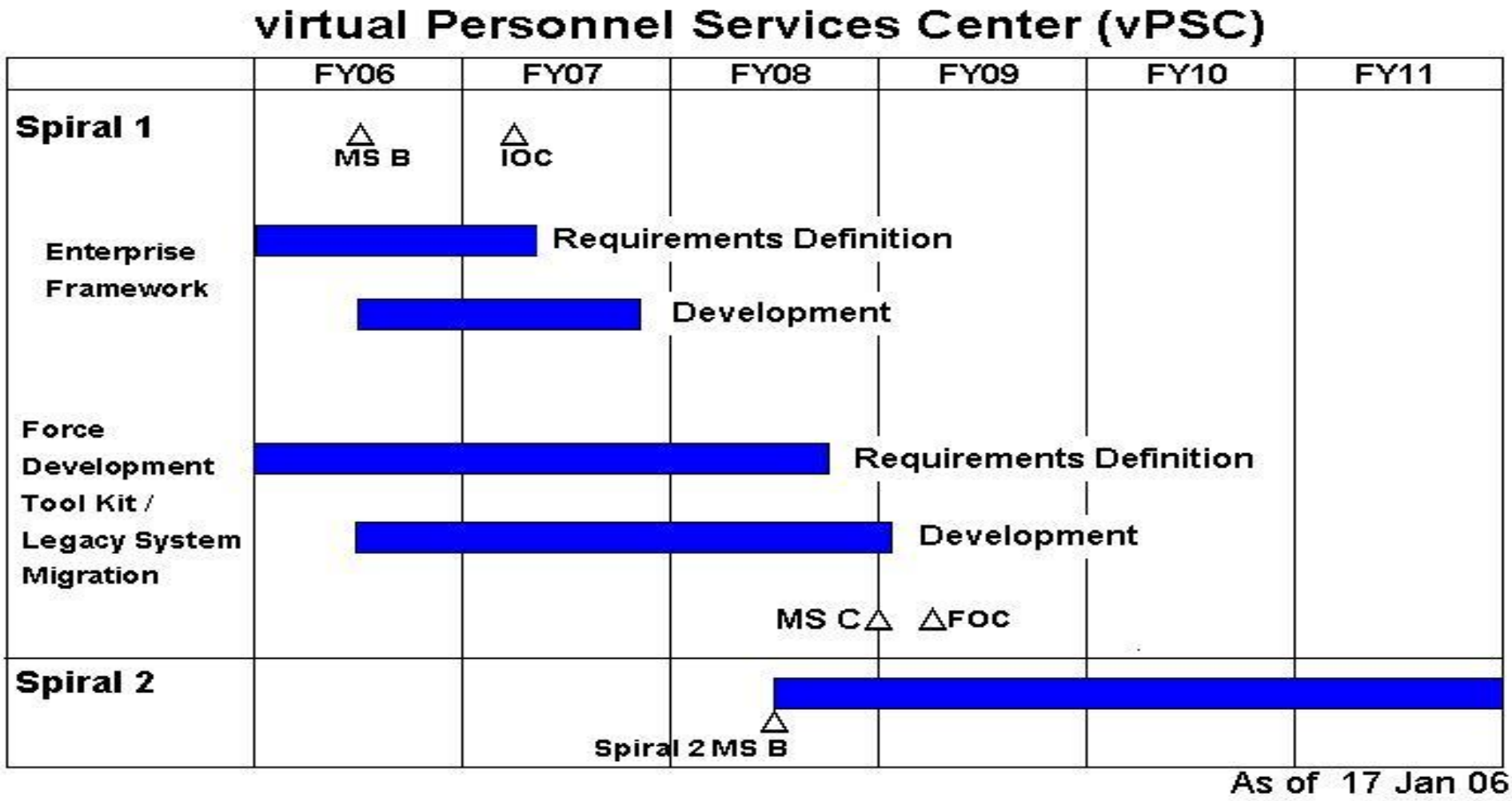


Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901220F PERSONNEL ADMINISTRATION**	PROJECT NUMBER AND TITLE **5194 Force Development Transformation**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) vPSC Milestone B		2Q	
(U) Enterprise Framework Development Begin		3Q	
(U) Force Development Toolkit Begins		3Q	
(U) vPSC Spiral 1 IOC			1Q

PE NUMBER: 0901538F
PE TITLE: FIRST

Exhibit R-2, RDT&E Budget Item Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F FIRST

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
	Total Program Element (PE) Cost	14.450	17.281	27.541	16.373	16.715	17.125	17.355	Continuing	TBD
5036	Financial Information Resource System (FIRST)	14.450	12.353	16.195	16.373	16.715	17.125	17.355	Continuing	TBD
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	0.000	4.928	11.346	0.000	0.000	0.000	0.000	0.000	0.000

(U) A. Mission Description and Budget Item Justification

The Financial Information Resource System (FIRST) is a software development effort that will provide an integrated, modern, seamless financial management system that enables authorized users (from Air Staff to base level) to plan, program, and execute their budgets. FIRST is ultimately envisioned to be the foundation for the Air Force's Planning, Programming, Budgeting, and Execution (PPBE) system. DEAMS will provide the core management functions consistent with financial management laws. regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. FIRST is being developed using the Spiral Development approach and maximizes Commercial Off The Shelf (COTS) products. The Budget Formulation capability provides for programming, budget formulation, budget justification processes and documentation. It encompasses the budget exercise process, which affects all organizational levels and all users, and is based on core financial and selected program information used to build the Air Force budget. FIRST will be compliant with the Clinger-Cohen Act, Business Management Modernization Program (BMMP), the Joint Technical Architecture (JTA), Global Combat Support System-Air Force (GCSS-AF) Integration Framework, Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines, and incorporate Public Key Infrastructure initiatives (such as electronic signature capability). FIRST will be integrated onto the GCSS-AF architecture. Additionally, program will continue to incorporate legacy systems as required and establish a financial enterprise data warehouse capability for the Air Force. This capability is the Commanders Decision Support Services (CDSS).

Defense Enterprise Accounting Management System (DEAMS) is a COTS-based software configuration effort to provide a modern accounting and finance system. The system will replace existing accounting and finance legacy systems to provide core management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. DEAMS will provide the necessary accounting module for FIRST. The AF increment will build on a USTRANSCOM pilot and enhance that pilot to include AF investment funding and Air Force Working Capital Fund (AFWCF). DEAMS will be compliant with the Clinger-Cohen Act, Business Management Modernization Program (BMMP), and Global Combat Support System-Air Force (GCSS-AF). The COTS product is Joint Financial Management Improvement Program (JFMIP) compliant. DEAMS will support elimination of duplicative and unneccessary systems. DEAMS provides the capability to be utilized by other services within the DoD. Additionally, program will continue to incorporate legacy systems as required and establish a financial enterprise data warehouse capability for the Air Force. This capability is the Commanders Decision Support Services (CDSS).

This program is in Budget Activity 7, Operational System Development, because the program modernizes Automated Information Systems (AIS).

Exhibit R-2, RDT&E Budget Item Justification	DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F FIRST**

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

		FY 2005	FY 2006	FY 2007
(U)	Previous President's Budget	15.594	17.531	27.528
(U)	Current PBR/President's Budget	14.450	17.281	27.541
(U)	Total Adjustments	-1.144	-0.250	
(U)	Congressional Program Reductions			
	Congressional Rescissions	-0.012	-0.250	
	Congressional Increases			
	Reprogrammings	-0.694		
	SBIR/STTR Transfer	-0.438		

(U) Significant Program Changes:

FY 2006 and 2007 increases are for integration of the DEAMS COTS based accounting system into the FIRST.

Exhibit R-2a, RDT&E Project Justification		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F FIRST	PROJECT NUMBER AND TITLE: 5036 Financial Information Resource System (FIRST)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5036	Financial Information Resource System (FIRST)	14.450	12.353	16.195	16.373	16.715	17.125	17.355	Continuing	TBD
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

FIRST is a Commercial Off The Shelf (COTS) based software development effort that will provide an integrated, modern, seamless financial management system that enables authorized users (from Air Staff to base level) to plan, program, and execute their budgets. FIRST supports the Air Force Core Competency for Agile Combat Support. FIRST is ultimately envisioned to be the foundation for the Air Force's Planning, Programming, Budgeting, and Execution (PPBE) system. DEAMS will provide the core management functions consistent with financial management laws. regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. FIRST will be developed using the Spiral Development approach and maximize use of Commercial Off The Shelf (COTS) products.

FIRST will be compliant with the Clinger-Cohen Act, Business Management Modernization Program (BMMP), the Joint Technical Architecture (JTA), Global Combat Support System-Air Force (GCSS-AF) Integration Framework, Command, Control, Communications, Computer, Intelligence, Surveillance and Reconnaissance (C4ISR) guidelines, and incorporate Public Key Infrastructure initiatives (such as electronic signature capability). FIRST will be integrated onto the GCSS-AF architecture.

The Budget Formulation Increment includes four spirals. Spiral 1 is deployed and provides a data query and reporting capability (to include trend and statistical analysis). Spiral 2 is in development and will provide on-line deliberations and cost modeling capability (particularly for flying hours). Spiral 3 will support manpower cost modeling and exhibits as well as budget integration. Spiral 4 will provide for budget justification, financial plans, report generation, and exhibits.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	Application Development & Test for Budget Formulation capability	12.549	10.477	13.656
(U)	Study and Anaylsis for ABSS (Completed FY05)	0.500	0.000	0.000
(U)	Integration/Support/Analysis (Includes Program Management Spt, GCSS-AF Test & Integration, Government Independent Test & Assessment (JITC), and Responsible Test Organization (RTO) Commanders Decision Support Services (CDSS))	1.401	1.876	2.539
(U)	Total Cost	14.450	12.353	16.195

Exhibit R-2a, RDT&E Project Justification		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F FIRST**	PROJECT NUMBER AND TITLE **5036 Financial Information Resource System (FIRST)**

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Other Procurement, AF (PE 0901538F)	0.722	0.749	0.786	0.804	0.824	0.845	0.860	Continuing	TBD
(U)	O&M, AF (PE 0308610F)	8.830	11.200	5.240	4.230	4.180	4.260	4.350	Continuing	TBD

(U) D. Acquisition Strategy

The FIRST program will execute an incremental delivery of COTS-based budget/financial management capability that subsumes and/or replaces legacy systems. The FIRST program is being developed using a Cost Plus Award Fee (CPAF) contract.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901538F FIRST**

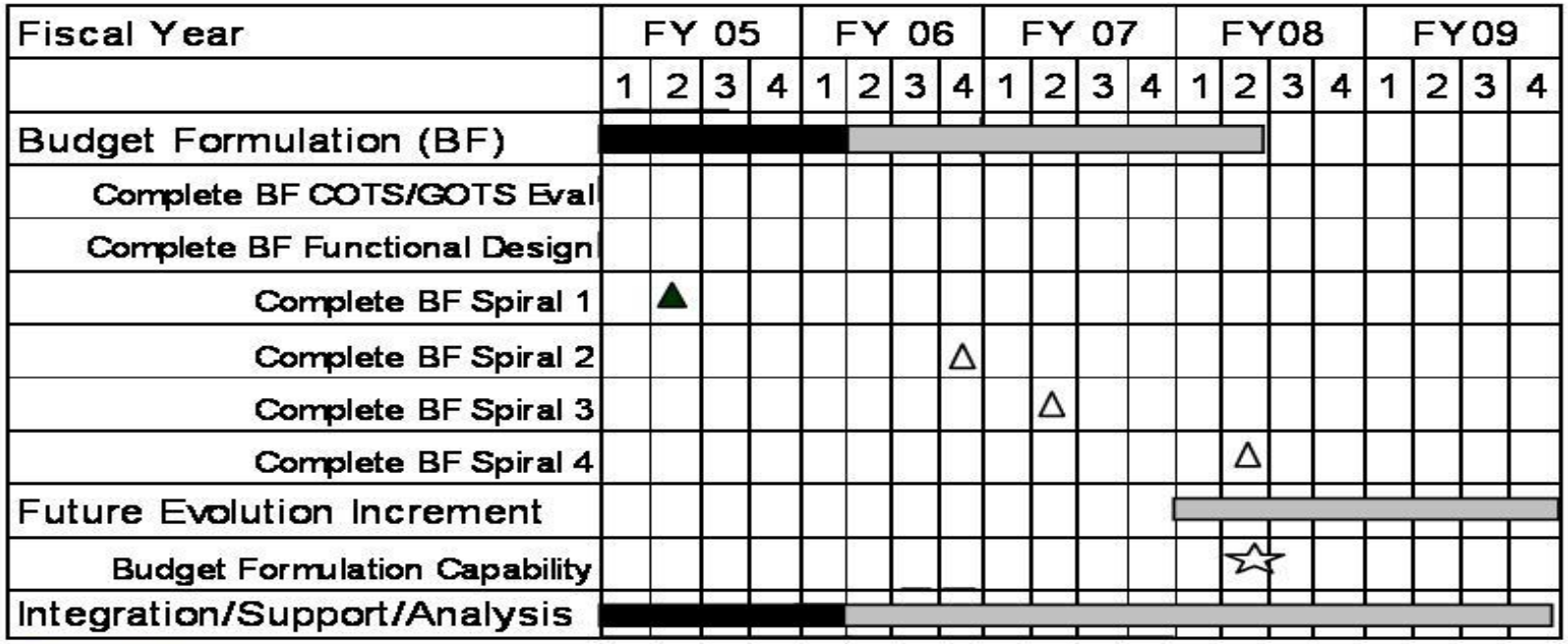
PROJECT NUMBER AND TITLE: **5036 Financial Information Resource System (FIRST)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Application Development	C/CPAF	Accenture, Fairborn, Ohio		12.549	Apr-05	10.477	Apr-06	13.656	Apr-07	Continuing	TBD	81.800
GCSS-AF Integration	C/CPAF	LM, Fairborn, Ohio		1.322	Dec-04	1.362	Dec-05	1.403	Dec-06	Continuing	TBD	TBD
Study and Analysis for ABSS	C/CPAF	Accenture, Fairborn, Ohio		0.500	Jul-05	0.000		0.000		0.000	0.500	
Subtotal Product Development			0.000	14.371		11.839		15.059		Continuing	TBD	TBD
Remarks:												
(U) Test & Evaluation												
Joint Interoperability Test Center (JITC)	MIPR	JITC, Fort Huachuca, Arizona		0.079	Oct-04	0.179	Oct-05	0.100	Oct-06	Continuing	TBD	TBD
Responsible Test Organization	MIPR	OSSG, Gunter AFB, Al		0.000		0.062	Sep-06	0.191	Jan-07	Continuing	TBD	
Subtotal Test & Evaluation			0.000	0.079		0.241		0.291		Continuing	TBD	TBD
Remarks:												
(U) Program Managment Activities												
A&AS Support	C/LOE	Titan Sencom	0.000	0.000		0.269	Aug-06	0.800	Aug-07	Continuing	TBD	
Program Office Spt	Various	Various	0.000	0.000		0.004	Aug-06	0.045	Aug-07	Continuing	TBD	
Subtotal Program Managment Activities			0.000	0.000		0.273		0.845		Continuing	TBD	0.000
Remarks:												
(U) Total Cost			0.000	14.450		12.353		16.195		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY 07 Operational System Development	PE NUMBER AND TITLE 0901538F FIRST	PROJECT NUMBER AND TITLE 5036 Financial Information Resource System (FIRST)

U.S. AIR FORCE

FIRST SCHEDULE



Major Event or Milestone
Planned Ongoing Activity
Ongoing Activity that is Complete
Completed Event
Planned Task(s)

AS OF 18 Jan 2006

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Exhibit R-4a, RDT&E Schedule Detail		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F FIRST**	PROJECT NUMBER AND TITLE **5036 Financial Information Resource System (FIRST)**

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Completed Budget Formulation Spiral 1	2Q		
(U) Complete Budget Formulation Spiral 2		4Q	
(U) Complete Budget Formulation Spiral 3			2Q
(U) Integration/Support/Analysis	1-4Q	1-4Q	1-4Q

Exhibit R-2a, RDT&E Project Justification

DATE: February 2006

BUDGET ACTIVITY: 07 Operational System Development

PE NUMBER AND TITLE: 0901538F FIRST

PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

	Cost ($ in Millions)	FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total
5179	Defense Enterprise Accounting Management System - AF (DEAMS)	0.000	4.928	11.346	0.000	0.000	0.000	0.000	0.000	0.000
	Quantity of RDT&E Articles	0	0	0	0	0	0	0		

(U) A. Mission Description and Budget Item Justification

Defense Enterprise Accounting and Management (DEAMS) is a COTS-based software configuration effort to provide a modern accounting and finance system. The system will replace existing legacy systems to provide core management functions consistent with financial management laws, regulations and policy, general ledger, funds management, payments, receivables, cost and revenues, and fiduciary reporting. The AF increment will build on a USTRANSCOM pilot and enhance that pilot to include AF investment funding and AFWCF. DEAMS will be compliant with the Clinger-Cohen Act, Business Management Modernization Program (BMMP), Global Combat Support System-Air Force (GCSS-AF). The COTS product is Joint Financial Management Improvement Program (JFMIP) compliant. DEAMS will support the elimination and duplication of unneccessary systems. DEAMS will also provide the capacity to expand to other services within the DoD.

	B. Accomplishments/Planned Program ($ in Millions)	FY 2005	FY 2006	FY 2007
(U)	DEAMS Blueprinting of AF requirements			5.888
(U)	Integration/Support/Analysis (Includes Program Management Spt, Independent Verification and Validation (IV&V), and Responsible Test Organization (RTO) Commanders Decision Support System (CDSS))	0.000	4.928	5.458
(U)	Total Cost	0.000	4.928	11.346

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

		FY 2005 Actual	FY 2006 Estimate	FY 2007 Estimate	FY 2008 Estimate	FY 2009 Estimate	FY 2010 Estimate	FY 2011 Estimate	Cost to Complete	Total Cost
(U)	Transportation Working Capital Fund (TWCF)	19.200	13.900	9.900	6.200	6.200	6.200	6.200	15.400	132.000
(U)	3400 (PE 91212F)	11.700	20.200	2.700	20.100	25.600	25.600	25.600	149.100	283.900

(U) D. Acquisition Strategy

The DEAMS program will execute an incremental delivery of COTS-based accounting and financial management capabilities and subsume non-CFO compliant legacy functionality as capability is delivered. Contracts will be awarded using the fixed price provisions of the DoD Enterprise Software Initiative contracts for COTS applications and System Integration Services Blanket Purchase Agreement.

Exhibit R-3, RDT&E Project Cost Analysis

DATE: **February 2006**

BUDGET ACTIVITY: **07 Operational System Development**

PE NUMBER AND TITLE: **0901538F FIRST**

PROJECT NUMBER AND TITLE: **5179 Defense Enterprise Accounting Management System - AF (DEAMS)**

(U) Cost Categories (Tailor to WBS, or System/Item Requirements) ($ in Millions)	Contract Method & Type	Performing Activity & Location	Total Prior to FY 2005 Cost	FY 2005 Cost	FY 2005 Award Date	FY 2006 Cost	FY 2006 Award Date	FY 2007 Cost	FY 2007 Award Date	Cost to Complete	Total Cost	Target Value of Contract
(U) Product Development												
Deams Blueprinting of AF Requirements	TBD	TBD		0.000		0.000		5.888	Aug-07	Continuing	TBD	TBD
Program Management Support	Various	Various	0.000	0.000		1.771	Jun-06	3.126	Jan-07	Continuing	TBD	TBD
Independent Verification and Validation (IV&V)	TBD	TBD	0.000	0.000		3.107	Jun-06	2.124	Jun-07	Continuing	TBD	TBD
Responsible Test Organization	MIPR	OSSG, Gunter AFB, AL	0.000	0.000		0.050	Aug-06	0.208	Nov-06	Continuing	TBD	
Subtotal Product Development			0.000	0.000		4.928		11.346		Continuing	TBD	TBD
Remarks:												
(U) Total Cost			0.000	0.000		4.928		11.346		Continuing	TBD	TBD

Exhibit R-4, RDT&E Schedule Profile		DATE February 2006
BUDGET ACTIVITY **07 Operational System Development**	PE NUMBER AND TITLE **0901538F FIRST**	PROJECT NUMBER AND TITLE **5179 Defense Enterprise Accounting Management System - AF (DEAMS)**

U.S. AIR FORCE

DEAMS SCHEDULE

Fiscal Year	FY 04				FY 05				FY 06				FY 07				FY 08				FY 09				FY 10				FY 11			
	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
AF Increment Blue Printing																																
Integration/Support/Analysis																																

☆ *Major Event or Milestone*

Planned Ongoing Activity

Ongoing Activity that is Complete

▲ *Completed Event*

△ *Planned Task(s)*

As of: 18 Jan 06

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Exhibit R-4a, RDT&E Schedule Detail		DATE: February 2006
BUDGET ACTIVITY: 07 Operational System Development	PE NUMBER AND TITLE: 0901538F FIRST	PROJECT NUMBER AND TITLE: 5179 Defense Enterprise Accounting Management System - AF (DEAMS)

(U) Schedule Profile	FY 2005	FY 2006	FY 2007
(U) Blueprint Air Force Increment			4Q
(U) Integration/Support/Analysis		3Q	1-4Q

FY 2007 Submittal						
BASE	**FY**	**Project #**	**Title**	**PE**	**($000)**	**Remarks**
Kirtland	07	MHMV011664	CONSTRUCT LAB SUPPORT SPACE	6.22.02F	460	FY07 Project

1. COMPONENT AIR FORCE	FY 2007 PROJECT DATA (computer generated)	2. DATE

3. INSTALLATION AND LOCATION	4. PROJECT TITLE
KIRTLAND AIR FORCE BASE, NEW MEXICO	CONSTRUCT LABORATORY SUPPORT SPACE

5. PROGRAM ELEMENT	6. CATEGORY CODE	7. PROJECT NUMBER	8. PROJECT COST ($000)
62202	312-477	MHMV011664	EEIC 529 460

9. COST ESTIMATES

ITEM	U/M	QUANTITY	UNIT	COST
PRIMARY FACILITIES				460.0
CONSTRUCT LAB SUPPORT SPACE B472	LS			(460.0)
SUBTOTAL				460.0
PROFIT AND OVERHEAD (0 %)				0.0
TOTAL FUNDED COST				460.0
UNFUNDED COST (0 %)				0.0
TOTAL REQUEST				460.0

10. Description of Proposed Work: Construct additional secure laboratory support space adjacent to the high-bay Science and Technology (S&T) laboratories in building 472 with secure access and sound attenuation to STC 45. Addition will be lightweight concrete slab on open web steel bar joists with walls, flooring, ceiling, lighting, heating, ventilation, and air conditioning, and appropriate fire detection/suppression.

11. Requirement: As Required.

PROJECT: Construct Laboratory Support Space, Building 472. (Minor Construction using FY07 RDT&E funds)

REQUIREMENT: Colocation of laboratory analysis, engineering, and management support space with their respective high-bay Science and Technology laboratories is required to improve efficiencies and to reduce S&T costs.

CURRENT SITUATION: The existing facility's layout is inadequate to provide the additional square footage of secure laboratory support space needed within Building 472. Current laboratory support space is housed in other facilities remote from their respective high-bay laboratories.

IMPACT IF NOT PROVIDED: Operational costs will continue to be higher than necessary due to the split operation. Science and Technology professionals will continue to waist unnecessary manhours in travel time between support space and high-bay laboratories that could be better utilized in performing and studying actual experiments.